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The Rural Settlements of Hellenistic and post-Hellenistic Central Asia: an Archaeology of Indigenous Life under Colonial Rule

Zachary W. Silvia

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The Rural Settlements of Hellenistic and post-Hellenistic Central Asia: an Archaeology of Indigenous Life under Colonial Rule

by Zachary W. Silvia

2022

Submitted to the Faculty of Bryn Mawr College
in partial fulfillment of the requirements for
the degree of Doctor of Philosophy
in the Department of Classical and Near Eastern Archaeology

Doctoral Committee:

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Abstract

Hellenistic Central Asia is among the most exoticized areas of study for Classical and Near Eastern archaeological research due to the discovery of ancient Greek colonies in the modern nations of Afghanistan, Tajikistan, and Uzbekistan. Most notable is the excavations of the Hellenistic “new foundation” at Ai Khanoum in the Dasht-i Qala Plain of northeast Afghanistan. This dissertation approaches Greek rule in Central Asia from a post-colonial perspective in decentering scholarly emphases on Hellenism in the east in favor of a new paradigm that emphasizes the diversity of indigenous lifeways among ancient, colonized Bactrians and Sogdians. Drawing on a vast overlooked dataset of Soviet and post-Soviet archaeological literature, as well as my own excavations of a rural farmstead at Bashtepa in western Uzbekistan, I situate indigenous life under colonial rule within the context of rural, non-elite agriculturally based economies. Methodologically this involves: first, the systematic GIS mapping of nearly 1,250 known archaeological sites from the 4th c. BCE – 4th c. CE to determine where ancient indigenous populations lived; and second, a detailed appraisal of rural settlement architecture across these vast landscapes. This data is then compared to preliminary results of excavations of a rural farmstead a Bashtepa, the first scientifically excavated pit-house farmstead in Central Asia. It is shown that standing biases in Classical and Near Eastern approaches to Central Asian archaeology have confused our understanding of ancient life in this region, overemphasized the importance of Greek rule, and ignored evidence for non-Greek rural life.
Dedication

This work is dedicated to the memory of my mother,
Donna Marie Silvia (1967-2014)
Acknowledgements

It is with much pride that I am the first from my family to not only go to college, but to arrive at this stage of an academic career. Pursuing an advanced degree with this background comes with considerable risk and sacrifice. I really owe my successes to the generosity of many friends, family, peers, colleagues, and advisors who believed that I could see this ambitious project through. It is humbling to have a support network willing to help, no matter how small and incremental that may be. Very early in my career I made a commitment to myself that each person would be acknowledged, should I get to this stage.

First, I would like to thank those who introduced me to archaeology. This group of people came to me when I entered undertook my B.A. at the University of Rhode Island at a later age than most, as I was transitioning from nearly a decade of work as an artist and screen printer. At the University of Rhode Island, I was instructed by an excellent cadre of faculty who were very encouraging at every step. Thank you to Bridget Buxton, Kristine Bovy, Anne Suter, Daniel Carpenter, and especially Bryn Mawr alum Mary Hollinshead. While I was an undergraduate, I had the pleasure of gaining archaeological field training under the direction of Krysta Rzyewski, who at the time was also a Ph.D. candidate researching for her degree at Brown University and conducting excavations at the Greene Farm Archaeological Project in Warwick, R.I. After graduating from the University of Rhode Island I undertook a M.Sc. in Archaeology at the University of Edinburgh under the direction of Robert Leighton and was very inspired by
classes taught by Andrew Erskine, Eberhard Sauer, Diane Bolger, and Ulf-Dietrich Schoop. The combined education I received from these scholars introduced me to the interpretive power of archaeological research through advanced classes on methods and theory but also the complexity and strangeness of Hellenistic history.

I arrived at Bryn Mawr College in 2013 and was immediately taken in by a supportive community and I am proud of the friendships developed out of being here. Among this group I would like to thank Georgia Harris and Shalana Thomas in Facilities for their hard work, but especially great conversation over the years. This also extends to the recently retired Ephi Dardashti in Information Technology, who has saved my research from doom on several occasions and is otherwise a great interlocutor. I also would like to thank David Perry and Karen Wilcox in the Interlibrary Loan Office for dealing with years of frustratingly difficult Russian language book requests. However, within this group I must give special thanks to Margaret Kelly and Migdalia Carrasquillo for all of the work they do on a daily basis to keep the Department of Classical and Near Eastern Archaeology running smoothly behind the scenes.

For several years I had the benefit of undertaking Russian language classes in the Department of Russian and Russian Language Institute. I probably owe my life to everyone in that department since this dissertation, which draws heavily on Russian language archaeological resources, would have never been possible without their guidance (and immense patience). So, thank you to Provost Tim Harte, Mark Baugher, but especially Jane Shaw and Irina Walsh, who have both done many great things since
also graduating from Bryn Mawr’s Graduate School of Arts and Sciences. These people were especially kind to me.

Before joining a project in Central Asia I had the benefit of learning advanced archaeological field methods on two projects. The first was as a trench supervisor on the Boğaziçi University Tarsus-Gözlükule Excavation and Research Project in Turkey and to that I owe a thank you to four wonderful individuals: Turkan Pavlacı, Sardar Yalçın, Elif Ünlü, and Azlı Özyar. From Tarsus I briefly joined the Bryn Mawr excavations of Tell Abraq directed by Peter Magee. While there I received stern but excellent field training under Marc Handel, who I owe much of my own approach to. While there I also became close friends with Akshyeta Suryanarayan, Steve Karacic, and Olivier Brunet who I also learned a great deal from.

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## Table of Contents

Abstract iii

Dedication iv

Acknowledgements v

Table of Contents xi

List of Figures xv

Chapter 1. Introduction. 1

1.1. Introduction. 1
1.2. The arrangement of this dissertation. 15
1.3. Abandoned lines of inquiry: Ustrushana/Chach/Fergana, Chorasmia, and Margiana. 20

Chapter 2. Theoretical contextualization and methodology. 31

2.1. The theoretical context of this work 31
2.1.a. Introduction. 31
2.1.b. Classical and Near Eastern approaches to Hellenistic Central Asia. 45
2.1.c. The myth of an academic “Iron Curtain.” 64
2.1.d. Seleucid royal ideology and the composite architecture of Ai Khanoum. 69
2.1.e. The meaning of Bactria in Hellenistic kingship. 75
2.1.f. Post-colonial approaches in Hellenistic Central Asian archaeology. 81

2.2. Methodology. 88
2.2.a. Introduction to methodology. 88
2.2.b. Where did rural populations live in relation to the wider environment? 90
2.2.c. How did people live within their environment? 100
2.2.d. Indigenous traditions in rural Bactria and Sogdiana. 101
2.2.e. The catalog: the Archaeological Map of Central Asia in Antiquity. 102
2.2.f. The organization of standardized attributes within the AMCAA. 112

Chapter 3. Aspects of rural life in Bactria from the 4th c. BCE – 1st c. BCE. 120

3.1. Introduction. 120
3.2. Ai Khanoum and the Dasht-i Qala plain in northeast Afghanistan. 131
   3.2.a. Rural settlements in the Dasht-I Qala plain. 132
   3.2.b. Rural domestic architecture in the plain of Ai Khanoum: some observations. 145
3.3. The eastern limits of Bactria in Gorno-Badakhshan. Life in the mountains. 153
3.4. The poorly understood northeastern region of Bactria – Parkhar, Kulob, and Dangara. 168
   3.4.a. Rural architecture in Parkhar and Kulob? Sakhsanokour and Tepai Diniston. 174
3.5. Tamoshotepa: a misunderstood site in Yavan, Tajikistan. 179
3.6. Life along the Oxus. Settlement strategies among riverine communities. 191
   3.6.a. Settlement along the Oxus River: rural and otherwise. 191
   3.6.b. Domestic architecture at Baitudasht, Takht-I Sangin, Shortepa, and Kampyrtepa. 210
3.7. The rural traditions of the Hissar Valley. 229
   3.7.a. The indigenous origins of rural domestic architecture in the Hissar Valley. 242
3.8. The rural hinterland of Surkhandarya. 252
   3.8.a. Indigenous rural architecture above the earth. 274
3.9. Mountain life at the frontiers of Bactria and Sogdiana. 283
3.10. Conclusion. 286

Chapter 4. Rural life in Sogdiana from the 4th c. BCE – 1st c. CE. 289
4.1. Introduction. 289

4.2. Rural Kashkadarya in the southern reaches of Sogdiana. 298
   4.2.a. Archaeological research in Hellenistic and post-Hellenistic Kashkadarya. 302
   4.2.b. Leaving Baysun: southern Kashkadarya in Dekhanabad and the Guzar Oasis. 309
   4.2.c. The architecture of rural settlements in the Guzar Oasis. 312
   4.2.d. Ancient Nikshapaya/ Xenippa: Er Kurgan and the oasis of Karshi. 320
   4.2.e. Ancient Nautaka. Rural settlement in the plain of Shurobsai and beyond. 339

4.3. Eastern Sogdiana: the oasis of Panjikent and the Zerafshan-Hissar Mountainous zone. 362
   4.3.a. Rural settlement patterns in the micro-oases around Panjikent. 368
   4.3.b. Inner Gorno-Sogd: the Zerafshan-Hissar mountainous zone. 406

4.4. The heart of Sogdiana: Afrasiab and the oasis of Samarkand (ancient Marakanda). 411
   4.4.a. Afrasiab: Historical and Classical inquiries into Hellenistic Maracananda. 413
   4.4.b. Settlement patterns and ancient hydrology along the middle Zerafshan River. 426
   4.4.c. Rural vernacular architecture in the middle Zerafshan Valley. 456

4.5. Western Sogdiana: The Bukhara Oasis and beyond. 473
   4.5.a. Bukhara and Paikend. Settlement patterns in Bukhara City and Paikend. 480
   4.5.b. Northern Bukhara – Navoi and the inner Kyzylkum. 488
   4.5.c. An interaction zone in the inner Kyzylkum north of the Bukhara Oasis. 494
   4.5.d. The western Bukhara Oasis. 501
   4.5.e. Rural domestic architecture in the western region of the Bukhara Oasis. 523
   4.5.f. Bastepa 2016-21: recent excavations of a post-Hellenistic rural settlement. 537
   4.5.g. Conclusions. 552

Chapter 5. Reconsidering Rural Housing and Settlement in Hellenistic Central Asia. 554

5.1. Introduction. 554

5.2. In defense of the splitters: flaws in working with Soviet settlement typologies. 559
List of Figures

Figure 1. Regions of Central Asia during the Hellenistic period and their approximate boundaries. ................................................................. 712
Figure 2. The distribution of Hellenistic period sites across Bactria, Sogdiana, and Margiana. ................................................................. 713
Figure 3. The distribution of post-Hellenistic and Kushan period sites across Bactria, Sogdiana, and Margiana. ........................................ 713
Figure 4. The mountains and oases of Bactria. ..................................... 714
Figure 5. 4th c. BCE (late Achaemenid) sites of northeast Bactria. ......... 715
Figure 6. Late 4th – mid. 2nd c. BCE (Hellenistic period) sites of northeast Bactria. ................................................................. 716
Figure 7. Sites of the plain of Ai Khanoum. ........................................ 717
Figure 8. A satellite image and plan of Ai Khanoum. ......................... 718
Figure 9. The so-called “indigenous habitations” on the Ai Khanoum acropolis. ................................................................. 719
Figure 10. A satellite image of Kohna Qala. ..................................... 720
Figure 11. A satellite image of Hellenistic vineyards at Ai Khanoum .......... 720
Figure 12. Hellenistic Shortughai ................................................... 721
Figure 13. Dingildje in Chorasmia .................................................. 721
Figure 14. Sites of eastern Bactria overview ...................................... 722
Figure 15. Sites in the Wakhan corridor .......................................... 723
Figure 16. A satellite photo of Kaakha I in Badakhshan .................... 724
Figure 17. A satellite image of Sariab ............................................. 724
Figure 18. A plan of Saksanokhur ................................................. 725
Figure 19. A plan of Tepai Diniston ............................................... 725
Figure 20. Sites of Dangara, Yavan, and the eastern Hissar Valley ....... 726
Figure 21. Tamoshotepa in Yavan .................................................. 727
Figure 22. Tamoshotepa. Plan of excavation area 9 ......................... 728
Figure 23. Tamoshotepa. Plan of the upper phase, excavation area 18. ................................................................. 728
Figure 24. Tamoshotepa. Excavation area 6 .................................... 729
Figure 25. Reconstruction of Tamoshotepa first phase pit-houses ........ 730
Figure 26. Reconstruction of the Tamoshotepa above ground farmstead. ................................................................. 730
Figure 27. The plains of Panj, Archi, and Imam Sahib along the Darya-i Panj. ................................................................. 731
Figure 28. Baitudasht sites 1-8 ...................................................... 732
Figure 29. The Baitudasht piedmont with the location of Baitudasht 2 .... 733
Figure 30. Plan of a pit-house at Baitudasht 2 ................................. 733
Figure 31. The settlement at Takht-i Sangin .................................... 734
Figure 32. Oxus temple precinct with bazaar(?) and dock .................... 735
Figure 33. Kampyrtepa with the location of the pit-house circled in grey ................................................................. 735
Figure 34. Settlements of the Hissar Valley .................................... 736
Figure 35. 5th-4th c. BCE sites in the Surkhandarya and Kafirnigan oases 737
Figure 36. Late 4th – mid 2nd c. BCE sites in Surkhandarya and Kafirnigan. ................................................................. 738
Figure 37. Mid. 2nd c. BCE – 3rd c. CE sites of Northern Surkhandarya.................................739
Figure 38. Mid. 2nd c. BCE – 3rd c. CE sites of southern Surkhandarya.................................741
Figure 39. Kyzyltepa and the Kyzylcha group of rural settlements........................................743
Figure 40. Kyzyltepa site plan..............................................................................................744
Figure 41. Kyzylcha 6. Phases 1-4........................................................................................745
Figure 42. Kyzylcha 6. Artist rendering..................................................................................745
Figure 43. 5th-4th c. BCE sites of Kashkadarya.................................................................746
Figure 44. Late 4th – mid. 2nd c. BCE of the Guzar Oasis....................................................747
Figure 45. Mid. 2nd c. BCE – 3rd c. CE sites of the Guzar Oasis............................................748
Figure 46. Late 4th c. - mid. 2nd c. BCE sites of the Karshi Oasis.........................................750
Figure 47. Mid. 2nd c. BCE sites of the Karshi Oasis............................................................752
Figure 48. Er Kurgan............................................................................................................752
Figure 49. Plan of pit houses at Kurgancha after excavation.................................................753
Figure 50 Kindikltete and its satellites.................................................................................753
Figure 51. Late 4th c. - mid. 2nd c. BCE sites in the western Oasis of Panjikent....................754
Figure 52. Late 4th c. - mid. 2nd c. BCE sites in the eastern Oasis of Panjikent......................755
Figure 53. Late 4th c. - mid. 2nd c. BCE sites in the middle Zerafshan River.........................756
Figure 54. Photo of the citadel at Afrasiab............................................................................757
Figure 55. Photo of Afrasiab including the Achaemenid walls..............................................757
Figure 56. Lyailyakui, Pulad, Bagrytepe, and Tupkhona ......................................................758
Figure 57. Besh Bulak in the Kyzylkm Desert........................................................................758
Figure 58. Late 4th c. - mid. 2nd c. BCE sites in the Navoi and Bukhara Oases....................759
Figure 59. The Bronze Age communal pit-house at Zamanbaba...........................................760
Figure 60. Final plan of Bashtepa as of 2021.........................................................................761
Figure 61. Bashtepa. Plan of the central pit-house settlement phase......................................762
Figure 62. Bashtepa. Second phase repair wall.................................................................763
Figure 63. Pit-house ON362 with a plastered floor..............................................................763
Figure 64. Hearth ON378 in the northeast corner of ON362...............................................764
Figure 65. Bashtepa pit-house farmstead............................................................................764
Figure 66. Pit-house ON29.................................................................................................765
Figure 67. Ayak tepa 2 in the Bashtepa Group of sites.........................................................765
Chapter 1. Introduction.

1.1. Introduction.

Southern Central Asia ranks as one of the most culturally and ecologically diverse regions on Earth. Since the early spread of *homo sapiens* into Central Asia some 200-170,000 years ago, people have lived an adaptive life responsive to this environmentally varied, ecologically sensitive landscape across a region now politically delineated by the nations of Afghanistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan (Figure 1). The climate, and therefore vegetation, landscape, hydrology, and resource availability of this vast landscape has changed dramatically over this broad expanse of time, but there is one significant, unchanged variable that have persisted into the modern era. This is the necessity of human adaptation to ecologically sensitive environments, adaptive processes which inform the decision making of everyday societies about how to organize and strategize life as much as situate themselves metaphysically with the cosmos.\(^1\) Environments are terraformed into vast agricultural or pastoral landscapes, and to a lesser extent cities, with a feedback effect in defining social identity, tradition, belief, and ultimately cultural knowledge. In completing the cycle each social aspect works itself into the formation of new human-landscape interactions and ontologies which people become world-builders and situate themselves in their world.

The ecological diversity of Central Asia is often overlooked by historians and archaeologists writing about the lives of resident populations in this part of the world. Yet, human adaptation within virtually all of southern Central Asia’s ecological zones, even among the harshest deserts and mountains, is perhaps the region’s most interesting story during any historical period as it involves the full gamut of strategies of living among the three extremes of economic production: sedentary agriculture, pastoralism, and nomadism. Some regions, such as the Southern Kyzylkum in southern Uzbekistan, are less amenable to human habitation. Others, especially the relatively stable alluvial oases of Ferghana, Surkhandarya, or Samarkand are far more amenable to life. Despite persistent difficulties, people have persevered through a complicated blend of cultural innovation, flexible subsistence practices, and networked exchanges of knowledge with others. Material culture is one mode of cultural adaptation that facilitates living, not only in a functional sense, but also in the sense that it is one component of a society own expression of being and existing within their own cosmos.

From the Neolithic into the present day, most people in Central Asia engaged in a wide range of subsistence practices to sustain life and wider relational networks. The introduction to plant and animal agriculture was a slow adaptive process in Central Asia, which, like everywhere else, was the normal cadence of the so-called “Neolithic Revolution” as V.G. Childe himself recognized. Over millennia populations in Central Asia utilized the vast ecological resources of the region and developed and maintained a variety of modes of rural economic production. Of course, it is likely that it is only after

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3 Childe 1936; Greene 1999.
the onset of agricultural production and land control regimes facilitated by irrigation that a new mode of production emerged for which the Central Asian steppe is particularly known – nomadism. The reality of adaptive diversity has never once ceased and, in fact, Central Asia remains a predominantly rural sector of the planet’s wider geography.

Taking this extreme long view, this work considers the lives of Central Asian populations at the during a particularly transformative period of the region’s history – the accession of Greco-Macedonian rule after the conquest of Alexander of Macedon in 328 BCE, and the subsequent collapse of their colonial descendants with the rise of poorly understood systems of nomadic rule. Chronologically this is roughly the end of the 4th century BCE – 1st century CE coinciding with what is conventionally referred to as the “Hellenistic” and “post-Hellenistic” periods – periods that takes their name from the perception of a distinctly Greek imprint on Central Asian life at the time. Here I pursue a radically different approach to the archaeological record of human-environment interactions during this period. To date scholarship on Hellenistic Central Asia is concerned with determining the scale and impact of Greek colonial rule in the region. Questions asked of the material and ancient textual record are framed from the perspective of Greeks who engaged in or benefitted from colonial rule, whereas the impact on, and even presence of, indigenous Central Asians rarely factors into historical considerations. This is to say nothing of the material culture of indigenous Central Asians, who are silent in ancient texts and a have a demonstrably elusive relationship with Greek colonial life, leaving the impression that indigenous populations are irrevocably lost for good or lived in a parallel universe compared to their Greek counterparts. Of course, both options cannot reflect the true dynamics of human
interactions among a wider population that otherwise occupied the same landscapes to one degree or another. In general, these indigenous populations are represented by adherents to two economic modes of living, nomads and sedentary farmers, which is admittedly itself an uncomfortable, reductionist binary since in reality there was a wide variety of subsistence practices of which these two options represent the extremes.

This dissertation concerns itself with the lives of the second indigenous group: the primarily sedentary, rural communities which were built on a combination of agriculture, cattle breeding, and semi-mobile pastoralism. Over two chapters I build the case that we have a substantial amount of archaeological evidence for these groups living among the oases and foothills of mountainous zones in southern Central Asia and in particular the ancient regions of Bactria and Sogdiana. I address three very basic questions that to date have not been asked of rural populations in Hellenistic and post-Hellenistic Central Asia:

- Where did rural populations live in relation to their wider environment in Bactria and Sogdiana?
- How did people live within that environment?
- In what ways were the lifeways of these communities part of wider traditions of sedentism and pastoralism indigenous to southern Central Asia? In what ways do they break with these traditions or reflect an incremental evolution?

In litigating this evidence against historiographic trends in the discipline that emphasize the role of Achaemenid Persian, Greek, and Greco-Bactrian elites over every aspect of daily life, a compelling case can be made that there was a significant amount of autonomy among non-elite rural populations in determining cultural developments within these regions. There is also a strong element of indigenous cultural continuity across spanning several millennia which provides an explanatory model for some aspects of rural habitation in the late first millennium BCE.
I pursued several avenues of inquiry to address these questions. To ask where sedentary populations lived, I amassed a new archaeological gazetteer of published archaeological sites that unifies commonly circulated archaeological maps of northern Afghanistan and southern Uzbekistan with archaeological maps and published sites that are only found in Soviet and post-Soviet scholarship. This dataset is unique in that it restricts itself to the 4th century BCE – 4th century CE and endeavors to standardize basic attributes of sites into a single coherent framework for analysis. I have titled this project *An Archaeological Map of Central Asian Antiquity* (AMCAA) and intend to publish this data in an open-access framework. Nearly 1300 sites have been integrated into this archaeological map using a variety of remote sensing methods in the open-source geographic information systems package QGIS. To bring order and easy reference to specific sites, these entries are given a standardized unique identifier to eliminate confusion about referenced material, since so many Central Asian archaeological sites have no name or duplicate names. My methodology in developing this gazetteer is described in detail in chapter two. At the outset I emphasize that while I have gathered and used this dataset to build my dissertation research, this dataset is a separate project outside of the dissertation and remains a living entity to be refined and adjusted. That is to say, the present incarnation is incomplete and will take several more years to finalize but is complete enough to form the backbone of my efforts to locate and define rural sites across Bactria, Sogdiana, and their neighbors. A catalogue reflecting the most recent state of this dataset is included in here as an appendix to provide additional technical information about each archaeological site mentioned in this text.
To ask how people lived within their environments I traced the development of settlements in each region with a particular focus on three attributes: the landscape context of sites (foothills, oases, mountains), the local hydrology of sites, and a particular focus on non-elite, rural domestic architecture. Methodologically, the landscape context and hydrology of sites is compiled through traditional research combined with remote sensing techniques in QGIS. Yet it is in the home that I feel the indigenous aspect of rural life in the Hellenistic period is a salient feature. A focus on domestic architecture allows me to consider the assemblages of rural homes to build a case for subsistence practices, localized production activities, and contextualize rural life within wider traditions across the first millennium BCE – and often earlier. To manage the issue of domestic architecture I have done my best to integrate previously published, scientifically excavated data into a coherent narrative of one long tradition. When I am able, I also draw on evidence for elite rural housing – evidence that almost entirely comes from Bactria with only a few examples from Sogdiana.

To anchor my interest in rural domestic architecture, from 2016-2021 I had the responsibility and privilege of excavating a post-Hellenistic rural settlement at Bashtepa at the boundary between the Kyzylkum Desert and the western extent of the Bukhara Oasis in Uzbekistan. This work is underway by the joint Uzbek-American Expedition in Bukhara directed by Sören Stark (ISAW-NYU), Fiona Kidd (NYU-Abu Dhabi), and Djamal Mirzhaakhmedov (Institute of Archaeology, Uzbek Academy of Sciences) and with myself as an integral member. Bashtepa is a site long recognized in the historiography of Uzbek Archaeology as a Hellenistic fortification, a fact known since it was first encountered by the great Soviet-era archaeologist V.I. Shishkin in 1938. Since
then the site has been visited several times but only subject to brief archaeological investigations which will be discussed much later in this dissertation. While earlier expeditions recognized Bashtepa as a fortified site with light evidence for a later rural occupation in the form of individual pit-houses, nobody would expect that this later occupation would turn out to be an entirely new form of rural architecture for ancient Bactria and Sogdiana. Our own explorations have now uncovered a multi-roomed pit-house complex with internal courtyard that draws on traditional elements known from both pit-house and above ground rural architecture of Central Asia.

Only preliminary results of the rural complex at Bashtepa are included here, which are embedded within my discussion of the rural areas of western Sogdiana at the end of chapter four. Since we are still processing our data and coordinating our final publication of the excavations, there is only so much that can be said at this time. The opportunity to do so allows me to complete an argument built up in these chapters – that virtually all our evidence for rural domestic architecture, homes largely structured by semi-subterranean pit-houses, points to lifeways structured around agriculture and cattle-breeding. This counters frequent claims that pit-house architecture signals evidence for mobility – a claim that is already unjustified when previously excavated assemblages are queried in detail, and now quite impossible to justify given this new evidence from Bashtepa. While it always remains a possibility that some mobile populations did utilize these structures, the evidence disallows prevailing a priori assumptions that persist in the
fields of Central Asian archaeology and vernacular architecture studies that assume a one-to-one correlation with mobility.\(^4\)

To address the final issue, in what ways the lifeways of rural communities in the Hellenistic period were part of longer patterns of indigenous sedentism, I have expanded my chronological scope to consider what archaeological evidence we have for sedentary agricultural life before the Hellenistic period within the microregional contexts of area in question. This aspect of deeper traditions does not aim to be comprehensive since the result would be a much longer and convoluted dissertation. The majority of this evidence is drawn from the period immediately preceding Greek rule (i.e. the end of the 4\(^{th}\) century BCE), the late Iron Age or so-called “Achaemenid period,” in which I explore earlier rural domestic architectural traditions that contextualize the evidence of the period in question. Quite exciting, however, is that I am able to demonstrate that some late Iron Age practices seem to have their antecedents at the end of the Neolithic or Bronze Age. This reflects a long process of local cultural transfer about some very specific practices that are maintained by rural communities in the Hellenistic period, even in regions where there was some degree of direct colonial contact.

What emerges from this approach is something I believe to be truly exciting for our understanding of rural life from the 4\(^{th}\) century BCE – 1\(^{st}\) century CE. In developing some framework for the development of rural Hellenistic life that is rooted in earlier local traditions, I am able to suggest some areas where we can observe changes in established patterns that might reflect a fundamental shift in the ways in which ancient rural

\(^4\) For example Итина 1963; Lhullier and Mashkour 2017: 668; Lyonnet 2021; Villinga, Oliver, Bridge 2007: 45.
communities saw themselves within their landscapes. This is a shift that is particularly evident in Sogdiana in terms of active modes of agricultural and hydrological terraforming in rural hinterlands. I suggest that in the Hellenistic period there may have been a transition from modes of economic production that were reliant upon existing natural features (such as rainfed agriculture, local “backyard” pastoralism, hunting) to terraforming projects which endeavored to increase agricultural production, control the natural flow of rivers, mitigate disasters, and ultimately reflect an investment in future expansion – a transition into what could be referred to as an early form of a delayed return rural economy. These efforts are particularly visible in the Hellenistic and post-Hellenistic periods, with some notable technological innovations in hydrology, but were nonetheless built on earlier pre-Achaemenid and Achaemenid period traditions. The fact that there is a long tradition of terraforming within the rural countryside spanning multiple kingdoms indicates that these were not the result of state central planning (as K.A. Wittfogel’s theory of hydrologic despotism or J. Steward’s understanding of the origins of social stratification would have it), but a form of planning which emerged communally from the rural populations who cultivated these lands.

These perceptual shifts in the Hellenistic and post-Hellenistic period are also observable in the choices made about the construction of rural domestic architecture in which indigenous communities across Bactria and Sogdiana were most likely to construct semi-subterranean pit-houses. Whereas pit-house architecture coexisted alongside above ground farmsteads in Sogdiana in the late Iron Age, above ground architecture is abandoned in the Hellenistic period with only a few notable exceptions. This is where the

5 Steward, Adams, Collier 1955; Wittfogel 1957.
evidence from Bactria and Sogdiana is particularly at odds, where the tradition of building above ground rural architecture persisted alongside pit-house usage, sometimes quite lavishly under the influence of a distinctly Helleno-Mesopotamian elite vernacular so well documented in ancient Bactria. It is therefore suggested in my final chapter that pit-house living was a conscious choice among communities who sought to leave a soft imprint on the landscape with home structures that were not physically imposing, being houses that are half dug into the earth and with light frame superstructures. This is in contrast to other modes of physically imposing architecture that do appear within these same landscapes – fortifications and temples – which would have looked all the more striking in presence of semi-subterranean houses. By the 2nd century BCE above ground architecture seems to reemerge alongside pit-houses, but pit-houses (at least at Bashtepa) become far more expansive in layout and reminiscent of earlier, large above ground farmsteads.

This dataset is further enriched when one compares this evidence to other historically attested settled zones that had a brush with Hellenism – Chorasmia, Ferghana, and oases along the Syr Darya river in southern Kazakhstan. However, I restrict myself to areas that were veritably controlled by Hellenistic kings at some point in their history, or were otherwise intertwined in trade and cultural exchange with settler Greeks, and thus incorporated into a colonial network. These are regions where present scholarship is heavily focused on evidence for Greek material culture and administration east of Iran. While Hellenism in Central Asia is a fact, it existed in an uneven distribution across

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6 Margiana, a region considered part of Central Asia and also under Greek rule for a time, is excluded here for reasons explained below.
Bactria and Sogdiana. Since non-Greek evidence for the period tends to be ignored, I believe that the cultural reach of Greeks has been overstated for reasons that have more to do with paradigms within Classical and Near Eastern Archaeology which represent entrenched in colonialist frameworks for understanding Asian archaeology (the two subdisciplines whose interests converge on Central Asia in the first millennium BCE) than an earnest effort to engage in holistic research into the Hellenistic period.

Most of the data presented here was gathered as an earnest and deliberate effort to engage Russian language scholarship from Soviet and post-Soviet Central Asian archaeological expeditions in Central Asia. I make no claim to have read or incorporated all available data for Hellenistic and post-Hellenistic Bactria and Sogdiana, which would be a remarkable feat for any scholar given the sheer volume of works published over the last century on the topic. This is a common barrier for Western scholars entering Central Asian archaeology. However, I do believe that the current structure of Classical Archaeology and Near Eastern Archaeology, which requires modern French and German language acquisition above all others, has significantly handicapped our understanding of the wider Hellenistic world. It is unethical as it is unsustainable to perpetuate a discipline that does not prioritize the local language of scholarship and collaboration in various geographies of interest. In the context of Achaemenid and Hellenistic Central Asia there is a common refrain that the main Soviet archaeological publications were unavailable in the West. As I show in chapter two, this view is a misperception, at least within the context of American institutional library collections. These political concerns have motivated me to make a real effort to overcome these language barriers despite adding years to my dissertation schedule. I hope the reader can forgive any errors in translation,
misunderstanding, or oversights when I engage with the work of our Soviet, Russian, and Central Asian predecessors, which I take responsibility for nonetheless.

One final disclosure is that this work only forms the groundwork for more a detailed investigation of rural life in Hellenistic and post-Hellenistic Central Asia. As my work progressed it became clear that many pressing questions could not be addressed in a dissertation that already ambitiously seeks to outline a basic disciplinary framework for understanding rural Hellenistic Bactria and Sogdiana. The dataset presented here, in my opinion, opens many doors for future research into the settlement dynamics and lifeways of all populations living in Central Asia in the Hellenistic and post-Hellenistic periods. Critically, it is most regrettable that I could not explore one of the most pressing problems of Central Asian antiquity – the relationship between nomads and sedentary populations (urban and rural). There is clearly a cooperative economic relationship between rural agriculturalists and nomads. Yet this question demands first an empirical basis for settlement patterns in this region of study, such as the AMCAA alongside rigorous bookwork, to explore the dynamism and relationship of settlements across time. As I started to think about this problem, I found that the two topics diverged enough that they could not be addressed in one project in which the latter problem of the relationship between nomads and sedentary rural populations could only be predicated on a dissertation such as this present one. Some ideas about the economic interaction did emerge between nomadic and sedentary populations, and frankly, the “in-between” which comprised of the true reality of rural life. For example, I found myself increasingly attracted to the idea of a mercantile “nomadic” class as playing a critical role in mediating rural and urban relations during the post-Hellenistic and early Kushan period.
There is also much opportunity to establish a basis for distinctly rural social identity that is neither based on economic production nor vexed questions of identifying ethnic identity in the material record of Central Asia at the end of the first millennium BCE.

Rural Hellenistic and post-Hellenistic communities were enmeshed in a different social and economic structure than places like Mesopotamia, the Levant, Anatolia, Egypt, and importantly – Greece and Italy. Rural settlements in Central Asia are perhaps more akin to places like eastern Europe or South Arabia at in the 1st millennium BCE: places that engaged with rapid shifts a core Hellenistic world, but existing outside of that sphere just enough to forge paths of their own in conversation with those changes. I see much agency in Central Asia’s lifeways during this period precisely because of the geographic situation of rural populations at the periphery of Hellenic colonization. This is even identified within the context of different choices made by rural communities between Bactria and Sogdiana. With Sogdiana’s peripheral political integration into the sphere of Hellenism we naturally see more local opportunity for a continuation of life as it was and more local agency in what aspects of Hellenism were integrated into Sogdian life, especially in the adoption of elite modes of representation.

There was also more opportunity to integrate cultural aspects outside of Hellenism, for example cultural borrowings from Chorasmia and the steppe – two areas that have their own potent indigenous traditions. Sogdiana was only ruled by the Macedonian Seleucids for approximately 50-60 years in the 3rd century BCE and likely never by subsequent Greco-Bactrian kings (if so, it could only have been for a brief time). Since Bactria was directly under the control of Greeks and Hellenized elites there was more opportunity for cultural Hellenization in lower strata of society than Sogdiana,
which is reflected in differences in the material culture and social institutions of both regions. This even includes seemingly “non-Greek” elite modes of representation such as the construction of Mesopotamian style architecture, the continuation of Persian modes of administration, and even the elite ways some people drank wine – all of which were likely introduced by colonial encounters with Greeks even if these cultural elements originated outside of Greece. On the contrary, we have to consider that even major Hellenized powers in Central Asia, the Seleucids and Greco-Bactrians, relied upon local populations to fight their wars in a tenuous dynamic of ethnic relations. This is indicated by the publication of a fragmentary Greco-Bactrian text that is likely dated to the early 2nd century BCE in which at least forty Scythian mercenaries (likely local nomadic warriors for hire) were paid no less than one hundred drachmas for their services under the reign of Animachos Theos. They also relied on rural populations for grain and tax revenue, two aspects of administrative life that many point to for evidence of a heavy hand from the state but cannot have mattered much to local populations living in lands distant from power centers. Local populations did not need Greeks, but the Greeks certainly needed locals. All of these issues lead me to further advocate for an archaeology of indigenous populations in Hellenistic and post-Hellenistic Central Asia.

7 Clarysse and Thompson 2007.

In the reign of Antimachos in year 30 [month + day] in Amphipolis near Karelote has introduced [NN of the] mercenaries (?) [to] NN of the for[ty. ---] Scythians, of one hundred drachmas of coined silver [---] [ ] of [the above mentioned (?)] sum of money [ ] traces of ink.

8 Clarysse and Thompson 2007: 275-76.
1.2. The arrangement of this dissertation.

This work attempts to synthesize a lot of data, for which I ask forgiveness from the reader. The structure is as follows. Chapter two outlines my methodological approach to this dissertation in more detail. I also state the terms of the theoretical perspective that led to my decision to emphasize rural settlements in Hellenistic Bactria and Sogdiana within the framework of indigenous Central Asian traditions. My approach is built upon a brief criticism of current approaches that place much weight on the archaeology of elite contexts, notably what is extracted from Ai Khanoum in northeast Afghanistan and Takht-i Sangin in southern Tajikistan. I stress that both sites are anomalies compared to the evidence for non-elite rural life across all of Bactria and Sogdiana, that is, most of the geographic scope of these. I question the validity of these anomalous contexts as cultural type-sites for Central Asia during this period, noting that even within these elite contexts there is evidence for local, indigenous traditions.

Thus, part of my approach is entrenched in a structural critique of Hellenistic Central Asia as a subset discipline of Classical and Near Eastern Archaeology, which I see as indebted to colonialist interpretive models that encourages the exclusion of evidence for non-Greek life. I explore some of the legacies of colonialist approaches to Classical and Near Eastern archaeology as that have defined Western approaches to Hellenistic archaeology in the region and do so as a call for us to move in another direction. This post-colonial perspective underlies my own framework and lurks behind my approach to each site site described in the following chapters, even those that are small and only attested through limited evidence. Perhaps in some cases this is to a fault,
but if intellectualism is discourse, then my colleagues will forgive me as we find a new middle way together.

Methodologically, I emphasize my attempt to build a new archaeological gazetteer of sites dating from the 4th century BCE – 4th century CE. In my catalogue I have systematically collated and mapped nearly 1,300 sites from the 4th century BCE – 4th century CE into a single gazetteer, which I refer to as an *Archaeological Map of Central Asia in Antiquity* (hereafter AMCAA). This gazetteer unifies common datasets of this sort published in English and French, but with datasets that are less familiar to many that are published in Russian. This is the first database of its kind for the period and region in question. Many sites will be new to readers in Europe and America but known to those educated in the Soviet Union, Russia, and the Central Asian Republics. Some sites will be new to nearly everybody as their presence is only noted in regional surveys reported to local institutes of archaeology – an area of archival work that I am certain will reveal even more sites unknown to me. The raw data for this database appears in an abridged format in the appendix and will be made available for all to use in short order in an open access online database out of my firm commitment to the free dissemination of knowledge and to the growth of the field.

As noted above, the AMCAA is the skeleton of this dissertation from which more detailed analyses of rural domestic architecture is built. Unlike other archaeological gazetteers of Central Asia,9 for example Warwick Ball’s *Archaeological Gazetteer of Afghanistan*, all catalogue data is presented in tabular form within the appendix but described in narrative form across the chapters of this dissertation. If the AMCAA is the

9 Ball 2019 (1982).
skeleton of this work, the narrative arrangement is the rest of the body that gives the data life.

Chapters three and four are length and follow a micro-regional approach to establish a basis for my argument that Hellenistic and post-Hellenistic (pre-Kushan) Central Asia is fundamentally rural and non-elite. In emphasizing settlement strategies at the micro-regional scale differences in settlement structure, rural strategies, and non-elite and elite engagements emerge as productive avenues for considering social complexity across this broad geography. Chapter three deals with rural life in Bactria although perhaps not so comprehensive as much as highlighting distinct trends. Since Bactria is the most studied region of Hellenistic Central Asia, I have the benefit of synthesizing key trends in settlement patterns and rural domestic architecture rather than engaging in thick description. Chapter four aims to be more comprehensive as I approach rural life in Hellenistic and post-Hellenistic Sogdiana. The chapter is so large that it forms the bulk of this dissertation, an attribute of this work that I think is justified because Sogdiana is a region less likely to be engaged in popular narratives of Hellenistic Central Asia because of its obscurity in ancient Mediterranean sources.

Since chapters three and four are especially long, I have subdivided both into subchapters systematically treating different areas of Bactria and Sogdiana as distinct cultural landscapes that are enmeshed in the local environmental and ecological realities. I do not see micro-regional rural communities as internally cohesive for environmentally deterministic reasons but because of the active agency and self-perceptions of these communities in local landscape formation. When environment and ecology plays a role in human behavior they are in conversation with cultural traditions that are adapted and also
subject to variability and change. This might seem convoluted, but I think there is an important distinction here. The geography of southern Central Asia is complex and is comprised of enormous mountains, rolling hills, vast areas of steppe, nearly uninhabitable deserts, and lush alluvial oases. This means that communities, and their traditions form in accordance with realities of living and adapting to complex ecological conditions. In analyzing such a complex arrangement of people, I move geographically roughly from east to west (first in Bactria, then Sogdiana). However within that geographic arrangement I attempt to identify a unity in rural sites as cultural zones first, but ones that are cohesive in coordination with these unique local environmental conditions second. As an example of what I mean here, in the next chapter, which is focused on Bactria, I have identified sites along the Amu Darya river (the largest river which bisected ancient Bactria) as a single cultural zone based on riverine life. This is a slightly different approach than, say G. Lindström who classified riverine sites by their associated oases.\textsuperscript{10} While neither approach is more correct than the other, I think more can be said of riverine sites as cultural entities if they are together.

When applicable I emphasize interregional similarities that, I hope, help us characterize a more unified rural archaeology for Bactria and Sogdiana. While this might seem tedious, it is the result of a very deliberate decision to not gloss over micro-cultural elements of rural communities that speak to minor differences in lifeways. To create such a gloss would only reinforce an essentializing binary that did not exist between Greeks and “non-Greek” Central Asians. In reality, rural Hellenistic Central Asia was not a monolith – communities were diverse and have their own unique histories. Therefore,\textsuperscript{10}

\textsuperscript{10} Lindström 2021.
each subchapter targets three classes of evidence: 1) an historiography of the most pertinent Soviet and post-Soviet expeditions that explored the archaeology of Hellenistic Central Asia; 2) a synopsis of general settlement patterns that includes urban sites / key administrative centers, rural sites, and fortified sites with a military function; 3) an analysis of rural domestic architecture within the context of micro-regional settlement patterning. This should make the information more digestible for the reader and useful for those who aim to mine this dissertation for regionally specific information.

Chapter five is a synthesis of general implications observed across the overall dataset. Here I focus on several key themes that are largely focused on rural domestic architecture in light of what we now know from Hellenistic and post-Hellenistic Central Asia. First, I situate Central Asian pit-house use in a wide global tradition of rural vernacular architecture. Critically, I emphasize that it is only in Central Asian archaeology that one finds interpretations of pit-house evidence as an \textit{a priori} space of nomadism, a paradigm that is also reflected in definitions of this form of architecture within the small field of vernacular architecture studies. When one looks to the global archaeological evidence for pit-houses across the Holocene one finds that the archaeologists excavating those spaces regularly describe pit-houses as a mode of sedentary architecture. Very rarely do pit-houses appear as the archaeologically verified spaces of nomads. When they are associated with nomadism it is usually based on an uncritical analysis of the excavated evidence and low priority of what is commonly viewed as shoddily built homes.

Second, establishing pit-houses as the regular form of domestic architecture for non-elites in Hellenistic and post-Hellenistic Central Asia, I consider these spaces in a
wider landscape context. I reiterate points made in the preceding chapters that there is a perceptual shift in human-landscape interactions in which landscapes become anthropogenic and the objects of rural control. However, pit-houses remain humble imprints on the landscape. These structures do have practical aspects, like excellent heat regulation, simple planning, and avoid many architectonic problems with above ground architecture in Central Asia. However, as spaces that structure the lives of people (being long term habitations) they represent a conscious choice to remain inconspicuous.

The final chapter presents some basic conclusions that reiterate the key points made in the wider text. While this is primarily a space to bind my arguments, I take the opportunity to summarize the most salient features of the dissertation for readers who do not wish to engage with the thick description of the preceding chapters. I also draw together avenues of future research that emerged from the data drawn together in preceding chapters as a blueprint for subsequent studies. Following this conclusion are a bibliography of referenced works, a list of images followed by those images, and finally, a catalogue of sites assembled in the *Archaeological Map of Central Asia in Antiquity* in its present state.

1.3. Abandoned lines of inquiry: Ustrushana/Chach/Ferghana, Chorasmia, and Margiana.

To conclude this introduction, I would like to alert the reader to three major geographic regions that were fully integrated into Hellenistic Central Asia but have been deliberately left out of the final version of this work. These are Margiana (Murghab Delta, southern Turkmenistan), Chorasmia (Amu Darya basin, northwest Uzbekistan/northern Turkmenistan), and Ustrushana/Chach/Ferghana (oases of Jizzakh and Tashkent, Uzbekistan and modern Ferghana in Uzbekistan/Tajikistan). I spent a
significant amount of time developing analyses of these incredibly important zones. At no time did either region fit comfortably within the comparative framework between Bactria and Sogdiana.

Focusing on Bactria and Sogdiana became a particularly effective way to emphasize indigenous traditions under the influence of colonial contact. There is far more Hellenic influence in the material culture of Bactria than Sogdiana, which is understandable since Greco-Macedonians held Bactria from the conquest of Alexander until their complete expulsion in 135 BCE. Within that time there were strong ties to the Mediterranean world through overland communication across West Asia, but also likely through the Indus Valley (another region that begins to influence the material culture of Central Asia around this same time). As a result Bactria developed a unique cultural identity that was distinct from all other Hellenistic kingdoms in Europe and Asia. Within this colonial context it is quite interesting to consider the ways in which rural communities interacted yet maintained their own indigenous identity.

Sogdiana is far different from Bactria in that there was less engagement with elite material culture introduced through colonial acculturation. Greeks ruled Sogdiana for only a brief moment – from Alexander’s conquest until the end of the 3rd century BCE. This is very little time in the grand scale of history. Yet there are important engagements and quite important is that Sogdiana was nonetheless culturally and politically tied to events in Bactria despite being beyond the northern borders of Hellenism. For one, there is evidence that at least some rural communities consumed Greek material culture and integrated it into their lifeways – notably in ceramic traditions. Sogdiana was also the gateway to northern areas of Central Asia – Chorasmia, the lower Syr Darya,
Ustrushana/Chach/Ferghana, and the steppe. All four of these regions also consumed elite Greek culture and integrated aspects of Hellenism independently of each other. Sogdiana geographically facilitated those interactions, anticipating an economic role for this region that is much better documented in Late Antiquity.

Noting that Chorasmia, the lower Syr Darya, Ustrushana/Chach/Ferghana, and the steppe each had their own unique engagements with Hellenism helps me justify their exclusion from this thesis. My approach to Bactria and Sogdiana is to consider trends that I see beginning in the Bronze Age of each region. To do so for Chorasmia and Ustrushana/Chach/Ferghana, and now I include Margiana, would have resulted in an endless and conceptually disjointed dissertation. I will take this opportunity to outline the problems that I see for each before dismissing them and moving on, although I note that the reader will periodically encounter evidence from these regions introduced as comparanda.

Ustrushana, Chach, and Ferghana constitute the northeastern periphery of Sogdiana in the Achaemenid and Hellenistic period. Ustrushana is a wide plain with the modern town of Jizzakh at its center situated between modern Samarkand and Tashkent. Only Ustrushana can be considered part of ancient Sogdiana, at least if we follow the opinion of ancient Mediterranean authors (Arrian, Strabo, Quintus Curtius Rufus). Chach is the ancient and Medieval designation of modern Tashkent, which at times is also referred to as Kanka. Ferghana is an isolated oasis nestled in a rugged mountainous zone east of Ustrushana and south of Tashkent (between the Turkestan and Chatkal-Ferghana spurs of the Pamir mountains), of which the modern cities of Khujend, Kokand, and
Andijan are the most important modern political centers. These three zones are more culturally interrelated with each other in antiquity than the rest of Sogdiana.

During the final quarter of the first millennium BCE the Tashkent Oasis would have been at the absolute margins of contact with Greek colonizers. The region is arguably the location of the elusive center of the tribal Kangju political power which also ruled over parts of Sogdiana after the 2nd century BCE. Integrating sites documented by Soviet scholars dating from the 4th century BCE – 3rd century CE would have drastically bloated my database and would have taken many months to complete meaningfully. I am convinced that there is little appreciation for the work of Soviet era scholars who explored the region and did so much to elucidate the cultural development of cultures situated around Chach and Kanka which later developed into modern Tashkent. Second, Chach and Ustrushana constitute a contact sphere between multiple cultural traditions local to this area but also beyond the region in Sogdiana, Bactria, Chorasmia, the Syr Darya, the steppe, northwest China, and even Siberia. To try to deal with this level of complexity would have resulted in a chapter that is incoherent compared to the strengths of comparing Bactria and Sogdiana, even with a wealth of comparative evidence for rural settlements in that region.

This leads me to my next point. Rural settlements in Chach and Ustrushana emerged in fundamentally different conditions than those of Bactria and most of Sogdiana and much more is known about the oasis during the Medieval period, when the region undergoes rapid development and urbanization. Many earlier settlements are

11 Sima Qian (Watson tr.) *Shiji* 123.
12 Буряков 1975.
located in intermontane river valleys that are similar to those of the Panjikent Oasis. Sites dating to the first millennium BCE in the Tashkent Oasis clustered around the Chirchik and Akhangaran Rivers. While proximity to rivers was still the primary motivator for locating a farm, it is the interconnectivity of and access to trade routes throughout the mountains and then in Tashkent Oasis that has been posited as the main determinative factor for the location of an ancient settlement. This is primarily because of the critical role rural populations played in the mining of precious materials and essential metals from the upper reaches of the Chirchik and Akhangaran rivers. A study on the importance of trade and resource extraction for rural communities in this region would again take me beyond the scope of my study. What is more, it would be odd to conduct a thorough analysis of Ustrushana and Chach without reference to Ferghana, which in terms of rural settlement architecture shares some commonalities in material culture, but a different model of rural vernacular architectural production despite Ferghana’s close proximity to the other regions. Having raised all of these points, I do plan to consider the Tashkent Oasis at a later time and consider these points in relation to this thorough study of Bactria and Sogdiana.

The Ferghana Valley has a unique status in the history of Central Asia. The region enters ancient Mediterranean sources by way of Alexander’s conquest of Sogdiana, famously as the very limit of his northeast conquest where he founded “Alexandria Eschate.” Alexandria Eschate was most likely located at the modern city of Khujand, which is situated right at the narrow pass connecting easternmost Ustrushana with the Ferghana Valley, but there are not any archaeological indications that there was, in fact a

city there. Ferghana has also been the focus of archaeological investigations since the 1930’s with a very strong record of continued research into all periods of the region’s past.\textsuperscript{14} Ferghana had its own mode of material culture production compared to other regions of Central Asia since the Neolithic period but was nonetheless a variant of the Hissar Culture of southern Tajikistan and Dzheitun Culture of the Kopet Dagh in Turkmenistan.\textsuperscript{15} For the early first millennium BCE two parallel traditions seemed to have occupied the same territory – the sedentary Chust culture and a nomadic culture that was the southern extension of steppe and inner mountain populations. This situation only becomes more complex with the emergence of the Eilatan-Aktam culture from the 6\textsuperscript{th}-3\textsuperscript{rd} century BCE, a society in which these traditions merge and there is an overall sedentization in the Ferghana valley.\textsuperscript{16} This culture is of course much different than Ustrashana, Chach, and in fact all of Sogdiana in its production of above ground farmsteads built of pakhsa, a major textile industry, a metallurgical society built on iron production, and a burial tradition that continues steppe traditions. Yet similarities include an economy built on wheat, millet, and barley cultivation, an emergent emphasis on viticulture, and stock rearing of sheep, horse, and cattle.

More historical information is known about Ferghana from ancient Chinese sources than from Mediterranean writers, the earliest of which predate extent attestations for this region and part of completely independent documentary traditions.\textsuperscript{17} The period mentioned in Chinese sources also reflects a time when Ferghana had already culturally

\begin{itemize}
\item \textsuperscript{14} Gorbunova 1986.
\item \textsuperscript{15} Gorbunova 1986: 22.
\item \textsuperscript{16} Gorbunova 1986: 22-57.
\item \textsuperscript{17} Morris 2019: 390.
\end{itemize}
realigned itself and adopted traditions of Hellenized Sogdiana and Bactria as well as Wu Sun society stretching into Xinjiang. According to Shiji 123, Han Dynasty military forces led by the general Li Guangli were active in Ferghana already by the late 2nd century BCE. The region was apparently invaded as a show of force against Ferghana rulers, referred to by the Han as Dayuan, for their refusal to submit to the Han Emperor Wudi and supply him with a breed of horses particular to the region. This is the closest to physical, imperial contact Han China would ever come to Hellenistic Central Asian kingdoms. Yet from an archaeological perspective life went on unabated within the valley.

This unique development is generalized into the Kugai-Karabulak culture after the two most prominent sites where this tradition emerged (2nd century BCE-5th century CE). The most significant change is in pottery production with the introduction of wheelmade red and occasionally black slip and engobe fine wares alongside handmade pots with distinctive painted ornamentation. There is also a substantial increase in the number of settlements, an intensification of agriculture (but only with minor artificial irrigation works), and an emergence of fortified sites. Most striking is a wide range of rural domestic house types with houses built of mudbrick, handmade bricks (guvalak), and/or pakhsa. Some houses are built on platforms and tend to have a central room with flanking chambers or are cruciform in shape. We also note that it is during the 2nd century BCE where Greek deities become represented in art, such as a bone plaque representing Nike holding a laurel found at Tudai-Kalon. Bronze mirrors reflecting both steppe and

18 Sima Qian (Watson tr.) Shiji 123: 244.
19 Gorbunova 1986.
Han Chinese types of the 1st century BCE and beyond are also characteristic as well as coinage dating to the Wu Sun period. In terms of economy, we are at a great advantage in that Soviet-era palaeobotanical analysis placed special emphasis on Kugai-Karabulak sites finding that a wide variety of barley species were grown alongside wheat, alfalfa, millet, and even rice (at Munchak Tepa) due to a period of oversaturated ecological niches within the valley.\textsuperscript{21} Legumes, peas, poppy (wild and domesticated), and cotton. Fruit seeds are also common with pumpkin, melon, watermelon, almonds, peaches, apricots, cherries, and apples all archaeologically attested. However, a special place is given to Ferghana viticulture at this time with regular finds of wild grape \textit{(vitis silvestris)} but especially the excavation of a full winery. This is quite significant because wine is singled out by Zhang Qian as a unique export of this region in an interaction that historically attests to the introduction of both grapes and grape wine into Han China for the first time.\textsuperscript{22} In reality, Kugai-Karabulak represents not a single unified culture, but a complicated merger of many traditions scattered throughout the valley – far too much to be integrated here as an independent chapter.

Margiana is a zone that was more difficult to exclude but I am confident that this was the correct decision. Margiana is largely restricted to the Murghab Delta in southern Turkmenistan and is famously the birthplace of the Bactria-Margiana Complex (aka Oxus Civilization) during the third to second millennia BCE. While we now have a great deal of evidence regarding Margiana’s Bronze Age, we have a distinct lack of understanding about rural Margiana in the Hellenistic period. Whereas there is strong continuity in

\textsuperscript{21} Gorbunova 1986.
\textsuperscript{22} Sima Qian (Watson tr.) \textit{Shiji} 123: 244-245.
Bactria and Sogdiana from the Bronze Age through Hellenistic period, there is no evidence for this in Margiana. A near comprehensive survey of the Murghab Delta was undertaken in a decades long international collaboration between the Institute of Archaeology of the USSR Academy of Sciences (IARAN) under the prominent Soviet Classical Archaeologist G.A. Koshelenko and the Italian Institute of the Middle and Far East (IsMEO) under M. Tosi from 1989-1998 (IARAN-IsMEO). The results of their work was published in several volumes, notably the *Archaeological Map of the Murghab Delta Studies and Reports* volumes focusing on observed settlement patterns of the Bronze and Iron Age as well as the more comprehensive text *The Archaeological Map of the Murghab Delta Preliminary Reports 1990-95.*

In my own efforts I relied more on the second book and its accompanying maps. While I have ultimately excluded Margiana from this dissertation all 4th century BCE - 4th century CE sites documented by IARAN-IsMEO has been carefully integrated into the AMCAA and standardized with all other sites of Hellenistic Central Asia. These results are included in my appendix but not analyzed in detail within the text. The decision to exclude Margiana is based on the following criteria. First, while there approximately 70 sites dating to the Yaz III period around the Murghab (not least of which is Yaz Depe itself), during the Hellenistic period there is an inexplicable absence of sites across the entire oasis. Only three sites are known covering a period of 280 to early 2nd century BCE. These are the Hellenistic city founded at Gyaur Kala (AMCAA 960) and Erk Kala (AMCAA 959) by Antiochus I in 280 BCE and that same ruler’s long wall that

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encapsulated much of the agricultural oasis around that same time, now known as the Gilyakin-Chilburj wall (AMCAA 925). These sites have been continuously excavated Only two additional sites emerge at the end of the Hellenistic period (early 2\textsuperscript{nd}-mid. 2\textsuperscript{nd} century BCE). These are the fortification at Kelteminara Depe (AMCAA 887) and the unfortified site Alan Depe (AMCAA 996). Together these are hardly sufficient data to characterize rural life in the Hellenistic period, even if we have one of the most substantial Hellenistic cities (Gyaur and Erk Kala) and the single most important type site for Central Asia’s Iron Age (Yaz Depe) looming large in the oasis. I would be on better grounds if I were to include Parthian material, for which there are several important elite rural sites within the delta and slightly beyond (for example, Garry Korez) and overall, a rise in settlements to approximately 90 total sites dating from the mid. 1\textsuperscript{st} century BCE – late 3\textsuperscript{rd} century CE. However, I consider this phenomenon to be fully integrated within the context of wider efforts across the Parthian Empire in conversation with similar developments in Bactria and Sogdiana. As with other excluded zones this is too complicated an issue to handle efficiently here.

Finally, I note the exclusion of Chorasmia and the adjacent relict agricultural oasis of Sarygamysh. This was the easiest region to exclude despite its status as the best understood rural landscape in the first millennium BCE. Here some of the most exciting archaeological evidence for rural life in Central Asia on account of the foundational work of S.P. Tolstov’s innovative explorations during the 1940’s and 1950’s and especially the work of his former graduate students. In particular, I highlight the work of B. Andrianov whose microregional approach to the irrigation hydrology of Chorasmia influenced my
Despite being far beyond the limits of Hellenistic power, rural and elite contexts in Chorasmia were quite interested in Hellenism. Yet this was not a wholesale adoption of a Greek cultural package, it was uniquely Chorasmian – the study of which has already been attempted in a dissertation and subsequent monograph by Michele Minardi. However, Minardi only tangentially engaged with non-elite rural contexts that did not engage with Hellenism, thus producing an incomplete picture of life for this sector of society. Since his work focuses on elite contexts this is permissible, but a fuller synthesis remains to be done. Given the sheer mass of data, this cannot be done here. I do however, make regular reference to important rural sites in Chorasmia across the first millennium BCE because, as we shall see, the specter of Chorasmia shadowed Bactria and Sogdiana alongside that of Hellenism.

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26 Minardi 2015.
Chapter 2. Theoretical contextualization and methodology.

2.1. The theoretical context of this work

2.1.a. Introduction.

This dissertation addresses one of the most important unanswered questions in the study of Hellenistic Central Asia – who were the indigenous rural Bactrians and Sogdians subject to cultural transformations in an era of Greco-Macedonian colonization? Where were their settlements concentrated? What landscapes did they inhabit? It also asks, how did these people inhabit the diverse ecological areas that is Bactria and Sogdiana? At present there is no systematic framework for addressing the question of rural life in these regions, nor for the question of continuity and origins of indigenous traditions among those populations. In approaching this topic, I attempt to situate rural populations in space while taking into account the varied ecological landscapes of Bactria and Sogdiana, i.e. at a microregional scale. This is a difficult task because the archaeological record for each identified microregion is incomplete or otherwise features uneven states of preservation on account of later environmental and depositional processes such as aridification (the Bukhara Oasis), natural disasters (the plain of Panjikent), or unusual amounts of alluviation from matrices of independent local riverine systems (Surkhandarya). Therefore, in reconstructing rural landscapes for the 4th century through 1st century BCE I consider human-environmental relationships within a general mode of human ecology within an overarching framework of landscape archaeology.
The relationship between people and environment is central to modern disciplinary anthropology since J. Steward introduced the concept of “cultural ecology” as a productive means for situating human culture in the physical world. Cultural ecology, and its more mature outgrowths of ethnoecology and environmental anthropology, is a basic concept within disciplinary anthropology but has yet to find a methodological footing within areas that are traditionally the domain of Classical Archaeology. At a most basic level, Steward’s cultural ecology considered human-environment relationships in terms of particularities and patterns local to individual regions which he referred to as “culture cores” or a “constellation of features which are most closely related to subsistence activities and economic arrangements” but within which subsumed “social, political, and religious patterns.” Rather than considering these relationships in deterministic terms, adaptation and ingenuity were prioritized as the primary motivators for ways of living and cultural elements and assumes much agency in decisions made by communities about their living arrangements, beliefs, and subsistence in conversation with their environmental reality. Traditionally this approach would consider cultural elements such as settlement patterns, kinship, subsistence, material culture, knowledge sharing, social organization, land tenure and use, and the sacred (and many more) as specific to the local environmental conditions within which a community lives. What distinguishes this approach from determinism and passive diffusionism agency and cultural tradition, in that aspects of the environment deemed as salient are

27 Steward 1955.
made relevant only by people themselves, a key component of the human construct of landscapes, and not merely responsive to environmental realities.29

Steward’s cultural ecology laid the groundwork for a productive approach to human-environment relations in both anthropology and later in landscape archaeology. The major problem with Steward’s approach was its commitment to functionalism in giving primacy to subsistence and strategies to cultural stability. This came at the expense of symbolic,30 and phenomenological,31 aspects of being in the world. Likewise, his approach assumed that cultural change was evolutionary in a relativistic, multilinear scheme that did not abandon the primacy of technological progress.32 What remained useful was an emphasis on the idea that communities in micro-regional contexts would prioritize salient features of the environment beneficial and relevant to their own self-determined traditions; a recognition that there is no singular, predictable way in which human beings will occupy any given landscape.33

The ecological approach outlined thus far, however, still situates people against rather than within the environment, even if aspects of that ecological reality are cognizably reflected in a community’s self-perceptions of corporeal and existential belonging in the world. Within recent decades, new approaches to landscape and ecology have added a new dimension that do better to dissolve theoretical binaries between humans and their environments in emphasizing temporality as a missing component of

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earlier ecological reasoning. Temporality is the element that transforms the human occupation of an environmental setting into an ecologically interconnected landscape of meaning and world-building. It is sometimes easy to forget as archaeologists that excavated materials rarely reflect singular moments in the past, for example, as is seen in the final destruction layer of the late Iron Age site Hasanlu in Iran. Rather, material assemblages, physical architecture, and sedimentation and depositional processes reflect sites of embodied experience and dwelling over time. In many cases the temporal component reflects several human lifespans, especially for architectural structures that continued to be inhabited for significant periods of time. In situating my theoretical perspective here, I only aim to emphasize the fact that communities actually lived in the places under discussion – spending time working the land, cultivating crops, shepherding animals, raising children, returning to the home. These are aspects of embodied experience which T. Ingold would classify as dwelling within a landscape rather than merely occupying a place as an academic abstraction. What these experiential aspects meant for communities across Hellenistic and post-Hellenistic Central Asia cannot have been the same in each inhabited ecologically area for the simple fact that the realities faced living by those living in a semi-arid desert differ at a fundamental level than the realities of communities living on a piedmont terrace overlooking a river, or a cultivated plain in which a community inherited canal infrastructure built by their ancestors.

Whereas communities were responsible for the transmission of local knowledge and traditions about dwelling there is also the element of cultural diffusion. For the

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35 LaMotta and Schiffer 1999.
36 Ingold 2000: 172-188.
colonial context of Hellenistic Central Asia, this includes local decisions to adopt ideas introduced by hegemonic powers, such as Greeks and Macedonians, as much as the decision to continue earlier traditions indigenous to individual microregions. I take the position that rural populations retained the power to make decisions about adaption and adoption for themselves in the face of colonization, but that potentially significant elements introduced by a colonial power, such as the decision to depict a river god using Greek iconography, is to some degree in conversation with the worldviews of those populations. That is to say, a rural population would have already determined that natural features, such as rivers, were so important to their own interactions with the environment that the status of those features was elevated as sacred. Modes of representing those elements, including those introduced by foreigners, was considered an acceptable way to honor sacred aspects of dwelling in the landscape, the power of a riverine deity.

The considerations outlined thus far underlie all methodological decisions made in this work. I see microregional ecologies as significant categories of representation of various rural communities across the vastness of Bactria and Sogdiana. This is in contrast to tendencies to reify static dichotomies established in terms of Greek and non-Greek interactions that do a disservice to all populations who lived in Hellenistic Central Asia, colonial and indigenous, in all of their great complexity. These considerations may not always be apparent when I tackle regions with very scant archaeological evidence, but they nonetheless inform my own thinking and decision making in selecting which types of materials I draw into the discussion. This also greatly influenced my interest in rural domestic architecture to root rural traditions within each landscape. This work aims to give rural settlements and domestic architecture an empirical footing from which future
studies can engage with indigenous Hellenistic and post-Hellenistic Bactrian and Sogdian life as a meaningful line of inquiry. In rejecting the focus on monumentality and colonial institutions of Greeks and Macedonians, I aim to eventually show that rural households are the basis for understanding how local, non-elite populations were affected by or influenced larger structural, social, and economic changes under colonial rule while achieving some degree of confidence about our understanding of how populations lived in this world.\textsuperscript{37} This is very much in opposition to the presentation of rural Bactrians and Sogdians as abstractions within the texts of ancient Mediterranean authors. I do not claim to have resolved these issues in this dissertation, but it is my hope that these efforts at least open new areas of analysis that move beyond emphases on elite, colonial Greek life in foreign contexts and the dichotomies established by essentializing discourses about Greeks versus “non-Greeks.” I now turn to the issue of these dichotomies in the application of Classical and Near Eastern archaeological approaches to Central Asia’s material record in the study of Hellenistic Central Asia.

The excavations at Ai Khanoum in the Dasht-i Qala plain of northeast Afghanistan under the auspices of the Délégation archéologique française en Afghanistan (DAFA), directed by P. Bernard from 1964-1978, transformed ancient Bactria into an area of Classical and Near Eastern archaeological interest. The exposure of a Greek city this far east revived optimism about references to a vast Hellenistic urban landscape across Bactria described in the texts of ancient Mediterranean authors,\textsuperscript{38} which was one motivation in the creation of DAFA in September 1922 and the subsequent

\textsuperscript{37} Wilk 1997.
\textsuperscript{38} Justin 41.1; 4, 8; Strabo 15.1.3.
excavations of Balkh, location of the ancient capital Bactra, led by A. Foucher in the 1920’s.\textsuperscript{39} Foucher’s early work did not yield evidence for a vast Hellenistic city that had captured the imagination of many from at least the late 19\textsuperscript{th} century.\textsuperscript{40} Over the course of excavations at Ai Khanoum however, the architectural infrastructure of Greek institutions was exposed: a herōon to a city \textit{oikist}, a theater that sat 6,000 people, a “polis” temple, a gymnasium, a palace, and others.\textsuperscript{41} Yet the excavators of the city were quickly confronted with a range of prominent features embedded within virtually all of these “Greek” colonial edifices that were also structured in Iranian and Mesopotamian principles, such as the main city temple. This led to a greater reliance upon truly Greek institutions in the city, such as the theater and gymnasium, as positive evidence a Greek polis in Central Asia.\textsuperscript{42} However, even among these examples, which do not have clear Iranian and Mesopotamian formal characteristics integrated into the structural forms, there are architectural and spatial elements that are otherwise wholly unique to Ai Khanoum and without influence from any Mediterranean predecessors.\textsuperscript{43} From a practical standpoint V. Messina and A. Invernizzi has noted that there is no basis to assume that Greek colonial institutions brought into Asia by way of the Seleucids were not made immediately accessible and incorporated into the social fabric of non-Greek urban life.\textsuperscript{44} Therefore even within the framework of a Greek city in the east there are serious flaws in

\textsuperscript{39} Fennet 2010; 2021.
\textsuperscript{40} Fennet 2021: 145-147.
\textsuperscript{41} For an overview see Martinez-Sève 2014.
\textsuperscript{42} The claim is often repeated, but see for example Holt 1999; Martinez-Sève 2014.
\textsuperscript{43} Hoo 2015: 35.
\textsuperscript{44} Messina and Invernizzi 2012.
emphasizing Greek culture as a distinctive class of meaning set in opposition to colonized populations, as early excavators of Hellenistic sites in Central Asia sought to do.

The urban area of Ai Khanoum is situated between a sixty-meter-high acropolis and the confluence of the Kokcha and Darya-i Panj rivers (Figure 7). The city features a lowland urban core and a raised acropolis plateau. One peculiarity of this context is that the acropolis was the location of the non-elite vernacular homes of the so-called “indigenous population” and the fortified lower town was the center of administration, religious life, and elite residences. For my purposes these non-elite residences are invaluable for understanding the integration of local Bactrian populations into the urban fabric of Hellenistic Ai Khanoum. We do know that non-Greek populations interacted with the space of the city as is most apparent in administrative records written on ceramic vessels from the Ai Khanoum treasury indicating local officials with Iranian names who indeed may have been Bactrian. The presence of Iranian or Bactrian administrators is a continuation of Achaemenid period practices that were left intact by Alexander when he took control of the region and is one of the most salient features of several of the so-called Aramaic administrative documents of Bactria. Very little of the non-elite housing at Ai Khanoum is published but will be nonetheless critically investigated in the next chapter. It is possible that these residences are nothing more than garrison housing. Even if these houses were indeed the non-elite houses of urban indigenous Bactrians, G. Rougemont was pessimistic about our ability to identify them when stating that “we do

45 Older publications erroneously refer to the Darya-i Panj as the Amu Darya. In fact, the Amu Darya begins at the confluence of the Vakhsh and Darya-i Panj rivers further west by Takht-i Sangin.
48 Naveh and Shaked 2012: 199-212; Khalili IA 17
not know whether…there were ‘assimilated’ Bactrians or Indians” living in Hellenistic Central Asia, implying that two parallel spaces existed in Hellenistic Central Asia that did not interact, one occupied by colonizing Greeks and another by indigenous Bactrians and Sogdians. This seems somewhat extreme since such human interactions are inevitable and natural in a densely packed urban context. Nonetheless the presence of a Hellenistic city at Ai Khanoum did not spark an interest in Greek and indigenous interactions, but instead quickly became situated within a discourse on Hellenistic cities and institutions in Asia, or the phenomena of new formal modes of monumentality introduced to the eastern limits of the former Achaemenid empire.

There is a vast corpus of scholarship on Ai Khanoum specifically and Greek life in Central Asia more generally, much of which can be found in R. Mairs well curated, open access bibliography of scholarship on Hellenistic Central Asia. Yet in recent years there has been only two lines of inquiry exploring theoretical questions related to non-Greek life in the region. Both are handicapped by a lack of comprehensive accounting of available archaeological evidence for Hellenistic period settlements across southern Central Asia. The first is represented by attempts to consider Bactrians and Bactrian ethnic identity theoretically, within a post-colonial framework. Attempts were made to explore the issue through the lens of post-colonial models such as the “hybridity” as one

49 Rougement 2012: 181.
50 Leriche 2003.
51 Downey 1988; Mairs 2010; Messina and Invernizzi 2012; Lecuyot 2021.
52 Mairs 2011; 2013; 2014a; 2015a; 2016a; 2017; 2018; 2019; This now includes an excellent bibliography of numismatic research assembled by S. Glenn 2016.
example, and “trans-scalar set of processes of increasing connectivities between distant localities” central to some strands of globalization-theory as the other.

Initially drawn from the works of H. Bhaba and P. Burke, hybridity is a term drawn from biological sciences that is concerned with producing an explanatory model for population encounters during colonial contact that are typically drawn along ethnic lines while removing the possibility of identities as monolithic, essentialized forms. R. Guha’s own contribution to post-colonial approaches (although Guha is perhaps better described as anti-colonial) was to emphasize the “sub-altern” component of indigenous, local, and colonial interactions in deconstructing the inevitability of interactions among various stakeholders within which hybridization is one process. The difficulty for applying this approach to Hellenistic Central Asia has been the lack of accessible material to say anything substantive about local Bactrian or Sogdian ethnic identities, let alone their responses to colonialism or elements hybridized with Greeks. This critical gap means that attempts to reflect the dynamism of a hybridized cultural landscape in southern Central Asia has inadvertently entrenched essentialized categories of Greekness first and then the material culture of “everyone else” as peripheral to the colonial settlers. This is largely because of the accessibility and visibility of Greek material culture across scholarship and the invisibility of scholarship on Bactrian and Sogdian elements.

Both post-colonial theoretical approaches, hybridity and globalization theory, have emphasized the unique form and aesthetics of Greco-Bactrian monumental and elite

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54 Mairs 2016;
55 Hoo 2021: 555.
56 Bhaba 1994; Burke 2009.
57 Guha 2009.
architecture in excavated Bactrian contexts, particularly at Ai Khanoum and Takht-i Sangin – sites that are both situated along the Amu Darya at the border of modern Afghanistan and Tajikistan. Outside of these post-colonial approaches has been more traditional, scientific fieldwork in Central Asia which has involved targeted, micro-regional surveys of Bactrian and Sogdian landscapes to contextualize Hellenistic sites within long-term settlement patterning. These surveys were typically associated with targeted excavations of sites that now serve as proxies for rural life. This is precisely the type of work that needs to continue to happen in order to develop a comprehensive understanding of rural lifeways across these varied microregional ecological areas.

Nonetheless, neither post-colonial theory nor traditional fieldwork methods have emphasized concepts such as indigeneity per se, instead trying to expose more generally where non-Greeks lived, how they lived, and what the historical and political implications of their presence were considering Greek colonization. These are conversations that will only evolve from here.

My work in this project is simple because of the targeted scope of previous approaches. Through a near comprehensive, micro-regional synthesis of available evidence for settlement patterning during the 4th-1st century BCE I ask three very basic questions:

- Where did rural populations live in relation to the wider environment (i.e. their landscape and ecological setting)?
- How did people live within that environment?

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In what ways were the lifeways of these communities one aspect of a longer traditions of sedentism and pastoralism? In what ways do they break with these traditions or reflect a slow evolution of traditions?

In this chapter I first lay out my theoretical reasoning and perspective in attempting this topic, which was borne out a genuine frustration with the ways in which Greek colonization in Asia after Alexander has been represented in Classical approaches to archaeology and history. I do not find my own frustration reflected in current scholarship despite the colonialist legacy that anchors the discipline. As outlined in my introduction, there is a great deal of scholarship into elite Achaemenid, Greek, and Greco-Bactrian life that is often taken as a proxy for life in Hellenistic Central Asia as a whole. What I hope to demonstrate here is that elite, Greek influence in Hellenistic Central Asia was quite limited. Instead through emphasizing settlements, I find that the indisputable majority of evidence points to rural, non-elite communities living in Bactria and Sogdiana – communities which often (but not always) only superficially were engaged with Hellenism.

I agree with R. Mairs and M. Hoo that post-colonial approaches are well suited for Hellenistic Central Asia, even withstanding barriers in the transposition of theories designed to explore modern phenomena. We could not have clearer evidence for a colonial encounter in antiquity than the presence of Greco-Macedonians in such a geographically distant region as Central Asia. The difficulty for post-colonial approaches in this context is the limited scope of inquiry into indigenous Bactrian and Sogdian life – the very people colonized. Since such approaches are fundamentally about the human experience of power imbalance during an obscene act of cultural intervention and

violence, its theoretical foundation must be built on what R. Guha referred to as the “subaltern” perspective, that is to say the prioritization of local experience as much as that of the elites.\footnote{Guha 2009.} Unfortunately for this topic the material evidence is skewed towards excavated elite, colonial contexts and ancient Mediterranean histories. I will elaborate on this problem below.

Nowhere in this dissertation do I enjoin myself with current, topical debates in Hellenistic Central Asian archaeology. These are questions of ethnicity in Hellenistic Central Asia, the Greekness of Ai Khanoum – Central Asia’s only broadly excavated Hellenistic city, syncretic religion, the origins of Zoroastrianism, the ancient names of cities and towns after Alexander, implications of coinage and mints in different regions, nor do I recount the campaigns and political events of Greek kings (Alexander, the Seleucids, Diodotids, Euthydemids), nor do I make qualitative judgements on of Greek material culture in Bactria or Sogdiana. I also avoid issues of historical geography, such as the political boundaries of Bactria and Sogdiana or questions about the location of minor regions such as Paratakene or Gava. These are all avenues of inquiry that encompass the much of Hellenistic Central Asian historiography, a vast bibliography for which, as noted, is easily accessible in an open access format.\footnote{Mairs 2011; 2013; 2014a; 2015a; 2016a; 2017; 2018; 2019; Glenn 2016.} Instead I attempt an entirely new line of inquiry, hopefully not perilously among readers within a discipline that I share much affection for.

To connect my theoretical outlook with my aims outlined in the previous chapter the objective should be clear. What I aim to achieve is a critical inquiry into Hellenistic
and post-Hellenistic rural settlement patterning across Bactria and Sogdiana, situating that evidence within precise environmental contexts, then exploring the excavated evidence for life in those regions. This includes some preliminary results from my own excavations of a rural settlement at Bashtepa in western Sogdiana, where I was able to excavate a rural site with present issues outlined above in mind. With this excavated material I try to relate local rural life, especially sedentary agricultural life, within the long-term development of local traditions. In this latter line of inquiry, I have targeted the archaeology of households for reasons outlined above – to root rural communities within the long-term developments and continuities of indigenous life and landscape interactions that are manifest in the Hellenistic and post-Hellenistic period. This is opposed to other lines of inquiry, such as mortuary evidence, which would have been another appropriate method for approaching this same topic. Given the sheer mass of available data, I have excluded mortuary evidence with only a few specific exceptions.

There are also two utilitarian components to this dissertation. The first involved the creation of the new aforementioned gazetteer of archaeological sites, which I have titled the *Archaeological Map of Central Asia in Antiquity (AMCAA)*. My methodological considerations and intentions in developing this database are included below in my methodologies section. The second utilitarian component is that in my chapters on Bactria and Sogdiana I undertake a thorough, thick description of key sites that are important for understanding the development of rural life Hellenistic and post-Hellenistic Central Asia. I drew out certain elements of settlement location, domestic architecture, and excavated material culture that I felt were important for understanding how rural populations lived within their immediate environment. However, there is another purpose
here. One major barrier for early career students and scholars is that most archaeological
data is found in Russian language publications. Many of these publications are totally
unknown to non-Russian students or are difficult to access through Western library
networks. I regularly found that when these Russian language materials are engaged in
scholarship there is confusion over the phasing and stratigraphy of several important rural
sites (for example, Tamoshotepa, Nurtepa, Tepai Diniston). Therefore, I wanted to use
this space as an opportunity to increase the accessibility of lesser-known sites for students
that have not yet acquired the requisite language skills. Since this dissertation will live
permanently as an open-access resource I encourage all to engage with the material
presented here and develop new critical modes of inquiry.


The legacy of Classical Archaeology as an outgrowth of European colonialism
and imperialism is now regularly acknowledged since both I. Morris and P. van
Dommelen independently made the case that prevailing ideas in recent centuries about
the role of Greece and Rome in the ancient Mediterranean and Near East were influenced
by the global context of Western imperialism and self-perceptions of cultural
supremacy.\(^{62}\) By the mid-1990’s context of both of these works, E. Said’s own critical
appraisal of Western perceptions of Asia, which Near Eastern Archaeology had heavily
influenced (and was often politically implicated in), was also the outcome of centuries of
European imperial interests east and south of the Mediterranean.\(^{63}\) From Said’s work, it is

\(^{63}\) Said 1978.
now regularly acknowledged that 19th and early-20th century archaeologists of the Near East and North Africa were active in crafting narratives of cultural and political despotism in ancient and modern Africa and Asia, narratives which upheld Western European justifications for chauvinism and colonial enterprises within these same regions. I follow others in agreement that many of these legacies are still active in the study of Hellenistic Central Asia where the three interrelated disciplines of Classical, Near Eastern, and Central Asian archaeology converge. Specifically, M. Hoo has addressed vestiges of colonialist, Orientalist, thought in disciplinary paradigms within the context of Hellenistic Central Asia in exploring the intersection of academic discourses on Macedonian colonialism in Bactria, pan-Asian Hellenism, and Silk Road studies more generally.

My own contribution to this conversation is in addressing how perceptions of Hellenic supremacy inherited from disciplinary training have conflated positive evidence for Greeks and Greeks institutions in Central Asia with rhetoric about cultural hegemony over colonized Bactrians and Sogdians. In some cases, the rhetoric is deliberate in ways that I see as perpetuating a notion of Greek cultural superiority over what is often presented Central Asian backwater that is peripheral to the perceived grandeur of the Mediterranean and even lower Mesopotamian world. This has emerged in the form of approaches that seek out evidence for Greeks and Greek culture, particularly from the late 4th century to 1st century BCE, with archaeological evidence for native Central Asian life an only secondary, causal outgrowth of such studies. These approaches that I see are

64 Baharni 1998.
66 Hoo 2018; 2021.
particularly Hellenocentric have prevented serious inquiry into the local lives of Central Asians, who have been disqualified as an object of interest for various reasons described below and is the theoretical basis for my attempt to redress the record with this dissertation. However, it is important to acknowledge that others are now also challenging the privileged status of Greek material culture in Central Asia, for example recent reconsiderations of supposed Greek influence over local pottery production.\textsuperscript{67}

As noted, M. Hoo has critiqued scholarly interventions in discourse on Central Asia, especially those pertaining to Ai Khanoum, which perpetuate myths of a unified Hellenic culture after Alexander.\textsuperscript{68} This section briefly adds to Hoo’s critique in drawing attention to the pedagogical problems associated with Hellenocentric biases within the intellectual tradition of Hellenistic Central Asia among Western, Soviet, and post-Soviet scholars. In doing so I suggest some implications for the study of Hellenistic Central Asia that have hindered approaches that might have addressed the question of indigenous Bactrian and Sogdian life. In particular, I draw attention to generalizing emphases of Greek material culture, or symbolic elements in “composite” Greco-Mesopotamian-Iranian art and architecture of Hellenistic Central Asia, that present a distorted vision favoring identities participating in networks of elite, Hellenized cultural exchange. I believe this has, in turn, skewed our collective perspective of the evidentiary basis for cultural life in the period and importantly, hindered the possibilities for growth within the field. Unfortunately, this has only perpetuated a long-standing historiographic trope, explored below, in which the Greeks were perceived as a civilizing force and yet without

\textsuperscript{67} Junker 2019.
\textsuperscript{68} Hoo 2018.
any critical recourse for addressing how exactly these systems affected indigenous populations; populations who inevitably shared these colonized landscapes with new hegemonic forces and interacted with Hellenic and Hellenized elites.

Academic inquiry into Hellenistic Central Asian archaeology was born in the 19th century out of scant textual attestations for Greeks in Bactria and Sogdiana in ancient Mediterranean sources alongside rare coinage acquired by European travelers and soldiers acquired in Central Asian markets.69 Since the early 20th century there has been a trend to apply a presence/absence filter of Hellenism over all aspects of life within this region. A notable example includes J. Marshall’s *a priori* identification of an “Indo-Greek” city at Sirkap, Taxila.70 Yet even within a more modern setting we can point to the establishment of DAFA, which as discussed above, was ostensibly founded to seek out evidence for Alexander’s Seleucid successors and Greek cultural life at Bactra, Begram, and later Ai Khanoum. This was followed by its younger sibling the French-Uzbek Archaeological Mission (MAFOuz) at Afrasiab in modern Samarkand, which since 1992 has explicitly sought to identify the Hellenistic levels of what was once ancient Maracanda.71 As is well known, Hellenocentrism within this historiography did not escape the notice of South Asian scholars, beginning with A.K. Narain’s *The Indo-Greeks* (1957) which reformulated Hellenism in the East as a cultural product along distinctly South Asian terms.72 Already by the time of Narain’s writing Soviet scholars joined in de-emphasizing the impact of Greek rule in Central Asia. This was through the

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69 Coloru 2021.  
70 Marshall 1951; Mairs 2009.  
71 Gorshenina and Rapin 2021: 198.  
72 Narain 1957.
development of a more comprehensive approach to Central Asian history, in part inspired by the Russian Orientalist V.V. Barthold, which situated the rule of Greeks within a more expansion vision of a succession of imperial conquests.\textsuperscript{73} This Soviet approach, however, jettisoned Barthold’s nationalism and praises for Russian imperialism while integrating Soviet-style Marxist ideology into disciplinary historical materialism and explorations of broader socio-cultural dynamics that were unreliant upon elite (in this context) Hellenistic materialism.\textsuperscript{74}

As is often noted, the first known publication on Hellenistic Bactria is Theophilus Sigfreid Bayer’s \textit{Historia Regni Graecorum Bactriani in qua simul Graecarum in India coloniarum vetus memoria explicatu}, published in 1738, at a moment when Peter the Great was actively expanding Russia’s imperial boundaries to the Caspian Sea.\textsuperscript{75} It was within this political context that Bayer was appointed to the newly formed Russian Academy of Sciences as a specialist in Greek and Roman antiquities and perhaps was conscientious of Russia’s own activities in Central Asia while writing the history of earlier European expansionism.\textsuperscript{76} By the late 19\textsuperscript{th} century the Russian empire had expanded its boundaries to Samarkand and was in a position to assert itself as an appropriate curator of Central Asian antiquities, setting its military ambitions in the region within a moralistic, civilizing framework of Alexander the Great’s conquest of the same area.\textsuperscript{77} More broadly, these trends in Russia were similar to the theoretical notion of \textit{“Hellenismus”} introduced by German historian J.G. Droisen in 1877 as an explanatory

\textsuperscript{73} Бартольд 1963 (1927); Bregel 1980; Trigger 1984: 365-366.
\textsuperscript{74} Кошеленко 1979; Gorshenina and Rapin 2021.
\textsuperscript{75} Mairs 2014; Coloru 2021.
\textsuperscript{76} Gorshenina and Rapin 2021: 174.
\textsuperscript{77} Gorshenina and Rapin 2021: 178.
framework for understanding the presence of Alexander in moralistic terms. Drawing heavily on Hegelian dialectics, Droysen famously applied a principle of thesis-antithesis-synthesis to argue that Alexander was an instrument of moral progress in unifying east and west in such a way that could enable the conditions for Christianity. Seemingly independent of Droysen, the Russian historian V.V. Barthold, arguably godfather of Central Asian archaeology, came to similar conclusions about Alexander’s presence in Central Asia. Barthold’s own historical thinking emphasized an evolutionary scheme in which the long arc of Asian history could be defined in terms of shifting power centers networked through roads teleologically advancing towards increased interconnectivity and the spread of global culture. In his unpublished correspondence, Barthold emphasized the importance of imperialism as a force for the global good within which the Macedonian conquest of Central Asia was one of positive historical events that expanded cultural integration.

In the Western Europe, critical inquiry into Hellenistic Central Asia developed alongside the institutionalization of complementary fields of Classical and Near Eastern archaeology in the late 19th century. As a part of these disciplines, historical and archaeological interest into Bactria emerged from modern imperialisms that were entwined with British and Russian colonization in Asia as well as prospects among wealthy classes for exotic travel and adventurism. Russian and British travelers and

78 Droysen 1877. Droysen’s earlier history of Alexander (1833) already anticipated some ideas that would later evolve into Hegelian “Hellenismus” but it was not until Geschichte des Hellenismus appeared in 1877 that these became fully formulated ideas.
79 Droysen 1877; Bosworth 2006; 2012.
80 Бартольд 1963 (1927).
81 Bregel 1980: 388.
soldiers frequently encountered and acquired Greco-Bactrian and Indo-Greek coinage, flipping them on antiquities markets for Western private collections.\textsuperscript{83} It was in these interactions that a more scholarly engagement with Hellenistic Central Asia was formed in the 19\textsuperscript{th} century, so much so that by 1933 explorer-archaeologists such as A. Stein actively sought out the archaeological vestiges of Alexander’s campaigns in Central Asia, Iran, and the Indus.\textsuperscript{84}

The emergence of Bactria as an arena of eastern Hellenism quickly brought Bactria into an Orientalist discourse of Europeans in Asia and like Russians in Samarkand, British troops and travelers in India and Afghanistan also saw themselves as the heirs to Alexander in the east. One of the first scholarly works to emerge about Hellenistic Bactria was Hugh George Rawlinson’s \textit{The Bactrian Empire under the Greek Dynasties} in 1909, written while Rawlinson worked for the Education Service for the Government of Ceylon in India.\textsuperscript{85} The political context of this book appearing during the peak of British colonial involvement in South Asia are important. The book was published by the “Times of India” Office in Bombay. Founded in 1838 as \textit{The Bombay Times and Journal of Commerce}, the office took the name \textit{The Times of India} in 1861 after Indian shareholders of the predecessor company were bought out by British capitalists. It is during this time that the “Times of India” company directed its focus to international news (largely news of British interests elsewhere around the world) and claimed itself as an unbiased and intellectual newspaper whose audience was the British

\textsuperscript{83} Holt 2012; Coloru 2021: 130-137.  
\textsuperscript{84} Stein and Mirsky 1933.  
\textsuperscript{85} Already by 1912 H.G. Rawlinson published a second book on the history of Bactria that was more expansive in historical scope, titled \textit{Bactria: the history of a forgotten empire}.  

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public in colonial India. Publishing through this channel meant that the Rawlinson’s book would share in an audience pool of wealthy and educated British elites living in India who would have had much familiarity with Classical history.

In the preface to his text, Rawlinson presents Bactria as the locus of Greek and Asian intellectualism:

The primary interest of Bactria must always rest upon the fact that it was the great connecting link between East and West. The time has, let us hope, passed, when scholars can rest content with regarding the two great civilizations, Hellenic and Hindu, which the Aryan race has produced, as things apart. Each has probably played an essential part in the development of the other. Greek philosophy from Plato to the Gnostics shows Eastern influence, as clearly as Indian art, drama, and astronomy bear traces of contact with the West. In the Bactrio-Indian civilization of the Punjab, we are enabled to study the fusion of the two races at the point of contact.

The history of Bactria has besides an interest in itself; it is the story of a little-known and adventurous race, who show many elements of true greatness. To the important Parsi community, who may possibly be themselves the descendants, to some degree, of the Bactrian Greeks, the story of the historic capital of Bactria, the ancient cradle of the creed of Zarathustra, and full of memories of the great Iranian race, should prove to be not without interest.  

Situated within a racial discourse central to Western historical and anthropological scholarship at turn of the 20th century, Rawlinson saw Bactria and India as an arena of so-called “Aryan” intellectualism against the backdrop of a bygone archaic Iranian religious culture. However, Bactria served a geographic, not cultural, function in as a space that was the missing link between eastern (Indian) and western (Greek) intellectual traditions. An epigraph to Rawlinson’s book erroneously attributed to Buckle, but actually from J.W. Draper’s An Intellectual development of Europe (1863), stated: “If through the Bactrian Empire European ideas were transmitted to the Far East, through that and other similar channels Asiatic ideas found their way to Europe.” These statements reflect the

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86 Rawlinson 1909: preface.
tenuous colonial situation of the British in India at the time. For his audience of wealthy
British elites stationed or engaged in commerce in India, Rawlinson sought to draw a
direct connection between his intellectual circle in colonized Asia with an idea that of
ancient Greeks in Asia were responsible for much the same. In Rawlinson’s mind the link
was conceptually appropriate because of a perceived shared “Aryan” identity between
colonizers and colonized in both historical contexts.

Critiques of colonial contexts in the historiography of Hellenistic Central Asian
history and archaeology do not exist in a vacuum and reflect wider trends of
introspection. Other areas of Classical and Near Eastern archaeology interrogate similar,
wider colonial origins of Hellenistic Central Asia’s parent disciplines. Particularly
important has been the works of I. Morris,87 P. van Dommelen,88 S. Jones,89 and
especially C. Gosden.90 Despite twenty years of introspection in Classical archaeology
fewer attempts have been made to query colonialist paradigms in the context of
Hellenistic Asia after Alexander of Macedon’s conquest from 336-323 BC. One easy
explanation is that there are simply too few Classical and Near Eastern scholars that
prioritize Hellenistic Asia in their own research. This is certainly the case and I note that
a more proactive engagement with post-colonial discourse in Central Asia topic is only as
old as the post-colonial turn in Old World archaeology.

Most influential in this turn was S. Sherwin-White and A. Kuhrt’s From
Samarkand to Sardis: a new approach to the Seleucid empire (1993) which challenged

88 Van Dommelen 1997; Knapp and van Dommelen 2010.
89 Jones 1997.
90 Gosden 2004.
earlier notions that the emergence of a Seleucid empire in Asia marked a civilizational decline compared to the parallel rise of a grandiose Rome. While not necessarily cited as a work of post-colonial discourse per se,\textsuperscript{91} this work laid the groundwork in decentering the Greek Mediterranean world as the sole locus of innovation during the Hellenistic period while establishing the Seleucids as suited within the tradition of Near Eastern empires. This was a stark contrast to prior notions of politically weak and despotic Hellenistic Greek regimes, especially regarding the Seleucids in Asia, which was steeped in anti-Asian bias and Orientalism in Classical scholarship.\textsuperscript{92} This previous view reflected assumptions about the Hellenistic period generally that were left unchecked for centuries that were first articulated by J. J. Winckelmann in his \textit{Geschichte der Kunst des Alterthums} (1764) who presented the period immediately following Alexander as aesthetically, and ultimately culturally, inferior to all aspects of Archaic and Classical Greek life. Instead, Sherwin-White and Kuhrt established the Seleucids as fundamentally a Mesopotamian and Persian Empire in that institutions and governance were maintained, rather than rooted in Macedonian culture.

Cultural Hellenization was a reality in Asia, notably in the transfer of some Greek institutions like theaters and gymnasia to Asia, monarchical rule of a god-king (an innovation of Macedonian kings the time) as well as the widespread adoption of realism according to Hellenistic aesthetics in coroplastics and sculptural arts, and wholesale changes to monetized currency according to Greek principles. Despite this Sherwin-White and Kuhrt argued that the Seleucids ruled as Mesopotamian and Persian kings

\textsuperscript{91} Although see Strootman 2012.
\textsuperscript{92} Bevan 1902; Bickerman 1938.
where it mattered most, in maintaining a somewhat cohesive empire for two hundred years. Winckelmann’s influence no doubt played a role in the long-standing view that Hellenism in Asia after Alexander was only a debased form of an “original,” superior Greek culture centered earlier in Athens. This included the Seleucid presence in Asia, which was typically seen as a backwater empire of Asia that was politically ineffective and overseeing civilizational collapse in the Near East.93

In promoting Hellenocentrism in the Near East a unique perspective emerged from the idea of Greeks beyond the traditional “cultural boundaries” of Archaic and Classical Greece (that is mainland Greece, southern Italy, and Ionia), i.e. in Asia. In an important article, J. Waldbaum outlined the extent to which the Hellenocentric priorities of Classicists have driven the expectations, and therefore interpretations, of Greek material culture in foreign territory.94 As Walbaum noted, the presence of what was perceived to be “Greek” material culture in regions such as the Levant was often used as a foil for claims about the presence of ethnically Greek colonies – in this case imported trade vessels taken as proxies for Greek settlers in foreign contexts.95 Similar conversations were happening elsewhere. Within the sphere of Near Eastern archaeology, C. Kramer had already delivered a blistering criticism of this thinking in declaring that “pots do not equal people” in the transmission of greyware pottery that was used by some as evidence for the migration of so-called Indo-European populations in the late 2nd millennium BCE.96

93 Bickerman 1938. 
95 Boardman 1994. 
96 Kramer 1977.
Hellenocentric, diffusionist models of the sort criticized by Waldbaum still apparent in methodological and interpretive approaches in popular and scholarly narratives written about Central Asia’s Hellenistic period. For some, Hellenism is an essential, privileged category applied as the sole criteria for describing cultural phenomena. Take for example a recent article which ostensibly traced the development of sacred spaces in Bactria and Sogdiana across the Achaemenid and Hellenistic periods.\(^97\)

The authors rightly question the degree of Hellenism present in Sogdiana after the conquest of Alexander, noting a significant lack of evidence for Greek influence beyond certain ceramic types and garrison construction. In particular, the cultural origins of sacred spaces at Koktepa and Sangirtepa in Sogdiana were analyzed through comparative study. However, when one scrutinizes the parameters of *comparanda* set by the authors, one only finds reference to elite Greek and Persian contexts and no reference to more local cult spaces such as Koi Krylgan Kala in Chorasmia or Er Kurgan in the Karshi Oasis of Kashkadarya, signaling to the reader that no other local sacred architecture existed around the same time. Nor is an attempt made to situate sites such as Koktepa and Sangirtepa within the context of parallel sacred engagements contemporary to monumental architecture within shared landscapes, such as “nomadic” cult practice at the Tashkalak stone circle in Kashkadarya.\(^98\)

Particularly problematic is the way Central Asia has emerged as an arena of discourse in textbooks on Hellenistic history and archaeology aimed at general readership. Colonial, Hellenocentric perspectives in generalizing texts are inevitably the

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\(^97\) Рапэн и Хасанов 2013.
\(^98\) Сулейманов 2000: 59.
first scholarly spaces where undergraduate students will learn about the existence of Greek rule across Asia. Therefore, it is important that students understand that events, like conquest and migration, are interactive engagements between disparate communities with a distinct power syntax and not the mere the movement of a dominant culture into empty landscapes. While this point might be obvious to established scholars, this is not the case for early-stage learners. When learning about the spread of Greek culture across Asia they should not be confronted with the statements like:

…the koine (or ‘common’) dialect was a slightly modified form of the Attic dialect of classical Athens. For it is clear that, as in language, so in virtually all cultural matters, the Hellenistic Greek cities modelled themselves on classical Athens. Attic drama was everywhere admired and watched; city after city prided itself on being a democracy; Athenian higher education, in the form of Isokratean rhetoric, became the standard Greek higher education, and so on. This same cultural uniformity, based in great part on the Athenian model, is found in physical infrastructure and accompanying administrative institutions.⁹⁹ [bolded emphasis is mine]

Aside from the occasional performance of Greek drama, there is no evidence for anything stated here as such a matter of fact by R. Billows, in Central Asia or elsewhere. Billows’ assessment of Hellenistic cities in Asia misrepresents how the excavators of these cities describe these sites. For example, those involved with excavations at Ai Khanoum do emphasize the Greek cultural elements but always note Mesopotamian, Iranian, and Indian influences when they are evident.¹⁰⁰ While colonized populations are not mentioned, they exist in the subtext. Such statements reinforce a view of the civilizing Greeks in Asia. There is also a hint of a deliberate spread of civilization in the concept of

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⁹⁹ Billows 2005: 196-197.
¹⁰⁰ Rapin 2004; Martinez-Sève 2014.
a prepackaged “Athenian model,” which presumably for Billows was a cultural assemblage understood by actual Athenians.

The archaization of Central Asia’s “native” populations also persists in generalizing histories by reputable scholars that engage with Hellenistic Central Asia. Two texts are egregious in this regard: first is F. Holt’s *Into the Land of Bones: Alexander the Great in Afghanistan* (2006) and the second is J. Boardman’s *The Greeks in Asia* (2015). Holt’s work was the second in a series of monographs produced by the author on the Hellenistic history of Bactria. Having previously reinvigorated the field with a new systematic treatment of Seleucid and Greco-Bactrian history,101 *Into the Land of Bones* sought to tell the story of the United States’ ground war in Afghanistan beginning in October 2001 through the lens of Alexander’s struggle to conquer Bactria and Sogdiana from 330-328 BCE. The first line of the book situates the book within a colonialist framework: “Afghanistan, the world’s inexhaustible wellspring of warlords and terrorists, cannot escape the crosshairs of history.”102 In his book, Holt perceived the resistance of local lords, but particularly the Sogdian resistance fighter Spitamenes as somehow comparable to the Taliban resistance to America’s *Operation Enduring Freedom*. Not only is the comparison a gross anachronism, but it also preserves the sentiment of Billows that Alexander’s conquest was a legitimate effort to spread civilization in Central Asia. Whereas Billows implies a passive acceptance of Greek culture, Holt’s framework implies that Bactrians and Sogdians rejected the civilizing mission of Alexander to the degree of Islamic extremism.

In fact, Holt suggested that ancient Bactrians were to blame for Alexander’s conquest and that the Macedonian was incapable of ignoble acts of war:

“...the only destruction of croplands resulted from Bessus’s orders, not Alexander’s. The only locals killed by the Greeks were the descendants of other Greeks. No Bactrian except Bessus was tried and condemned to death. There seemed for just a moment an exquisite chance that the intervention might actually end well. The United States senses that possibility now, as once did the Soviets’ the British felt it twice. It is, historically, a dangerous feeling.”  

Holt’s apology for brutal conquest is historically incorrect, as A.B. Bosworth had already demonstrated convincingly in a monograph on the topic. I agree with Bosworth that Alexander’s activities in Sogdiana involved a deliberate policy of fear in the east that did not shy from outright terrorism and mass slaughter when encountering rural populations. When the Macedonian king pursued Spitamenes into eastern Sogdiana he senselessly sacked every village along the Zerafshan River (Polytimus). These actions were only one small part of a campaign of genocide against rural communities in eastern Iran, Bactria, in Sogdiana. In the forested mountains south of Bactra, Alexander employed a *stratagem* of ecological terrorism to force the surrender of revolting Bactrians under Satibarzanes. That this group fled to a naturally fortified peak of the mountain implies that they had an in-depth knowledge of their own local topography (as is expected). Unable to breach their position, Alexander ordered the entire forest burned to kill the locals by fire or force them into his own ranks. When crossing the Amu Darya (Oxus River) the Macedonians were greeted with favor by descendants of the Branchidae, the group who 150 years earlier had destroyed the Temple of Apollo at

103 Holt 2005: 45-46.
104 Bosworth 1996.
106 Arrian *Anabasis*, 4.6.6.
107 Quintus Curtius Rufus VI.vi.25-32.
Didyma to impress Xerxes during the Persian War. Now a community far removed from those events, the Branchidae still followed some Greek customs but spoke a linguistically altered form of Greek under the influence of local dialects. Encouraging an ethnic conflict, Alexander ordered Milesians in his own ranks to systematically slaughter every person in the town, raze every building, then pull every tree out of the sacred groves and salted the earth. When arriving at Maracanda (modern Samarkand) the Macedonians inexplicably raided and burned all of the surrounding villages, followed by the rest of the villages between Maracanda and Bukhara. This was also his treatment of the Memaceni at Cyropolis in northeastern Sogdiana. Bessus, already dead for most of these events, had nothing to do with any of these massacres.

J. Boardman’s *Greeks in Asia* (2015) is an extreme case that is hardly representative of present views in Hellenistic Central Asian scholarship. He is an author with wide readership and respect within Classical Archaeology. Nonetheless, Boardman continues to elevate the colonialist perspective of Central Asia in major publications, some of which otherwise are veritable scholarly publications. Boardman’s general impression of Hellenic material culture and iconography in Central Asia is binary. When aspects of Greek art and iconography are found in a foreign context, such as in the post-Hellenistic nomadic burials at Tillya Tepe in northern Afghanistan, he encourages us to accept it as “purely Greek” and within the cultural syntax of Hellenistic art in West Asia.

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108 Quintus Curtius Rufus VII.v.28-31.  
109 Quintus Curtius Rufus VII.vi.32-35.  
110 Quintus Curtius Rufus VII.vi.10.  
111 Arrian *Anabasis*, 4.6.6 (M. Hammond trans.).  
112 Quintus Curtius Rufus VII.vi.20-21.  
113 Cribb and Herrmann 2007.
and the Mediterranean. In doing so he asks us to disentangle Hellenism from the local context for art historical analysis within the tradition of Classical art and outside of its excavated context. He has also theorized about processes of cultural transfer. Framing the narrative of Greek interactions with Iranians and Central Asians, Boardman began his book with an anecdotal colonial encounter in Egypt that managed to dehumanize Greeks and “Arabs” at the outset.

In 1948 I met an elderly Greek man on the island of Naxos who said he had been with General Kitchener at Khartoum. As a boy he was helping his father sell lemonade to the British troops, undercutting the prices of the local Arab shopkeepers. The episode seemed typical of that Greek private enterprise and success far from home which was as apparent in antiquity as it is today, commercial rather than militant or imperial – consider millionaire shipowners.

In this introduction Boardman seeks to establish active, mercantile relations for Greeks against a backdrop of passive Iranian and Central Asians (Asiatics, as he refers to them) willing to receive Greek ideas and art. His presentation is an assemblage of the most recognized objects from Ai Khanoum, Takht-i Sangin, Tillya Tepe, and sites around Gandhara stressing only Hellenic aesthetics in form or iconographic representation as to demonstrate the potency of Greek culture in colonized contexts. This Hellenocentric diffusionist paradigm has defined much of Boardman’s career, and has been criticized in other contexts.

These examples are selected because they are texts that engage with Hellenistic Central Asia that are easily accessible for students. From the outset they establish a framework of Hellenocentrism and Greek cultural dominance without engaging any

114 Boardman 2007: 12.
115 Boardman 1995.
“non-Greek” material from these same places. These views serve neither science nor history, but only preserve the position of Classics as a bearer of civilization – so self-evident that engagements with local culture are not worth mentioning.

To this point I add one final example, that I see as representative of the resonance of Hellenocentrism in current scholarship. In a recent paper on the origins of Greek philosophy in South Asia is the following statement:

At the borderlines of Hellenism, in an isolated but not disconnected situation, the Greeks from Bactria, and later from India, managed to create an effective political, cultural and social synthesis with the other cultures and civilizations that crossed their paths in the Indian subcontinent in the last three centuries before our era.  

In this passage, which in some ways reflects H.G. Rawlinson’s 1909 approach to the same topic outline above, the Greeks are here considered “isolated but not disconnected” while simultaneously “creating” a “synthesis with the other cultures and civilizations.” In this romanticized view of Greek culture in Central and South Asia there is subtext of longing for the Classical Greek homeland of Alexander (of Macedon), which evidently Bactrian Greeks still yearned after living in Asia for several hundred years. What is more, itemized aspects of Greek culture invoked as active efforts for synthesis by Greeks is contrasted with “other cultures and civilizations” whose contributions are left vague. This synthesis has much in line with another “civilizing mission” of Alexander once accepted by Classical historians, W.W. Tarn’s thesis of a “unity of mankind,” drawn directly from Plutarch’s rhetoric in De fortuna Alexandri, in which Alexander’s invasion was a mission to impose racial harmony between Europe and Asia.  

From the perspective of the

117 Reggio 2020: 1.
118 Tarn 1933.
author, the project of synthesizing with Central and South Asians was successful – the Greeks “managed to create” their synthesis, even though we have no idea what local cultural infrastructure these Greek institutions were grafted to.

These examples are emblematic of reasoning that I see as detrimental to the field in that there is a tendency to elevate the status of Greeks while conducting an erasure of local populations. As is shown, popular narratives that are most likely to be a young student’s first encounter with the topic of Hellenistic Central Asia. Each source cited here does reflect a recognition that Bactrians existed as an entity without Hellenism, but the three operative modes in dealing with that fact sanction their diminished status. Boardman argues that a Greek colonial presence was a positive fact introduced to local populations. Holt invites his readers to perceive indigenous Bactrians and Sogdians as hostile threats responsible for their own deaths at the hands of invaders. Reggio sees Greeks and Bactrians as in an ethnic stasis in Central and South Asia of which only cultural elements important to Greek values (and to be fair to the rest of his work, South Asian philosopher classes) are worthy of interrogating. While the impact of Greek colonization from a Greek perspective is indeed intrinsically interesting and historically significant, we must begin to invite other ancient populations to the conversation table. As I show going forward, this is precisely what Soviet and post-Soviet scholars have done.
2.1.c. The myth of an academic “Iron Curtain.”

There is an oft-repeated myth that Western and Soviet scholars were unable to interact because of the Cold War from 1945-1991. This was largely the case within the sphere of opportunities for international collaboration on archaeological research projects. Some scholars, such as C. Lamberg-Karlovsky, P. Kohl, and M. Tosi were able to overcome these barriers beginning in the 1970’s in the context of the Brezhnev administration in the Soviet Union and an era of détente with America and Western Europe. In the arena of Kushan and Bronze Age archaeology some were able to make recent trends in Soviet archaeology accessible to Western academia through critical texts and translations of key findings and works. I am skeptical of the idea that Western scholars trained in Classical Archaeology did not have access to the Soviet era archaeological literature that forms the basis of my dataset in subsequent chapters. After the death of Stalin in 1953 there was a gradual increase in exchange of Western and Soviet archaeological scholarship with the easing of political interference in academia, notably with the establishment of the journal Soviet Anthropology and Archaeology. As is shown below, key Soviet archaeological texts were regularly collected by major academic libraries in America which included major journals that reported new findings pertaining to Hellenistic and post-Hellenistic Central Asia. If there was interest, I believe scholars could have formulated ideas about indigenous rural life in Hellenistic Central Asia much earlier than now.

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119 For example, Wu 2018.
120 Kohl 1984.
122 Trigger 2006: 342, 574-575.
The few Western scholars versed in Soviet era Classical and archaeological literature were as aware as their Soviet peers about two facts. The first is that Western scholars were overlooking good, productive Soviet scholarship, ostensibly on account of the Cold War. The second is that the Cold War was not enough to prevent the possibility for an engagement with Soviet archaeological material for a rigorous Classical Archaeology in Central Asia if someone were to make the effort.\textsuperscript{123} Soviet-trained Central Asian scholars echoed the sentiments of Western Classical scholars in their criticism of the state of Western historiography. The harshest critic was the late E. Rtveladze in his 2002 \textit{Aleksandr Makedonskii v Baktrii i Sogdiane} who reflected on the state of Western scholarship in the Soviet and post-Soviet eras:

> Another significant drawback of Western historiography is a superficial acquaintance with, and sometimes simply ignoring of, the achievements of Central Asian archeology (both in terms of discoveries and publications) in the study of archaeological sites of the Achaemenid period and its final stage, i.e., the time of the expedition of Alexander the Great.\textsuperscript{124}

As Rtveladze notes, statements made by Western scholars about incomplete evidence or the inaccessibility of Russian language archaeological literature state reflects more of an underappreciation of Central Asian archaeology in Western knowledge than an archaeological reality. Quite illustrative of this point is the fact that Rtveladze’s same book, which is an especially important text on Hellenistic Central Asia written in the Russian language, is not cited in the most widely read recent work of Western scholarship, R. Mairs’ \textit{The Hellenistic Far East: Archaeology, Language, and Identity in Greek Central Asia} (2014).

\textsuperscript{123} Graham 1961; Frumkin 1962; 1970.
\textsuperscript{124} Rtveladze 2002: 14.
The accessibility of Soviet era archaeological literature can be empirically demonstrated, at least for American institutions. While specific site publications and edited volumes of Central Asia were largely unavailable, major academic libraries in the United States had subscriptions to the physical copies of key Soviet archaeological journals. I have quantified the holdings of some of the key archaeological journals pertinent to Central Asia accessible to students and scholars across American institutions:

- **Sovyetskaya Arkheologiya** - 64 institutions
- **Arkheologicheskie Otkritya** - 99 institutions
- **Arkheologicheskie raboty v Tadzhikistane** - 23 institutions
- **Obshchestvennye Nauki v Uzbekistane** - 25 institutions

This data was gathered by analyzing the print holdings of each journal by institution on www.WorldCat.org. It is assumed that each institution with print holdings obtained their copies as these publications were issued, likely by a subscription.

125 American institutions with print copies of **Sovyetskaya Arkheologiya** include: the American Museum of Natural History, American University, Auburn University, Boston University, Brandeis University Library, Brown University, Bryn Mawr College, California State University, Cleveland Museum of Art, Columbia University, the Corning Museum of Glass, Cornell University, Dartmouth Library, Duke University, Dumbarton Oaks, the Field Museum Library, the Getty Museum, Indiana University, the Metropolitan Museum of Art, Michigan State University, New York Public Library, Ohio State University, Pennsylvania State University Libraries, Princeton University, the Smithsonian Institution Libraries, Stanford University, Stony Brook University, SUNY – Buffalo, Syracuse University, Temple University, Texas A & M, Texas Christian University, University of Alaska, University at Albany, University of California – Berkeley and Davis and Los Angeles, University of Chicago, University of Cincinnati, University of Colorado Boulder, University of Connecticut, University of Florida, University of Georgia, University of Hawaii at Manoa, University of Illinois at Urbana Champaign, University of Iowa, University of Kansas, University of Michigan, University of Minnesota- Minneapolis, University of Missouri – Columbia and Kansas City, University of Nebraska, University of New Mexico, University of North Carolina at Chapel Hill, University of Notre Dame, University of Oregon, University of Pennsylvania, University of Pittsburgh, University of Rochester, University of South Alabama, University of Tennessee, University of Texas, University of Utah, University of Virginia, University of Washington, University of Wisconsin - Madison, Vanderbilt University, Washington State University, Washington University in St. Louis, Wayne State University, Wellesley College, Yale University.

126 American institutions with print copies of **Arkheologicheskie raboty v Tadzhikistane** in their holdings include: Boston University, Bryn Mawr College, Columbia University, Cornell University, Duke University, the Getty Museum, Harvard University, Indiana University, Iowa State University, the Metropolitan Museum of Art, New York University, Texas A & M, University of California – Berkeley and Los Angeles, University of Chicago, University of North Carolina at Chapel Hill, University of Illinois at Urbana Champaign, University of Kansas, University of Missouri – Columbia, University of Oregon, University of Pennsylvania, University of Wisconsin - Madison, Yale University.

127 This number is so high that it is not worth listing each institution to prove the point.

128 American institutions with print copies of **Obshchestvennye Nauki v Uzbekistane** in their holdings include: Arizona State University, Boston University, Columbia University, Cornell University, Duke University.
Surely all of these institutions did not acquire these Soviet era publications after 1991. It is clear that a significant number of American institutions had access to at least the main archaeological publications of the Soviet Union, which included many of the reports on key Central Asian sites cited in this dissertation. More importantly, most major American research institutions with Classics or Archaeology programs that were likely to engage with Soviet scholarship on Hellenistic archaeology in Central Asia had access to the main archaeological publications of the Soviet Republics of Tajikistan and Uzbekistan.

Language barriers and interest are the only conceivable reasons for a lack of engagement with Soviet scholarship among Western archaeologists trained in Classical and Near Eastern Archaeology. Speaking to interest, there is a sense of skepticism of Soviet era scholarship structured into works such as B. Trigger’s *History of Archaeological Thought*, who implies that there is no heuristic value in Soviet scholarship on account of the Marxist ideology of the source material. It is important that Trigger’s work is the standard English language text for undergraduate courses in

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130 American institutions with print copies of *Istoriya Material’noi Kul’tury Uzbekistana* in their holdings include: Columbia University, Duke University, the Getty Museum, Harvard University, Indiana University, the Metropolitan Museum of Art, New York Public Library, Ohio State University, Princeton University, Stanford University, Syracuse University, Texas A & M, University of Arizona, University of California – Berkeley and Los Angeles, University of Chicago, University of Illinois at Urbana Champaign, University of Iowa, University of Kansas, University of Miami, University of Missouri – St. Louis, University of North Carolina at Chapel Hill, University of Oregon, University of Pennsylvania, University of Pittsburgh, University of Rochester, University of South Carolina, University of Southern California, University of Virginia, University of Washington, University of Wisconsin - Madison, Yale University.

archaeological theory and is likely read in full by Western graduate students interested in all areas of global archaeology.

We should be more sympathetic when language is a barrier to scholarship. Russian is indeed a difficult language to learn for non-native speakers. However, the acquisition of modern language competency is a technical requirement in virtually every Classical and Near Eastern Archaeology graduate department. Unfortunately, that acquisition is rarely extended to the home languages of regions of interest in a field where primacy is given to French, German, and Italian. In Central Asia, Russian is the *koine* language of scholarship and so students who seek holistic knowledge of archaeology of this region face real challenges in becoming prepared to work professionally in this region and with its academic literature when other languages are required without accommodations. This can only lead to a further reliance upon texts published in English, French, German, and Italian that, while extremely significant for our collective knowledge of Hellenistic and post-Hellenistic Central Asia, cannot produce scholars who fully appreciate the most important discoveries and theoretical trends within the discipline at an early stage of their career. Despite my own efforts here, I accept that this might even be the case for my own work.

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132 This even includes modern Greek for Classical archaeologists. If the justification for French and German language acquisition is engagement with pertinent scholarship, then the discipline fails again. Greek language scholarship is regularly published by the Ephorate in Greece and yet modern Greek is often a suggestion rather than requirement.
2.1.d. Seleucid royal ideology and the composite architecture of Ai Khanoum.

In this chapter thus far I have made three arguments: 1) that we should consider the archaeology of rural life in Hellenistic and post-Hellenistic Central Asia within the context of microregional ecological diversity rather than treat the settlements of “non-Greek” Bactrians and Sogdians as a monolith, 2) that the failure to do so for this period is largely steeped in colonialist thought that remains in Classical and Near Eastern archaeological approaches to Central Asia, and 3) that there have not been as many barriers to scholarly engagements with the archaeological record for rural indigenous life, largely published in Russian, as many in Western Academia have assumed (and when the barriers are real, they are self-inflicted to a degree). In this section I add another argument. Here I suggest that the site most commonly invoked as evidence for Greek colonial life in Central Asia, Ai Khanoum, is especially unique in Central Asia and will not satisfy expectations for understanding Hellenism broadly across all of Bactria and Sogdiana. Instead, I briefly suggest that Ai Khanoum was a colonial site that transposed distinctly Seleucid ideals about royal ideology from Mesopotamia into Central Asia and that these ideals were only elaborated upon by subsequent Greco-Bactrian kings that undertook more expansive urban development and monumentalization.

We should consider the unlikelihood that the Seleucid founders of Ai Khanoum intended to create the hybrid, architecturally multi-cultural city that others have correctly identified as its most salient formal feature. Doing so would have been a different approach to urbanization by the early Seleucids who were faced with mediating their own emergent modes of royal expression with the values and institutions of colonized

133 Mairs 2010; 2016b; Canepa 2018; Hoo 2015; 2018; 2021.
communities across Asia. For one, Ai Khanoum was not founded as a city, but as a garrison-settlement. The space was likely transformed organically for thirty years before a more monumental construction program was initiated under Greco-Bactrian independence in the mid-3rd century BCE. In the earliest phase of Ai Khanoum we cannot assume that the Seleucids were interested in replicating Greek cultural ideas in the east, especially given that Antiochus I, who never stepped foot in Greece or Macedonia, was equally Sogdian and Greek and otherwise raised in Babylonia. It is no surprise, then, that excepting the Herōon of Kineas at Ai Khanoum, the early buildings of the city are formulated within emergent modes of Seleucid royal expression that had not yet reached maturity; modes of expression that had only begun to emerge decades earlier under the Antiochus’ father Seleucus Nikator. Arguably, in Bactria, the king likely applied a expressions of royal identity that were likely emerging contemporaneously in Babylonia and Syria, and notably in conversation with planning policies underway at the newly founded Seleucia-on-the-Tigris in Babylonia.

Between 246-236 BCE usurpers to Seleucid rule in Bactria and Sogdiana were able take advantage of a decade of political instability in Syria and Mesopotamia within the Seleucid court after the death of Antiochus II in 246 BCE. In West Asia, that strife culminated in the Third Syrian War and the “war of the brothers” Seleucus II and Antiochus Hierax. This was a catalyzing event for Bactrian independence. Antiochus II’s appointed satrap Diodotus I had recently seceded before the death of the Seleucid king and was able remain in power during the turmoil of the west. While Diototus I was

135 Justin Epitome of Pompeius Trogus 41.4; Lerner 1999: 30-31.
able to establish himself as the ruler of a new Bactrian kingdom, it is unlikely that he was
able to hold Sogdiana for very long. At some point in the second half of the 3rd century
BCE Sogdiana completely broke free from Bactria. Nonetheless, Diodotus would have
only inherited expressions of royal identity from Seleucid predecessors, which in turn
was adopted by subsequent rulers such as Euthydemus, but especially Eucratides in the
early 2nd century BCE.

This contextualization is necessary for understanding why there are no clearly
identifiable elements of local, indigenous life in the monumental architecture of the city. I
argue that those who explore Ai Khanoum’s architecture as evidence for a composite
culture are engaging with a very specific context of royal expression that is not visibly in
dialogue with Bactrian architectural culture. What emerged at Ai Khanoum was a
Seleucid foundation where the mode of royal expression was in flux, not a space where
these ideas had already been established at the time of transposition from West Asia. As a
Hellenistic kingdom based in Syria and Mesopotamia, the Seleucids were interested in
creating a new royal identity representative of its geographic center. Therefore, the
composite nature of Ai Khanoum’s city architecture is unsurprising when one considers
the high degree of Mesopotamian conservatism in Seleucid architecture across the empire
that becomes unevenly juxtaposed with traditional Greek ideas and institutions. Within
this framework it is clear that Antiochus I only marginally altered Babylonian self-
expressions of kingship when he inherited this region from Seleucus Nikator. For
example, the Antiochus Cylinder from Borsippa illustrates that both the materiality of the
cylinder itself aligns with the text in demonstrating that Antiochus I formulated his royal
identity according to Mesopotamian royal ideology,¹³⁶ and that these elements were in further conversation with inward esoteric traditions of Babylonia.¹³⁷

There are other examples. At Seleucia-on-the-Tigris, more of a Hellenistic “urban foundation” than Ai Khanoum but with a similar administrative role, we find elite Hellenic installations such as a Greek theater built alongside other elite buildings and modes of urban planning that are very traditional by southern Mesopotamian standards.¹³⁸ However I emphasize the “newness” to this new foundation. Seleucia-on-the-Tigris was built in 312 BCE under Seleucus Nikator, roughly thirty years before Antiochus I began substantive work at Ai Khanoum – and notwithstanding that the earliest archaeologically verified architecture for both cities dates to the same time.¹³⁹ In cities which were not Seleucid new foundations architecture continued to be renewed along strictly local forms,¹⁴⁰ so much so that the introduction of a “Greek” gymnasium does not arrive in Babylon until 109 BCE under Parthian rule.¹⁴¹ At Babylon and Uruk there were significant, city-wide efforts to restore temples to Babylonian gods and build new ones that did not previously exist, all of which were funded by the Seleucid court.¹⁴² It does not seem that there was interest among local Babylonian populations to integrate the newly formed Seleucid architecture into their own lives and there is even evidence for “neo-conservatism” among elites in Hellenistic Mesopotamia. For example, it is from the Hellenistic period Palais Grèco-Syrien at Tello that E. de Sarzac excavated that majority

¹³⁷ Stevens 2014.
¹⁴⁰ Reuther 1926.
of the Louvre’s collection of Gudea statues. In this context they were set up in the house of the local Seleucid governor Adad-nadin-ahi as mementos of an earlier history of Girsu, which we know because his own house was built directly on top of the Sumerian Temple of Ningirsu and according to local formal modes of elite housing.\textsuperscript{143}

At Nimrud we also find that the urban framework was redeveloped according to older urban standards even while the ceramic assemblage featured many imports and local reproductions of eastern Mediterranean forms.\textsuperscript{144} It is here that we can recognize other spheres in which ideas from Greece were instituted in Babylonia. This includes the Hellenization of the local economy through new coinage and Hellenic sacred dedicatory practices at the Nabu Temple during the 3\textsuperscript{rd}-early 2\textsuperscript{nd} century BCE.\textsuperscript{145} As S.A. Langen-Hooper has recently shown, the miniature arts were impacted significantly by Greek influence.\textsuperscript{146} This may also be the case for Central Asian miniature plastic arts but at least in this context we must also contend with Chorasmian influence that already predated Greek anthropomorphic coroplastics.\textsuperscript{147}

Interregional, colonial royal kingship during the early Hellenistic period was a new institution for Greeks and Macedonians, who only previously had to deal with the anti-democratic mode of governance in quite small areas of the Mediterranean, if at all. With Alexander’s quick death in 323 BCE during an incomplete act of Asian conquest, his successors were left with the task of defining kingship. With no real plans for governance, each competing faction was given the space to develop as many strains of

\begin{footnotesize}
\textsuperscript{143} de Sarzec 1879.
\textsuperscript{144} Oates and Oates 1958.
\textsuperscript{145} Jenkins 1958.
\textsuperscript{146} Langin-Hooper 2019.
\textsuperscript{147} Двуреченская 2016: 170.
\end{footnotesize}
royal ideology as there were rulers.\textsuperscript{148} It took twenty years for these rulers to conclude their fighting before establishing their imperial boundaries after the battle of Issos in 301 BCE. At no point after Issos across 3\textsuperscript{rd}-1\textsuperscript{st} centuries BCE was any border or frontier of a Hellenistic kingdom ever secure. Without a precedent, each ruler opted to coopt elite modes of kingship that were established tradition in their colonized territories. Ptolemy I and especially Ptolemy II asserted themselves as Egyptian Pharaohs and empowered Egyptian officials in reinforcing traditional administrative practices over the local populace.\textsuperscript{149} Seleucus I and his son Antiochus I asserted themselves as eastern Mediterranean rulers in Syria, Babylonian kings in Babylon, and almost certainly Bactrian-Sogdian rulers in Central Asia.\textsuperscript{150} The emergent modes of royal expression would only be adapted and modified by later kings, such as the Greco-Bactrians.

Traditionalism within a Seleucid context was once taken as evidence for the weakness of the Seleucid kingdom in the east, unable to assert its Greekness onto the colonized populations.\textsuperscript{151} This is no longer accepted. Antiochus I must have been deliberate in formulating this new ideology and the few buildings that date to the early 3\textsuperscript{rd} century BCE at Ai Khanoum must be understood within this context, the audience for which would have been court elites implicated in the colonial milieu and not local Bactrians. This is at least reflected in administration if a blueprint left by Alexander was followed. Within the Bactrian-Aramaic documents Alexander is seamlessly inserted into

\textsuperscript{148} Mélèze-Modrzejewski 1966; Walbank 2006; Manning 2003; Strootman 2014.  
\textsuperscript{149} Samuel 1970; Manning 2003; Bingen 2007; Moyers 2011. Although C. Preaux (1997) has argued for far more Greco-Egyptian syncretism than is generally accepted.  
\textsuperscript{150} Sherwin-White and Kuhrt 1993.  
\textsuperscript{151} Bickerman 1938; Walbank 1981: 125; Oelsner 1986.
the calendrical dating system by ruler year and local Bactrians and Sogdians continue to pursue mundane responsibilities such as grain dispersals.152

Within the Herōon of Kineas at Ai Khanoum we find a veritably Greek colonial emplacement in a remote corner of Central Asia. Like an imperial flag planted on foreign soil the founder of Ai Khanoum (presumably Kineas) was venerated with a temenos and family shrine (Figure 8). A maxim imported from Delphi, typically associated with acts of Greek colonization, asserted colonial connections to Hellenic cosmology. That this Delphic maxim sought to impart neutral Greek philosophical wisdom is similar to modern modes of colonial expression through asserting moral superiority in the public sphere. As R. Mairs has convincingly argued, after several generations, ethnic Greeks would have a vague cultural memory of Greece and only an abstract awareness of Ai Khanoum’s differences compared to Greek settlements in the Mediterranean (if they had any concept at all, save for traders and the well-traveled).153

2.1.e. The meaning of Bactria in Hellenistic kingship.

Before considering post-colonial approaches to Hellenistic Central Asian archaeology, I want to interject here some considerations about what colonization meant to Hellenistic rulers in Bactria. Bactria had a unique status in the imperial cosmology of Hellenistic kingship beginning with Alexander. Prior to the mid-4th century BCE, Bactria appeared in ancient Mediterranean literary and historical accounts as an exoticized place of exile at the eastern limits of the known world, a place from which Persian kings could

152 C4 [Khalili IA 17], 8 June 324 BCE, Shaked 2004; Mairs 2015b: 112-13.
153 Mairs 2015b.
muster near invincible military forces or banish populations at will as much as it was a place which only the best rulers could conquer and where demigods were born. After Alexander, a romanticized vision of Bactria evolved in conversation with nascent ideals about the imperial geography of rulership and claims to world empire. Here I want to emphasize and contextualize the importance of Greco-Macedonian perceptions of Bactrian landscapes and the colonized status of the region as a category of meaning in Hellenistic royal ideology. There seems to be a unique colonial syntax at play for Greeks who sought to conquer and settle within Bactria that has to do with the meaning of *oikoumene* (i.e. the known world) within the mythic framework of Greek life, not least of which includes Alexander of Macedon himself. I do not believe that the conquest of Bactria can simply be reduced to an effort to dismantle the Persian Empire, since Alexander invested so much energy in conquering this region even after the death of Bessus. The following establishes the cultural perception of Bactria from an ancient Mediterranean perspective and what it likely meant for Greeks and Macedonians who colonized Bactria, a territory which would have been wholly unfamiliar foreign in real terms. After the initiation of colonial contact, Bactria evolved as a conceptual landscape for the negotiation of Hellenistic imperial cosmology in the east which likely affected the average lives of indigenous, rural Bactrians experiencing conquest.

Ancient Bactria was among the most exoticized and romanticized distant regions in antiquity. From the perspective of the Classical Mediterranean world, Bactria represented one of several limits of the known world.\textsuperscript{154} The clearest statement is from Aristotle, who considered the Hindu Kush as the eastern limit of the habitable world. Yet

most ancient Mediterranean authors sought to situate Bactria within a civilizing discourse that justified, or at least valorized, a Greek presence in Bactria. In the Classical through Hellenistic periods there is a clear conceptual shift in the ancient Greek view of Bactria from a place of exotic wonderment to legitimized rule through myth and history. For Herodotus, Bactria was a tax district of the Achaemenid Persian Empire\textsuperscript{155} and a source of some of the empire’s of the most elite cavalry.\textsuperscript{156} It was the satrapal domain of Xerxes’ brother and supreme commander, Masistes, in the 480 BCE invasion of Greece,\textsuperscript{157} a figure who suffered the same fate in revolting against Xerxes as the Bactrian satrap Bessus would later in 329 BCE after his betrayal of Darius III. Bactria was also the endpoint of forced migrations of the Barkeans from the Egypt under the Persians,\textsuperscript{158} which has parallels to the migration of the Branchidae to Bactria during the Persian war but only reported in later sources.\textsuperscript{159} Threats of sexual violence and exile to Bactria were also made against the Milesians, were they to reject Persia as their overlords.\textsuperscript{160} Aeschylus narrated a lament by Queen Atossa over the death of the Bactrian generals who perished off the coast of Salamis.\textsuperscript{161} For Ctesias, Bactria was a conquered territory by the mythical Assyrian queen Semiramis,\textsuperscript{162} a story so popular that it was the subject of the Hellenistic romance novel \textit{Semiramis and Ninus}. In the \textit{Bacchae} by Euripides we find

\textsuperscript{155} Herodotus III.92.2.
\textsuperscript{156} Herodotus VII.86; VIII.113.2.
\textsuperscript{157} Herodotus IX.113.2.
\textsuperscript{158} Herodotus IV.204.
\textsuperscript{159} Strabo XI.10.4; Quintus Curtius Rufus 7.5.28.
\textsuperscript{160} Herodotus VI.9.4.
\textsuperscript{161} Aeschylus \textit{Persians}, 290.
\textsuperscript{162} Photius \textit{Bibliotheca} 72, trans. J.H. Freese 1920; Diodorus Siculus, 2.1.4-28.7, 6.1-7.1. The myth is repeated again as history in the 2nd century CE \textit{Historical Epitome} of Cephalon (Photius \textit{Bibliotheca} 67, trans. J.H. Freese 1920) Although J. Stronk (2007) has argued that the attribution of the Semiramis myth to Ctesias was an interpolation into the tradition to deliberately associate the queen with Alexander’s activities in Bactria.
for the first time the idea that Dionysus was born in Bactria and introduced the grape to
that region.\textsuperscript{163} This birth of Dionysus was given epic flair in the 5\textsuperscript{th} century CE in
Nonnos’ \textit{Dionysiaca} where Bactria is included as one battlefield against the Titans after
Dionysus is killed and soon to be reborn.\textsuperscript{164}

The consequences of this ancient cultural perception, especially in Classical
Greece, was a rhetorical justification for the colonization of Bactria by Alexander and his
successors. There is even an aspect in which Bactria was implicated in Macedonian
imperial cosmology, exceeding a mere rhetorical strategy. Pliny discusses altars set up by
both Alexander and Demodamas, the bematist of Antiochus I, at the Syr Darya river in
northeast Sogdiana.\textsuperscript{165} He recounts Demodamas’ report that altars were set up by
Heracles, Dionysus, Cyrus, Semiramis, then Alexander. Following tradition, Demodamas
set up altars to Didymaean Apollo. This must have been a popular narrative in Rome
because the \textit{Tabula Peutingeriana} also notes altars of Alexander set up in Sogdiana.\textsuperscript{166}
Beyond these altars both Bactria and Sogdiana were incorporated into Hellenistic
astrology in such a way that the alignment of planets was described as the source of the
predestination essentialized ethnic traits of these populations.\textsuperscript{167} In particular Bactria and
Sogdiana were considered under the rulership of the planets Jupiter and Saturn and
therefore considered wealthy, clean, loyal, just, and having sophisticated religions.
However, Bactria was also seen as under the rising rulership of the constellations Gemini
and Libra, and therefore had an extra flourish of material luxuriousness and were lovers

\textsuperscript{163} Euripides, \textit{Bacchae}, 15.
\textsuperscript{164} Nonnos \textit{Dionysiaca}
\textsuperscript{165} Pliny \textit{Natural History} 6.18.
\textsuperscript{166} Kosmin 2014b: 62.
\textsuperscript{167} Ptolemy \textit{Tetrabiblos} 67.
of the Muses. In contrast, Sogdians were under the rising rulership of Aquarius and Saturn and were therefore considered “ungentle, stern, and bestial.”

Hellenistic and Roman authors clearly situated Alexander’s conquest of Bactria in an exoticizing and colonial discourse that sought to retroactively validate the Greek presence through myth. Both Diodorus Siculus and Eratosthenes claimed that indigenous Bactrians led Alexander to the cave where Prometheus was chained at the edge of the world. Yet the fascination of ancient Mediterranean authors was to equate Alexander with Greek gods who they perceived as already having conquered Bactria or with the mythical Semiramis. Arrian suggests that Alexander sought to emulate Heracles in his conquest of the east, and Quintus Curtius Rufus stated that Alexander sought to surpass both Heracles and Dionysus in doing the same. Alexander seems to have declared this when taking the Rock of Aornus, which Heracles could not take. Alexander’s emulation of Heracles, clearest on numismatic evidence, was a clear rhetorical effort to put himself in conversation with the demi-god.

Alexander was said to have emulated Dionysus when he celebrated the conquest of Nysa in India and subsequently marched through the desert of Gedrosia in a Bacchanal triumph. His emulation of Dionysus in Bactria and India may have been rooted in an obsession with Euripides, perhaps not a coincidence since The Bacchae

168 Ibid.
170 Diodorus Siculus, XVII.83; Eratosthenes is cited in Arrian Anabasis V.3.2, although Arrian downplays the event as fiction.
171 Quintus Curtius Rufus VII.xi.15; IX.ii.29.
172 Arrian, Anabasis, V.26.6; Curtius VIII.x.36.2; Diodorus Siculus XVII. 85.2.
173 Arrian, Anabasis, IV.10.6; IV.11.6; Plutarch, Alexander, II.1
174 Arrian, Anabasis, V.2.7
175 Arrian, Anabasis, VI.28.2.
176 Plutarch, Alexander, LIII.2-5; Arrian, Anabasis, VII.16.6.
was written in the Macedonian court less than fifty years earlier. However, in another respect, his emulation of Dionysus was also homage to his mother, Olympias, who was an initiate in the Eleusinian cult. According to Strabo, some authors argued that the Corybantes, who were ministers of the mysteries, were originally from Bactria.

The myth of Semiramis in Bactria was adapted by Diodorus Siculus to accommodate the history of Antiochus I and Stratonice, who ruled in Bactria until his death in 261 BCE. In Egypt, Ptolemy II sought to revise the history of the pharaoh Ramesses II to include a mythical conquest of Bactria in which Bactria was incorporated into Egypt’s administrative sphere and with a diplomatic marriage to a Bactrian princess. This story was so well known in Ptolemaic Egypt that it has come down to us through epigraphic sources (the Bentresh stela) as much as accounts in Tacitus, Strabo, and Diodorus Siculus (it seems likely that the Roman general Germanicus saw the epigraphic stele that has come down to us). Josephus altered the Biblical “Table of Nations” outlining the genealogy of humanity in Genesis to include Bactria, alongside India and China (Seria) within the Semitic lineage of Shem. In the context of the Roman wars with Parthia the Macedonian rhetorician Polyaeus wrote that Dionysus led an army of Indians, Amazons, and Bacchic revelers against the Bactrians and were victorious after a battle at the banks of a river. The tale must have been an allegory for Alexander but made into myth to suit the context of Polyaeus’ stratagems, which begin

177 Martin and Blackwell 2012: 49
178 Plutarch, Alexander, II.6.
179 Strabo X.3.19.
180 Dalley 2014.
181 Rhyolt 2014.
182 Louvre C 284; Tacitus, Annals, 2.60.3; Strabo, 17.1.46; Diodorus Siculus, 1.47.6.
183 Josephus, Jewish Antiquities, I.4.
184 Polyaeus, Stratagems of War, I.1.1
in myth and end in history. It is only with Ammianus Marcellinus in the 4th century CE that we see Bactria diminished as the eastern limit of the world in imperial rhetoric the looks to lands further east.\textsuperscript{185}

\textbf{2.1.f. Post-colonial approaches in Hellenistic Central Asian archeology.}

The excavators of Ai Khanoum regularly note the “composite” cultural forms of Ai Khanoum’s architecture, as was noted above. In the previous sections I argued that this architecture is in conversation with Seleucid royal ideology formulated in Mesopotamia and therefore reflects particularly Greek, Babylonian, and Iranian formal elements. As noted, there is very little evidence for a purely Greek edifice in the city with all aspects of the urban infrastructure drawn on local forms. Hellenocentric impulses have elided this point in conversations about Ai Khanoum. While some of these architectural forms emerged at the city’s founding after the ascendency of Antiochus I in 280 BCE, the majority of what we see dates to the final thirty years of the city’s existence initiated by the Greco-Bactrian king Eucratides (ca. 171/170-145/144 BCE) as a broad urban redevelopment initiative. This initiative represents the continued efforts of Hellenistic rulers to invent their own royal identity.\textsuperscript{186}

G. Lecuyot’s has rightly emphasized the composite nature of architecture that structures Ai Khanoum’s urban fabric as well as grounding its existence as a colonial interaction.\textsuperscript{187} In defining colonial architecture he notes that:

\begin{itemize}
\item \textsuperscript{185} Ammianus Marcellinus, xxiii.60-73.
\item \textsuperscript{186} Lecuyot 2007.
\item \textsuperscript{187} Lecuyot 2021.
\end{itemize}
[it] is above all an architecture of compromise. In general, it tries to adapt the way of life of the settlers to difference cultural and material environments. Using local resources, it creates a hybrid architecture of both cultures, mixing material and cultural influences to match the needs and requirements of the owners. It is inspired by elements seen and encountered in the surrounding area and in different neighbouring countries, creating its own, original architecture.\textsuperscript{188}

This is an apt definition of an \textit{elite} colonial engagement in that settler administrations entitle themselves to local resources and modes of cultural representation, then graft it to their own elite identity. The product is original but is fundamentally a political statement of cultural appropriation and dominance over colonized populations. For example, G. Rougemont’s has suggested that only the material resources that used to build Ai Khanoum’s urban architecture (mud and clay) represent the local indigenous element.\textsuperscript{189}

The formal expression of hybridized architecture is instead situated in a broader tradition of royal elite expression, which at Ai Khanoum is represented by a deliberate composite of Greek, Mesopotamian, and Iranian elite identity imported from outside of Central Asia.\textsuperscript{190} Here they are elided into the artificial binary of “Western” and “Eastern” architecture, not as a hybrid colonial interaction, but the imposition of a specific mode of royal Seleucid self-expression enacted across the empire and adapted by Greco-Bactrian kingship. Here, indigenous Central Asians are not cultural participants in this royal expression and are reduced to the material composition of Bactrian earth.

Recent trends led by R. Mairs have tried to overcome the colonialist framework established by early inquiries into Central Asia’s past through a more critical application of hybridity theory to Greco-Bactrian material culture.\textsuperscript{191} In doing so, Mairs has critically

\textsuperscript{188} Lecuyot 2021: 540.
\textsuperscript{189} Rougemont 2012.
\textsuperscript{190} Canepa 2018.
\textsuperscript{191} Mairs 2016b.
interrogated elite contexts for non-Greek influence (especially Achaemenid and Indian) in aspects of Ai Khanoum’s administration and royal expression. M. Hoo’s application of globalization theory by way of a trans-local approach has emerged as one productive avenue for challenging Hellenocentrism in scholarly interventions into Central Asia’s broader Hellenistic period culture. Nonetheless, both approaches are handicapped by the structural issues with the discipline outlined above that has provided no framework for understanding indigenous life faced with Greek colonialism. As is a recurring problem with post-colonial approaches to “legacy” data in archaeology, the components of a binary cultural encounter are reduced to essentialized bounded entities (Greek and non-Greek). While both approaches are sincere efforts to overcome this problem, essentialized entities are reproduced along ethnic lines because of the limited available evidence that allows for more nuanced paths of inquiry.

This is not a cause for pessimism, R. Mairs and M. Hoo have attempted to push the boundaries of our knowledge of Greco-Bactrian life through a critical consideration of architectural representation and administrative practices at Ai Khanoum. Ai Khanoum is long recognized as a city with imported Classical Greek institutions such as a gymnasium, a Heroon, a theater, a Classical Macedonian style palace, and a city temple with an acrolithic cult statue, and frontally placed altar – two sacred relationships that have no absolute Central Asian precedent. Greek philosophical texts, inscriptions, and methods of accounting were also found in the main city palace to the ruler. The architecture of the city features distinctly Mesopotamian principles except in a few structures, such as the gymnasium, that were adorned with Corinthian colonnades.

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Hoo 2018; 2020.
The primary problem that I see is a lack of understanding of indigenous life within the context of a colonized Hellenistic Central Asia. This makes for an especially difficult approach to hybridization theory. Processes of hybridization and creolization were eloquently summarized by van Dommelen as follows:

…hybridization refers to the ways in which social, economic or ethnic groups of people construct a distinct identity within the colonial context and situate themselves with respect to the dominant, i.e., colonial culture. As distortions in the process of imitating the latter can undermine colonial authority, hybridity often assumes a more or less explicit counter-hegemonic character in the form of subcultures or popular, often religious, movements.¹⁹³

The difficulty for R. Mairs, and now M. Hoo, has been to attempt a post-colonial model for Hellenistic Central Asia without recourse to knowledge of the indigenous culture of Late Iron Age Bactria and Sogdiana. Unlike the hybridity model van Dommelen described, the colonial context of Greek culture and modes of political hegemony cannot be properly addressed if the populations of Bactria and Sogdiana remain an abstraction lurking behind a predominance of elite material culture from a few anomalous sites (such as Ai Khanoum, but perhaps even the Oxus Temple at Takht-i Sangin).

M. Hoo has effectively managed structural issues in the discipline by focusing her critique on the recent appropriations within Hellenistic and Silk Road studies of Central Asia as a symbol global interconnectivity.¹⁹⁴ As she notes, globalization models in this context are keen to emphasize Hellenism as a positive global phenomenon reflecting modern geopolitical circumstances, with “local” components only added as addenda in support of globalizing infrastructure.¹⁹⁵ Used in such a way, these models have appropriated the terminology of globalization with only a superficial understanding of the

¹⁹³ Van Dommelen 1997: 309.
¹⁹⁴ Hoo 2018; 2021.
¹⁹⁵ Hoo 2021: 553-54.
“conceptual range of globalization theory within a post-colonial framework (in itself hardly a monolithic and unified discipline), and only reproduce the colonialist perspective of a “civilizing” Hellenistic world. Critically, Hoo emphasizes that an effective model of human interconnectivity must account for differential local experience and negotiation of increasing connectivity.” In this context it means not only accounting for the existence of local pockets of community and its own cultural output, such as those identified here in the following chapters, but also demands a reconsideration of elite contexts that were likely understood within a local and indigenous cultural syntax. We are encouraged then, to consider various meanings and receptions of Greek material culture in a colonial context beyond essentialized, culture-historical formal elements.

To draw my theoretical argument outlined in the first half of this chapter to a close, I conclude with the following remarks. The so-called hybridity of Greco-Bactrian architecture and urban identity is one dimension of a far more complicated Central Asian encounter. As far as we can tell Ai Khanoum is a totally anomaly within wider a wider Hellenistic Central Asian context and should be treated as such. It cannot be the case that this city is representative of life in Hellenistic Central Asia even if there is a substantial archaeological assemblage from the site. What Ai Khanoum does provide is one of only a few possible locations from which Hellenic influence was dispersed with among rural communities in northern Bactria and Sogdiana. This is in fact demonstrably the case, as my analysis of rural settlements in northern Bactria will show. Even within this framework, other settlements outside of Ai Khanoum might deceive us into thinking that

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196 Hoo 2021: 555-560.
197 Hoo 2021: 558.
Greek-inspired craftworks and consumption practices were more widespread than reality. For example, elite, Greek cultural life is prominently on display among the votive assemblage within the walls of the Oxus Temple at Takht-i Sangin, but the surrounding settlement has produced very little suggestion that Greek material culture was anything other than for sacred dedications. While there is a remarkable assemblage of votive craftworks drawing on Achaemenid and Hellenistic motifs and artisanry deposited at the temple, the temple is clearly venerated to an indigenous river deity, Vakhsh, and is situated in an entirely indigenous town in terms of settlement architecture. As I argue in the next chapter, only an obscure settlement in modern Dangara, Tajikistan, could possibly be representative of another Hellenic “locus” in northern Bactria comparable to Ai Khanoum in quality but not scale. Outside of these contexts, we will find very few engagements with material culture introduced by ethnic Greeks through processes of colonization.

We now seem to be approaching a point in the study of Hellenistic Asia where there is no longer a direct correlation between “Hellenistic” as a chronological period and Hellenism as an essence embedded in material or political culture. Post-colonial approaches in archaeology that elevate the voice of the “sub-altern” are more in line with a potent criticism of Western Classical archaeology made by Soviet historian G.A. Koshelenko, who in 1979 chastised Western approaches to the Hellenistic world as elitist and failing to consider “local” culture as an active component of “Hellenistic” identity formulation. This brings me to the point. As I see it, current approaches to Hellenistic

198 Druzhinina 2016.
199 Кошеленко 1979: 25.
Central Asian archaeology have not yet found a way to integrate native, non-Greek communities into the grand narrative of post-Alexander life. Lines of inquiry continue to be developed with reference to Greeks first and everyone else as an afterthought, even among those with the best intentions. I see this as an unsustainable vestige of colonialist approaches in Classical and Near Eastern archaeology that continue to resonate in the Asian archaeology more generally. As we approach a phase of our discipline where more students engage with the breadth of available archaeological literature, we will find Hellenocentrism in colonial contexts as entirely unsustainable for effective heuristic inquiry. This will certainly be the case when there is finally a realignment of language acquisition requirements for graduate study that reflect the languages of scholarship for geographic areas of study. For example, a Classics student who chooses to pursue Hellenistic Central Asia might be given the freedom to abandon Latin in favor of Russian, alongside French and ancient Greek.

As I demonstrate in the following chapters, we do not lack evidence for indigenous life during Central Asia’s Hellenistic and post-Hellenistic periods. While in many places the amount of evidence is thin, there is always enough to say something that distinguishes each micro-region that engaged with Hellenic rule. My emphasis on rural life is a statement on how most indigenous populations lived – removed from the influence of cities, lightly subject to administration, and active in decisions about how much of Hellenism they wished to adopt into their own lives. I have chosen to approach the question through the systematic GIS mapping of as many archaeological sites as I could find to build my case. My emphasis on domestic architecture is a choice that follows my own interest in household archaeology. My hope is that others will develop
new lines of inquiry that decenters Hellenism and admits indigenous elements into the vanguard.

2.2. Methodology.

2.2.a. Introduction to methodology.

The first half of this chapter emphasized the critical need for elevating evidence of non-elite, indigenous life in Hellenistic Central Asia and a discussion about what brought the field to its present state. There must be a framework for understanding how these people lived within their own territories and on their own terms. In doing so, evidence for indigenous life is almost entirely found in the vast rural territories outside of limited urban contexts. This dissertation attempts to close the gap and realign the field along more holistic lines.

This study is conventional in its approach and I employ a different method to answer the three main questions posed in my introduction. In asking where rural populations lived, I utilized a new gazetteer produced alongside this dissertation, which I have titled the *Archaeological Map of Central Asia in Antiquity* (hereafter AMCAA). This dataset geographically situates sites and settlement patterns. Associated data coded into the AMCAA was queried alongside original excavation publications to carefully distinguish rural settlements from sites with other functional or symbolic qualities. This is a practice fundamentally situated within the long tradition of settlement archaeology but was particularly influenced by the work of T. Wilkinson who stressed the transitory nature of meaning of sites in relation to settlement dynamics and local ecology while simultaneously recognizing that individual datasets always reflect the differences in
collection methods of their project leaders.\textsuperscript{200} A detailed description of how I built this database, its limits, and its peculiarities are included at the end of this methods section. In asking how people lived in their rural environments, I interrogated best-excavated case studies for rural households for evidence of settlement architecture and assemblages that spoke to subsistence strategies, aspects of production, and methods of house construction to root rural communities within local traditions indigenous to southern Central Asia. This is firmly in line with the still-nascent methods of household archaeology. Finally, to situate Hellenistic and post-Hellenistic settlements in the context of Central Asian indigenous traditions, I provide general information about the history of settlements within each microregion and emphasize trends in house architecture. I describe my methodological parameters for each approach in more detail below.

The reader will find chapters two and three following the same formulaic structure. First, chapters two and three are geographically bounded. Chapter two deals with rural settlements and lifeways in Bactria. Chapter three deals with Sogdiana. For simplicity’s sake I define Bactria as a riverine region that is situated around the Amu Darya river known as the Oxus River in antiquity (Figure ??). In the south Bactria is bounded by the Hindu Kush in central Afghanistan. In the north and west Bactria is bound by the Hissar Mountains and its extensions in central Uzbekistan and Tajikistan. The eastern frontier of Bactria was certainly the Pamir Mountains between Afghanistan, Tajikistan, Pakistan, and China, however the precise location of the border is unknown but likely existed somewhere along the inner reaches of the Kokcha River in inner Gorno-Badakhshan at the entrance to the Wakhan corridor. The difficulty with many of

\textsuperscript{200} Wilkinson 2003: 1-14, 33.
these boundaries is that they were likely conceptual in antiquity even if limited by the practicalities of imposing geography. In this chapter I subdivide Bactria into microregions to maintain control over the data and preserve local variation.

Chapter three follows the same principles only in the context of ancient Sogdiana. I subdivide the chapter into four microregions: Kashkadarya, Pendjikent-Gorno Sogd,201 the Middle Zerafshan valley (i.e. plain of Samarkand), and the Bukhara Oasis-inner Kyzylkum desert. As noted in my introduction, I did not include the region later known as Ustrushana (around modern Jizzakh) even though it was part of Sogdiana. Since the material from this region was too complicated to include even if it is considered comparatively. I do however include evidence for domestic architecture from Nurtepa given the importance of this key excavated site which occupied some space between a rural village and town.

2.2.b. Where did rural populations live in relation to the wider environment?

Chapters two and three both aim to address settlement patterning through the conventional mapping of archaeological sites in the open-source geographic information system (GIS) application QGIS. Chapter three (Sogdiana) is more ambitious in scope and aims to be more comprehensive than chapter two (Bactria). Both chapters nonetheless make use of the AMCAA database that I developed in tandem with this project. While that database is still being built, the 1300 integrated sites form the skeleton of this dissertation. I make no claim to having produced a comprehensive dataset. For some

201 Note here I use the toponym “Pendjikent” only to reflect the name of the modern city and oasis. In all other instances I utilize “Panjikent” following common usage in reference to the ancient region.
source data I was faced with insurmountable obstacles that prevented accurate site 
identifications and/or associated attribute information. I outline those problems on a case-
by-case below. When this issue was encountered, I tried to supplement a more 
detailed presentation with statistical data about the number of sites in a region and its 
chronological development as the data were reported by the relevant expeditions.

With this said the results are very rewarding. For the first time we are able to see a 
broad overview of changes to settlement patterning across the Hellenistic, post-
Hellenistic, and Kushan periods. One immediate result was that we can say definitively 
that the number of sites doubled from the Hellenistic through Kushan periods across 
Bactria, Margiana, and Sogdiana. I was able to document at least 440 sites are 
documented for the Hellenistic period (Figure 2) and a staggering 850 sites by the end of 
the Kushan period (Figure 3). The reasons for this are for another study, but the benefits 
of a comprehensive dataset are evident.

The reader should know that I did not consider, nor map, mortuary evidence with 
only a few rare exceptions. This would have added a great deal of time to this research 
and is admittedly a critical gap my method of studying rural landscapes. As I 
demonstrate, many sites that were previously considered nomadic or semi-nomadic 
settlements are demonstrably the settlements of sedentary farmers and pastoralists. This 
unintentionally relegates nomadism to the conceptual periphery even though nomads 
were a normal feature of Bactrian and Sogdian landscapes. Actual nomadic settlements 
are difficult to verify archaeologically but I believe are indirectly implied by specific site 
contexts in a few rare instances. One such context might be the presence of kurgans, 
although such an assumption is particularly fraught and beyond the scope of this study.
Since this class of evidence is excluded, nomadism is regrettably jettisoned from my analysis as I focus on sedentary communities.

As expected, mapping and describing northern Bactria and Sogdiana at this scale resulted in an enormous amount of data and limitless possibilities for analysis. I have not attempted to pursue or consider each possible line of inquiry that might develop from the catalog I developed. To answer the question outlined above I restricted myself to the following criteria:

- **First**, I had to determine what constitutes a rural site, a type of settlement that only is only conceptually intelligible in opposition to towns and cities. I refrain from describing Neolithic, Bronze, and early Iron Age sites as rural.

- **Second**, for purely analytical purposes I asked whether there was *archaeologically verified* urbanization within a microregion. I completely ignored the statements of ancient Mediterranean authors about the scale of urbanization and new foundations in Bactria and Sogdiana. Nor do I speculate on the existence of cities based on settlement size, as many Soviet scholars once did (i.e. sites over 20-40ha were often assumed to be urban). This very quickly reduced the number of Hellenistic period cities to the following locations: Ai Khanoum, Bactra, Xenippa-Nikshapaya-Er Kurgan, and Gyaurs Kala/Er kala-Antiocheia in Margiana. At present, there is no evidence for urbanization at Afrasiab-Maracanda nor Nautaka-Padayaktepa/Uzunkir in the Hellenistic period despite the large size of these sites, which otherwise seem to be *kalas* (large fortifications with only a sparse intramural, built environment) at this time. However, it is clear that these sites were the significant power centers of the Middle Zerafshan and eastern Kashkadarya, respectively. My own criteria in
designating urbanization required the dense agglomeration of settlement over a large area (broadly defined), the presence of fortification walls, and evidence for local, internal institutions for coordinating social life, such as temples and craft centers. Each instance had to be verified archaeologically. There is also a theoretical power-dynamic which factored into my decision making, which views the urban environment as a place that could not produce its own food and had to rely upon the hinterland to sustain its population.

- **Third,** if there was a verified urban site within a microregion I looked for adjacent extramural settlements within a 1-2km range and determined whether those settlements were patterned in relation to each other and a power center (i.e. distributed at regular intervals). If this was the case, I proposed these sites as agricultural suburbs that were in direct conversation with the city. The present state of evidence only allows us to identify suburbs at four sites in Bactria and Sogdiana: Ai Khanoum, Xenippa-Nikshapaya-Er Kurgan, Afrasiab-Maracanda, and Nautaka-Padayaktepa/Uzunkir. Suburbs likely existed at Bactra but are not archaeologically attested.

- **Fourth,** I asked whether a site was fortified. An answer in the affirmative, and the site was not a city, this raised the possibility that the site was a military installation such as a garrison or a watchtower. Garrisons and watchtowers have different functions and relationships to the landscape than rural settlements and were thus earmarked as possibly having an administrative function. However, garrisons and watchtowers were regularly embedded within rural contexts and I aim to be clear when this is archaeologically verified.
• **Fifth**, if a site was fortified, I sought out excavation data to determine *when* the site became fortified and *if* there was a pre-existing rural settlement present. Sometimes fortified sites were not garrisons, such as towns, kalas, and in later periods, rural manor houses. If this was the case then I looked to excavated material from those sites to consider the nuances of each settlement. These distinctions were addressed in my description of sites, making clear to the reader what stage of development each site was at during each chronological period. If no settlement existed before the establishment of a fortification the site was assumed to have a martial, defensive, or watchtower function.

• **Sixth**, if a fortification existed at a site’s inception, I looked for associated settlement data for evidence of an extramural anthropogenic landscape. This associated data falls into two classes – 1) smaller satellite tepas (like tells, these anthropogenic mounds representing cycles of settlement, abandonment, deflation, and sedimentation), 2) scattered ceramics documented in surveys. Both were taken as positive evidence for a rural settlement associated with the fortification although I expect here there are certain pitfalls, which I assume few. I did not speculate about the status of extramural rural settlements in relation to a fortification, except at Bashtepa in Sogdiana, where we have substantial, scientifically excavated data that allows this level of interpretation.

• **Seventh**, all unfortified sites that were not suburbs or mortuary sites were considered rural. At present there is no evidence for unfortified towns or cities for the period in question. This does not imply that each rural site was a settlement, as many isolated sites can be integrated into the rural economy in other ways, such as production areas,
mines, and sacred sites. If an unfortified settlement was excavated, I consider the findings of those excavations and reproduce the descriptions of those results. Often these sites were found to be ceramic or metallurgical production centers. I alert the reader when this is the case but do note that individuals involved in production likely lived close by. In some cases there is evidence that buildings used for production were also used as a dwelling or burials.

- **Eighth**, all surveyed but unexcavated sites were assumed to be rural. I accept that in some cases ceramic scatters are created through anthropogenic and natural destruction events, such as a bulldozed fortification. My inclination (bias?) was to assume that rural settlements were more common than fortifications and a future incarnation of the AMCAA will address this issue through certainty assessments.

- **Ninth**, once a rural settlement was confirmed I considered the landscape and ecological context of that settlement. In particular, I noted whether the site was located in an oasis, piedmont/ natural terrace, intermontane valley, on a mountain slope, along a river, at the edge of the steppe, and along an interregional road network.

- **Tenth**, fortifications were also considered in their broader relationship to rural oases but especially road networks.

The reader will find that this aspect of my data presentation is very descriptive and formulaic. The purpose of this approach is to achieve some level of standardization when comparing and/or associating rural sites. It does not make for compelling reading, but I believe this approach is quite useful when one considers that the majority of this
information has never been presented in English nor pushed in such an interpretive framework.

There is one major break from convention in my approach to addressing the spatial aspect of settlements in Bactria and Sogdiana, which I expect might lead to some consternation. It is standard practice in Old World archaeology to prioritize settlement size as a comparative unit of analysis among sites. This is as true in Central Asian archaeology as it is anywhere else.202 While I regularly refer to the size of a site with a standard metric in hectares, which has been rigorously recorded for each site within the AMCAA database, I deliberately avoided using the documented area of a site as an analytical category. I explore this problem in some depth in chapter five.

The reason for the diminishing of settlement size as a practical indicator for settlement type, especially when incorporating legacy data, is because reported settlement sizes do not indicate the size of a settlement during a particular moment in history.203 Areas documented as archaeological sites are spatial palimpsests as much as they are chronological.204 Ancient settlements in Central Asia are identified by characteristics ranging from a scattered array of pottery along a surface to condensed mounds to the exposure of full-scale ancient cities. The latter is very rare but when exposed their urban status is always clear. The problem is that a registered settlement size, no matter how systematic, will record the size of a distribution area of pottery or architectural features at their peak. It is difficult to understand the true size of a more ancient (or even more

203 Lawrence, Bradbury, and Dunford 2012.
recent) settlement without a carefully coordinated methodology that uses trial trenches across the peak distribution area. In many cases there is also the issue of modern development and agriculture, especially in Central Asian contexts such as the oasis of Surkhandarya in southern Uzbekistan or the plain of Samarkand. In both areas the complete bulldozing of ancient, mounded settlements and fortifications for land reclamation is regularly documented. When the site is based off a distribution of scattered pottery the depositional formation of that pottery scatter must be considered, which is no easy task when dealing with a deflated mudbrick settlement. As is known from A.M. Rosen’s classic theoretical study on the issue, mounded sites built of mudbrick, adobe, and pakhśa (pisé) there are predictable patterns that allow us to formulate an idea about a peak size of the tepa, but there are many factors that have to be taken into account in order to do so. These are structure, material composition, elevation, local ecological and anthropogenic conditions (which will not be consistent over time), later occupations that were completely deflated that might have involved terraforming the mound, which side of the mound is eroded, not to mention time. All of these factors will influence the size of the mound and the radial distribution of pottery along its base. New satellite remote sensing methods aim to address this problem by integrating data certainty as an analytical class that involves retaining a high degree of detail from the results of field survey data (i.e. areas surveyed, crossover with other surveys, distribution patterns) into the analysis of various raster images. However, the Soviet and post-Soviet datasets integrated here typically do not indicate the entire area surveyed in

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205 Mantellini 2017; Mantellini and Berdimuradov 2019; Stančo and Tušlova 2019.
207 Lawrence, Bradbury, and Dunford 2012.
specific terms nor precise artifact distributions and thus by necessity my method
remained somewhat conservative.

This leads me to my next point. Many oases of Central Asia are historically well-
watered by mountain runoff, spreading natural alluvium over wide areas that in turn
becomes cultivated and then sustained through artificial irrigation. Some areas, such as
the plain of Panjikent, are prone to landslides – something documented in the
archaeological record such as at the Hellenistic site Sang-i Surokh, discussed in chapter
four. This means that some oases, such as Surkhandarya, have early archaeological
records that are obscured because sites are buried under deep alluvial deposits. In these
cases, only mounded sites remain skewing the record towards a specific type of site, such
as fortified towns or garrisons. Small, single period sites will be near impossible to find
except for by chance. This is why, as we shall see, there is such a stark contrast between
the material evidence for rural settlements in a place like Surkhandarya compared to the
Bukhara Oasis or even Dangara in Tajikistan (which is situated on a plateau). How then,
are we supposed to create a hierarchy of rural Hellenistic sites in places like
Surkhandarya, when only a few Hellenistic sites are even known, let alone well enough to
say anything at all about their distribution or size?

Together, the issues of peak settlement size and depositional processes makes it
difficult to create a meaningful typology of sites with any chronological granularity. That
is to say, it is difficult know with certainty if any two sites, let alone dozens, are
comparable. There are of course some unique exceptions, especially when there is a clear
urban center (Ai Khanoum, Merv) that contemporary sites in the immediate hinterland
are hierarchically related. Likewise, it should be no surprise that the few regions where
size-based hierarchies were implemented meaningfully, such as the Sherabad Oasis in Surkhandarya\textsuperscript{208} or Middle Amu Darya in Turkmenistan,\textsuperscript{209} were areas where there was such a high degree of visibility for a single period (Kushan, relatively speaking) in which most sites were representative of their peak size. As I discuss further depth in chapter five, size-based typologies in places like western Kashkadarya were so unsuccessful (especially when combined with other presence/absence characteristics such as a citadel or fortification) that the resulting categories ultimately lack analytical usefulness.\textsuperscript{210} For these reasons I did not consider settlement size as such a meaningful analytical category as others before me. It would have been extraordinarily bad science to say, for example, that a site like Dal’verzin in Surkhandarya was 35ha (it’s peak size under Kushan rule) during the Hellenistic period, when the 4\textsuperscript{th}-3\textsuperscript{rd} century BCE remains are just a few pit-houses. I realize this is an extreme example. Yet, is it really when, for example, a site like Koktepa north of Samarkand is defined as urban partly because of its peak size of 17ha in the late Achaemenid period, only to find that same urban designation used to describe its early Iron Age status (when it was only a small settlement)?\textsuperscript{211} While I was experimenting with producing maps that did take settlement size into account it became immediately apparent how misleading and heuristically useless those maps were. The best maps that could be produced, especially ones comparable across multiple oases, were those that highlighted only chronological changes in relation to quintessential

\textsuperscript{208} Stančo and Tušlova 2019.  
\textsuperscript{209} Пилипко 1985.  
\textsuperscript{210} Сулейманов 2000.  
\textsuperscript{211} Rapin and Isamiddinov 2013.
landscape features like mountains, rivers, and paleochannels. These are the maps included and analyzed here.

2.2.c. How did people live within their environment?

While settlement patterning is quite interesting when considered within such a landscape and ecological setting, I am particularly interested in characterizing how people lived within those environments. This of course is one of the fundamental questions of anthropological approaches to archaeology with many possibilities for inquiry. I chose to characterize rural lifeways through an exploration of domestic architecture. As a member of the Uzbek-American Expedition in Bukhara (NYU-UzAS) I had the responsibility of excavating a rural settlement dating from the late 2nd century BCE – 1st century CE. This settlement was a small village comprised of pit-houses, some of which constituted a single farmstead complex with internal courtyard. This settlement is unlike any other known rural pit-house settlement in Bactria or Sogdiana which raised questions about the origins of this type of structure and general questions about the social life, subsistence strategies, and economic production of people who lived in these types of settlements.

In exploring the origins of pit-house construction in Central Asia a significant pattern emerged that was confirmed by excavations at Bashtepa. These structures were the main type of non-elite rural populations that were primarily engaged in rainfed or irrigation agriculture alongside local pastoralism. While this possibility already had been raised by some scholars,212 there were standing opinions that generally see a one-to-one

212 Хасанов, М. 1990b; Lhuller 2013; Chang 2017.
relationship between pit-house use and nomadism or transhumant pastoralism.\textsuperscript{213} I do not go as far as to rule out the possibility that nomads used these structures although I assert that such a direct correlation is demonstrably false. Others have interpreted them as temporary housing for the construction of more substantial above ground architecture.\textsuperscript{214}

In tackling this issue, I presented the best-documented evidence for Hellenistic and post-Hellenistic settlement architecture known from each microregion. This information comprises the second half of each microregional analysis. My approach is descriptive in that I represent (and in some cases had to reconstruct) the stratigraphic development of domestic architecture at the most relevant sites. In some cases, I highlight specific modes of construction and intra-site variability. In all cases I am able to demonstrate that there is no evolutionary relationship from pit-house use to above ground architecture – a theme that emerges occasionally in literature (especially Soviet scholarship). Instead, these architectural types coexist even as far back as the Bronze Age. What is more, I consider settlement activities only superficially, but effectively for reasons that are made clear in chapter four.

\textbf{2.2.d. Indigenous traditions in rural Bactria and Sogdiana.}

One key line of inquiry I wanted to pursue was the question of indigeneity in rural architecture. Given the lack of consensus about who used pit-houses in Central Asia, I thought it would be useful to interpret this settlement and household data in a way that can substantively establish that Bactrian and Sogdian indigenous populations utilized

\textsuperscript{213} Итина 1963; Lhullier and Mashkour 2017: 668; Lyonnet 2021.
\textsuperscript{214} Омельченко 2003: 63; Пугаченкова и Ртвеладзе 1978.
these structures, so much so that they are even used in non-rural town settings (Kampyrtepa, Takht-i Sangin). In most cases I was able to associate non-elite late first millennium BCE rural architecture with local traditions dating back to the Bronze Age, and in some cases the Neolithic. The significance is that one can imagine some degree of traditionalism in the structure of rural communities, and perhaps even the household, based on similarities in settlement planning, communal areas, and the use of indoor versus outdoor spaces. Whereas others look to the continuity of Bronze Age irrigation systems in the Dasht-i Qala plain to stress indigenous traditions (a situation that might be unique only to that one location), I feel we are now able to emphasize such traditionalism in a more direct social space.

Each subchapter provides important contextual information about the development of sedentary life in these microregional contexts. I pay particular attention to trends in domestic architecture as they are documented through time. When able, I consider specific artifact assemblages that help elucidate the continuity of sedentary lifeways. I am also diligent in noting when there are significant breaks in these traditions and attempt to explain why they reappear in the Hellenistic period.

2.2.e. The catalog: the Archaeological Map of Central Asia in Antiquity.

This section provides an overview of the *Archaeological Map of Central Asia in Antiquity* (AMCAA). This is a database of nearly 1300 archaeological sites that were documented over the past century by Soviet, post-Soviet, and Western archaeological expeditions in Central Asia. This dataset was assembled in QGIS. As a gazetteer, the database features precise geolocational information, as well as general bibliographic,
periodization, typological, and other attribute data such as size. Here I discuss how it was compiled, its symbology, its purpose, and its deficiencies. It is my intention to release this complete catalog in an online open access format that is currently under agreement with an outside institution. Scholars working on Hellenistic Central Asia will have the ability to add sites to the project, correct errors, and obtain data for their own analyses. This is a project developed only in tandem with this dissertation research but is not central to the present work.

A longform version of the AMCAA in its most recent state is included as an appendix to this dissertation. I stress again that this database changes often and in some areas is still incomplete. By the time this dissertation is made publicly available there will be an open access, online forum for users to engage with the data. There are serious ethical problems with revealing precise coordinates of so many sites, especially sites in conflict zones and in areas that could be targeted by illicit excavations. Therefore, the catalog appendix included in the appendix here withholds geocoordinate information.

While the dataset is open source, the new gazetteer should be cited as:

Silvia, Zachary. 2022. An Archaeological Map of Central Asia in Antiquity (AMCAA). [website pending under agreement]

It is preferred that in-text citations to sites included in the gazetteer be referred to according to the format utilized in this dissertation. Here entries referred to are cited as “AMCAA” followed by the database entry number for that site. For example, “AMCAA 2” for Ai Khanoum or “AMCAA 785” for Kalai Zahoki Maron, and so forth. It is my expectation that subsequent citations of this database by others will retain this format for consistency. The intention here is to keep a global running list of Hellenistic, post-
Hellenistic, and Kushan sites where each site has a unique numerical identifier that is not repeated to dissolve confusion over sites with the same name, or no name at all.

I am fully aware of the imperfect terminology in the gazetteer title. In particular, Central Asian “Antiquity” utilizes a specific chronological period referred to in the Soviet and post-Soviet dating tradition. Yet this database also includes purely Achaemenid period sites with no substantive later “Antique” occupation, such as the Kyzyltepa and Kyzlcha settlement area. One consideration was to adopt a solution that is now standard in southern Arabia, within which the Hellenistic and post-Hellenistic periods are simply referred to as “pre-Islamic.” At least in a Central Asian this approach would merely shift the same awkwardness in adopting historically fraught terminology from the field of Classics to Islamic studies, which is equally problematic since Islam was not accepted quickly in Central Asia nor without resistance.

Since the database is constructed to enable a forensic overview of the Hellenistic period and post-Hellenistic periods by taking into account prior and later settlement patterns, “Central Asia in Antiquity” is a conceptual title for the overall analytical power of the database, not a neatly packaged chronological framework for the contents within. Relatedly, in subsequent chapters I often refer to long-term cultural traditions and developments that date to the Bronze Age, Chalcolithic, and even Neolithic periods. In some cases, I provide the reader with maps that show sites and settlement patterns of those periods to make a point about their connection to Central Asia’s Achaemenid or Hellenistic periods. The reader should not expect to find catalogue entries for these earlier sites. This would have been too burdensome, and ultimately irrelevant, to include within the main database. These sites do exist in a separate shapefile.
Sources. This section outlines my data sources for each microregion of Bactria, Sogdiana, and Margiana. I describe specific problems faced with mapping each dataset and my methods used to ingest this data.

All data for southern Bactria (corresponding with northern Afghanistan) derived from two sources. First is Warwick Ball’s *Archaeological Gazetteer of Afghanistan* (1982; new edition 2019). Second are data from the Gardin, Lyonnet, and Genetelle’s three volume *Prospections Archéologiques en Bactriane orientale (1974-1978)* publishing the results of a joint *Délégation Archéologique Française en Afghanistan* (DAFA) expedition with the Centre national de la recherche scientifique under the title “Le peuplement antique de la Bactriane orientale.” W. Ball’s book is the most accessible data about the cultural heritage of Afghanistan during any period and does well to incorporate legacy data from DAFA’s work in Afghanistan. This has recently been mapped as an open-source dataset published by D. Plekhov and E. Levine (2020), which was used here. Their dataset does not consider the revised edition of Ball published in 2019, which is overall the most recognized gazetteer of archaeological sites in Central Asian archaeology. By design this dataset only considered the cultural heritage of Afghanistan. Better, more granular information about long-term settlement patterns was produced by Gardin, Lyonnet, and Genetelle during their systematic survey of northeast Afghanistan from 1974-78, which was only published completely in 1997. I rely more heavily on this dataset than Ball, especially since some of their documented sites were excavated. While writing this dissertation, R. Mairs’ edited book *The Greco-Bactrians and Indo-Greeks* was published, which contains three very important chapters on Hellenistic Bactria that each provided long-overdue context for most archaeologically
attested sites in southern, northern, and eastern Bactria. The chapter on southern and
eastern Bactria by L. Martinez-Sève provides a detailed overview of the settlement
patterns of the region between the Balkh Oasis and plain of Ai Khanoum demonstrating
that our knowledge (but not the ancient reality) of rural settlements in Hellenistic Bactria
remains concentrated in the east.\(^{215}\) Martinez-Sève’s considerations were also factored
here.

For sites located in eastern Bactria, corresponding to modern Gorno-Badakhshan I
utilized M.A. Bubnova’s *Arkeologicheskaya Karta Tadjikistana: Gorno-
Badakhshan’skaya Avtonomnaya Oblast’ Zapadnyi Pamir (pamyatniki 2 tys. do n.e. – 19
v.).* This work attempted to synthesize all surveyed and excavated archaeological data of
the inner Pamir zone of eastern Gorno-Badakhshan which encapsulates the Wakhan
corridor and eastern routes into the Tarim Basin in China. There is an accompanying
volume for western Gorno-Badakhshan that presumably would bridge a geographic zone
between the Dasht-i Qala plain (of Ai Khanoum) and the Wakhan Corridor.
Unfortunately, this second volume was hopeless to locate despite my best efforts.\(^{216}\)

Sites located in Surqandaryo Province and specifically the Surkhandarya and
Sherabad Oases were mapped using a combination of L. Stančo and P. Tušlová’s 2019
work *Sherabad Oasis: Tracing Historical Landscape in Southern Uzbekistan*, S. Stride’s
dissertation *Geographie archéologique de la province du Surkhan Darya*. In only a few
cases, some newer locational information was added with the help of Jakub Havlík’s

\(^{215}\) Martinez-Sève 2021.
\(^{216}\) This book was requested in the Spring of 2020 just as the world went into lockdown on account of the Covid-19 pandemic. It finally arrived on April 28, 2022, i.e. the day before this dissertation was defended.
Master’s thesis “Settlement Development of Hellenistic Bactria.” Stančo and Tušlová’s study corrected many of Stride’s errors while publishing a number of newly discovered sites based on their survey and excavation work across the Sherabad Oasis and foothills of southern Baysun pass. Their work publishes all of the project’s site survey cards, which consistently provide information about each site’s chronological breath (based on ceramic finds), geocoordinates, size, record of previous investigations, publication record, and other known names.

Since Stančo and Tušlová’s study was limited mostly around Sherabad, Sebastian Stride’s dissertation was consulted for the rest of Surkhandarya. Stride also conducted extensive field survey in the region. Additionally, Stride spent several years organizing the archives at the Institute of Archaeology in Samarkand as well as working with archival materials in Termez and Tashkent. Stride draws heavily on previous surveys of Surkhandarya. For these reasons, his dissertation is an invaluable resource, and its frequency of citation reflects the importance of the work. Stride provides site survey cards and maps for each of the 400+ sites documented in his study. Like Stančo and Tušlová’s documentation, these cards provide standardized information about each site’s chronological breath (based on ceramic finds), geocoordinates, size, record of previous investigations, publication record, and other known names. Sites were entered into QGIS using the geocoordinates provided by Stride. I did not have access to Stride’s own GIS files, nor the supplementary data CD submitted with his dissertation.

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217 Havlik 2018.
218 I am grateful to Sebastian Stride for sharing the entirety of his dissertation.
Information drawn about the Hissar Valley and Dushanbe area of Tajikistan was drawn from T.M. Atakhanov’s *Arkheologicheskaya Karta Tadjikistana Gissarskaya Dolina (Gissarskii, Shakhrinavskii, i Tursunzadevskii raiony)*. This work attempted to synthesize all surveyed and excavated archaeological data of the Hissar, Shakhrinau, and Tursunzada regions of southern Tajikistan into a single gazetteer with detailed summaries for pertinent sites. This work does not usually include geocoordinates for sites, but the maps provided were good enough quality to locate with a high degree of confidence. Each site entry in this gazetteer provides basic information about dating, settlement type, development, and occasionally geocoordinates. Since the AMCAA provides more detailed and standardized information about most sites I regularly consulted original site publications to complete this dataset beyond what was provided by Atakhanov.

For Kashkadarya in southern Uzbekistan I primarily relied upon two sources supplemented by minor field survey reports. These main texts are R.Kh. Suleimanov’s *Drevnie Nakhshab* (2000) and A. Omel’chenko’s *Kultura vosmochnykh raynov yuzhnogo Sogda epokhi antichnosti* (2003). Suleimanov’s work is a comprehensive synthesis of known archaeological sites in the Karshi and Guzar Oases of western Kashkadarya that were previously published across a wide swath of local archaeological journals and some archival material. Rather admirably, he attempted to create a new typology of settlements to bring order to the chaotic dataset he had to deal with. His book includes detailed maps that distinguish settlement patterns chronologically through the Medieval period. Unfortunately, Suleimanov did not publish geocordinates from which I could easily map these sites. His maps of Kashkadarya are poorly drawn and in some cases incorrectly
labeled. A. Omel’chenko’s dissertation achieved a similar synthesis as *Drevnie Nakhshab* for eastern Kashkadarya, specifically the oasis of Shakhr-i Sabz, but was not as detailed or organized as Suleimanov’s work. The commonly circulated version of Omel’chenko’s dissertation does not include geocoordinates although it is clear from his text that such a dataset exists. Quite unfortunate is that this same circulated document does not include a key for sites numerically labelled in his otherwise excellent maps. The implications of this were very unsatisfactory for my project since there was no way for me to confirm the locations of sites referenced in his text, nor their dates outside of a very general range (4th century BCE – 1st century CE). Therefore, the maps of Suleimanov and Omel’chenko had to be manually integrated into the AMCAA. I have attempted to locate these sites through georeferencing the survey maps published therewithin and correlating Suleimanov and Omel’chenko’s maps with Google Earth, Bing, and georectified Soviet Military Map data at a 1:100,000 scale. I was able to locate these sites with a medium to high degree of confidence, but in some cases this was less absolute. Sites where locations were only approximated are noted as having a low degree of confidence in the “Notes” field of that database entry. While I was able to precisely map the location of sites indicated by Omel’chenko in his maps, there is almost no useful attribute data currently associated with the geocoordinates (including the names of most sites). It is my hope that these site locations can be verified and adjusted in the future by me or another patient researcher utilizing this database once more complete information is acquired.

220 For example, some Medieval sites such as Laykatepa (Suleimanov’s site 421) were included on a map purportedly restricted to the Iron Age.

221 This will shift to a certainties indicator in the next phase of the AMCAA database.
For sites in the Middle Amu Darya sites between Sogdiana and Margiana I utilized two works of V.N. Pilipko these are his 1987 Sovetskaya Arkeologiya article “Tipologiya poselenii kushansogo vremeni I dolinie srednii Amudar’i” and his Poseleniya Severo-zapadnoi Baktrii (1985). Pilipko did not publish coordinates for these sites, but I was able to locate each with a high degree of confidence thanks to the clarity of the published maps. These sites were mapped in QGIS using the same methodology as outlined in the last paragraph.

Sites of the Panjikent Oasis and northern Hissar-Zarafshan mountainous region are drawn primarily from Eshonkulov’s Istoriya Zemledel’chekoi Kul’tury Gornogo Sogd (2002). Eshonkulov did not provide a catalogue of sites in his publications but discusses many in this text and he provided very few, poorly drawn maps. Instead, he preferred to focus on the relative location of ancient roads, canals, khorez networks (also known as a qanat or falaj), rivers, and sais (the dry beds of temporary streams or seasonal river) appear in maps provided in his text. Remarkably, none of his maps clearly indicate topographic information such as mountains, terraces, and in some cases even the rivers. This made for a near futile mapping strategy for the AMCAA that was nonetheless successful enough after paying close attention to Eshonkulov’s detailed description of site locations, which was often imprecise and inconsistent. Unfortunately, sites mapped from this source were identified with a low degree of confidence and must be adjusted in the future with better data. This does not detract from the usefulness of the information provided in Eshonkulov’s text, which remains the most comprehensive study of the longue durée of settlement in this oasis. What is more, Eshonkulov is invaluable for understanding the development of the khorez/qanat method of irrigation in Sogdiana and
its implications for populations living in the Panjikent Oasis as well as the mountains at the end of the first millennium BCE. Thus, despite the imprecise nature of his work, it is still a great resource. While the mapping of sites is not accurate here, the relationships and information about development are at least secure enough at a general level to be a potent case study for this dissertation.

For the Bukhara Oasis I used a variety of sources. I began with maps produced by Sören Stark that appear in a number of his publications, most recently those associated with the Uzbek-American Expedition in Bukhara. Other resources were V.I. Shishkin’s Varakhsha, Adylov, and Mukhamedjanov. For sites along the ancient Khitfar and Romitan-rud I utilized several sources. Mukhamedjanov’s *Istoriya Storiya Orosheniya Bukharskogo Oazisa* (1978) and *Kul’tura Drevenbucharskogo Oazisa III-VI vv. N.E.* (1983) edited by Filanovich but written by Mukhamedjanov, Suleimanov, and Ubakov. This was supplemented with Shishkin’s *Varakhsha*. All of this data was given a modern facelift by the recent work of the Uzbek-American Expedition in Bukhara under the direction of Stark, Kidd, and Mirzhaakhmedov and has likewise been incorporated into this database. While some sites were easy to find, many were difficult to identify through a process of visual confirmation in GIS combined with georectification of published plans. I again stress the importance of Soviet military maps for the confirmation of known sites. I should mention that a map of sites in the Kyzylkum north of Kyzylkyr and Setalak was produced from 1972-1975 by Mukhamedjanov. Because these sites date entirely to the Late Antique and especially Medieval periods, sites from this expedition are for the most part excluded from *Archaeological Map of Central Asia in Antiquity*.  

\[\text{Мухамеджанов 1983а: 6.}\]
Rocco Rante’s 2019 *The Bukhara Oasis: Volume I* was also used in constructing a map of the Bukhara Oasis. However, this presented several problems. Rante’s recent work does not fully engage with prior research, or even current research,\(^{223}\) conducted in the Bukhara Oasis and thus cast doubts on his description of the chronological development of the oasis. In some instances, he offers dates for sites that are unjustified by the evidence, notably, theorizing a substantial expansion of settlement in the 2\(^{nd}\) century CE despite a commonly known lacunae for evidence of occupation,\(^{224}\) even at the most substantial sites (i.e. Paikend). I have chosen to include his data here because I trust that the ceramic evidence for Hellenistic and post-Hellenistic occupation is more secure.

2.2.f. **The organization of standardized attributes within the AMCAA.**

The AMCAA attempts to bring all gathered settlement data together into a single standardized resource. The following attributes were distinguished for each site, to the best of my ability. These are presented as searchable categories within the attribute table of the AMCAA shapefile. A copy of this database, which is still being developed, is included as an appendix to this dissertation with geocoordinates redacted in line with modern ethical principles. The database attributes are as follows:

- **Id:** Unique identification number for each site. *This is a numerical list internal to the AMCAA.*

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\(^{223}\) Taking note of the dismissal of: Stark, Kidd, Mirzhakhmedov, Mirzhakhmedov, Silvia, Evers, and Naymark, 2016; Stark and Kidd 2018; Stark, Kidd, Mirzhakhmedov, Mirzhakhmedov, Spengler, Pozzi, Wang, Silvia, and Sligar 2018. But also the dismissal of Shishkin 1938, Shishkin 1952. I refer to this as a dismissal and not an oversight because of Rante’s statement on page 44 and figures 32 and 34 that the region west of the Bukhara Oasis in the Kyzyl Kum desert, the Bashtepa group of sites, was “weakly inhabited” and “probably seasonal.” As indicated in this dissertation the area has almost 90 years of excavation history with several well published maps documenting the dozens of permanent agricultural settlements in this area. All of this is clear on the same satellite imagery Rante uses in his book.

\(^{224}\) Naymark 2001.
· **Site:** Name of site. Sites with no known name are entered as “NN” followed by the new AMCAA number. Sites mapped where the name exists but was not known to me were marked as “N/A.”

· **Latitude:** Latitude of the site in decimal degrees.

· **Longitude:** Longitude of the site in decimal degrees.

· **Type:** Quick reference to the type of archaeological site (i.e. mound, scattered ceramics, fortification, burial, graveyard).
  - S – settlement
  - M – mound
  - SC – scattered ceramics
  - F – fortification
  - U – urban site
  - IO – independent object/find
  - P – production center
  - M – mine
  - G – graveyard
  - N – necropolis
  - K – kurgan(s)
  - T – tower
  - C – canal
  - CV – cave
  - R – cultic complex and/or temple
  - W – wall

· **Area:** Area of site in hectares.

· **Size:** Site dimensions provided in original publication. Sometimes this distinguishes multiple internal features such as the dimensions of a citadel and dimensions of a fortification wall.

· **Periodization:** Periods are distinguished according to a new system that attempts to standardize existing chronologies of southern Central Asia from the 4th c. BCE – 4th c. CE (see below) and neutralize politically loaded periodization terminologies. Each period is included as its own attribute column and identified as Yes/No within each site row. Dates are not absolute.
  - Antique Ia (A1a): early 4th c. to 330-327 BCE.
  - Antique Ib (A1b): 330-327 to ca. 280 BCE.
  - Antique IIa (A2a): ca. 280 to mid. 3rd c. BCE.
  - Antique IIb (A2b): ca. mid. 3rd c. BCE – early 2nd c. BCE.
  - Antique IIc (A2c): ca. early 2nd c. BCE – ca. 145/135 BCE.
  - Antique IIIa (A3a): ca. 145/135 BCE to mid. 1st c. CE.
  - Antique IIIb (A3b): mid. 1st c. CE to mid. 2nd c. CE.
- Antique IIIc (AIIIc): mid. 2\textsuperscript{nd} c. CE to late 3\textsuperscript{rd}/early 4\textsuperscript{th} c. CE.

- **Fortified:** Yes/No. Strictly presence/absence of a fortification wall.

- **Fieldwork:** Expedition and publication year. When the year of the expedition was unknown, the year of the publication and publication author were entered.

- **F-Type:** Type of fieldwork done at the site over time
  - S – survey
  - E – excavation
  - R – rescue excavation
  - RS – remote sensing
  - SO – sondage/ test trenches.

- **Notes:** First position refers to basic bibliographic information and catalogue numbers used in previous publications. Second position is additional, unstandardized information about the site including if a site was mapped with a low degree of confidence.

- **Country:** Country the site is located in.

- **District:** Modern administrative district the site is located in.

- **Oasis:** “Oasis” the site is commonly associated with (i.e. river or principle settlement system).

- **Other name:** Other names for the same site in known publications.

- **Site type:** Classification of the site used in other publications. This category is highly variable and reflects the unique, internal classification and/or typology of the site as listed in the site’s publication. I refer the user to those publications, indicated in the notes column to understand the typological structure of this category.

- **Late phases:** Yes/No. This refers to the presence or absence of occupations later than the 4\textsuperscript{th} c. CE. This category was created to account for the fact that the settlement area reported here is impacted by later processes of site expansion and deflation.

- **Housing:** Type of Hellenistic and post-Hellenistic period houses excavated at the site, if any.
1.2.F. Periodization in the AMCAA.

From the outset I was confronted with problems of periodization. Because my project challenges us to think beyond the reigns of kings while immersing ourselves in the timescale of rural populations, traditional periodization schemes simply do not work. This is compounded by the fact that all of Hellenistic Central Asia was never ruled by a single kingdom or political entity. What is more, whereas political unity was strongest during the Achaemenid period (as far as we can tell but only from an absence of concrete evidence) the course of the second half of the first millennium BCE is a story of progressive political dissolution and balkanization. This fragmentation of empires is not necessarily a negative assessment on those who ruled, and those ruled who challenged the rulers. Instead, the political history of Central Asia from the Achaemenid through Kushan periods is that of imbalanced rule, where kingdoms concerned themselves mostly with the management of a few urban areas and rural control only through taxation. This allowed much cultural freedom in rural zones, and especially the steppe, where accepting rule was always a temporary consideration until there was no longer a need for the state. Thus, for example, Sogdiana divorces itself from Achaemenid and Hellenistic modes of kingship quite soon after Antiochus I took charge. Afterwards, all indications seem to point to a mixed political system that included the localized rule of lords and merchants juxtaposed with steppe-derived tribal structures that involved large familial associations and mercenary work.

The described fragmented system emerges in the form of theoretical “states,” especially north of the Amu Darya during and after the 2nd century CE. Such examples
include the “Kangui” and “Kaunchi” peoples, whose political cohesiveness is often interpretively elided with cultural unity, specifically in their material culture. The same can be said of a so-called kingdom of Dayuan, which existed in the area of modern Ferghana and known to us only by way of first-hand accounts of Han envoys written in classical Chinese. While these texts provide historical color to otherwise unknown interactions between China and Central Asia at the end of the first millennium BCE, these sources suffer from the same methodological problems as those from the Mediterranean. We only get a sense about the political organization of places like Ferghana and Sogdiana, but not necessarily closer to the truth. These aforementioned “states” have only become unified political entities recently in the minds of modern researchers. That is to say, there is no indication from the texts themselves that many of these places were unified aside from sharing in some cultural elements that allowed outside Han envoys to associate these societies as distinct entities. From an archaeological perspective, the reality is far more complicated.

Other issues arise when experimenting with a periodization. The need to develop a politically neutral periodization is attractive for regions where there is less indication of severe political disruption, such as in the Pamir Mountains or inner Kyzylkum desert. Yet the most populous zones were indeed impacted by seismic political events, such as Alexander’s conquest, widespread defense infrastructure initiated under Antiochus I, or the expulsion of Greco-Bactrian rulers. When such events have such a drastic impact on settlement, and ultimately on the development and defense of rural zones, it was impossible to implement a periodization strategy that encompassed all areas. Events

225 Sima Qian (Watson tr.) Shiji 123.
impacted the broad geography of Central Asia quite unevenly, for example leaving places like Khorezm and parts of Sogdiana untouched.

These issues brought me the difficult juncture of creating a periodization that successfully encompassed all Central Asia from the mid-first millennium BCE to 4th century CE. The solution was to develop a strategy that was politically neutral in its terminology – ignoring loaded terms such as “Seleucid,” “Greco-Bactrian,” “Kushan,” “Kangui,” and so on. Likewise, I do not reduce periods to significant events. For example, while major changes happen as the result of Antiochus I’s ascension to the throne of Seleucid Asia after 280BCE, it is not useful to categorize all sites using a date that was only indirectly significant for all places. However, since all of southern Central Asia was an interconnected entity, it is appropriate to allow such a date to at least be indirectly reflected in a new periodization in such a way that notes the significance of the date without leading the reader to believe that there was necessarily Greek rule in every region.

Thus, my periodization strategy is as follows. I appropriate and expand a Soviet era scheme that utilizes the term “Antique” to neutralize chronologies that describe periods in relation to rulers. Whereas the Soviet term antique only encapsulated a later period, my use of the term “Antique” applies to all of the 4th century BCE – 4th century CE. Within this “Antique” era I subdivided periods that do reflect both historical and material changes, but only generally. Nowhere do I claim that these are firm dates that reflect broad sweeping changes across all of Central Asia. I do not encourage users to use these dates as proofs for sweeping historical statements. These dates are only a classificatory model for internal use within the AMCAA. I do encourage users to submit
modifications and propose new categories once this database is made available open-source and open to community review. I expect this periodization to change and acknowledge its blemishes. With that said, this new periodization is fairly conventional:

- **Antique Ia (Ala): early 4th c. to 330-327 BCE.**
  - Characteristics: Yaz III pottery; Afrasiab IA; Late Achaemenid; Late Chorasmian “state”.

- **Antique Ib: (Alb): 330-327 to ca. 280 BCE.**
  - Characteristics: Late Yaz III and transitional pottery; Afrasiab IB; Sarai-tepa-2; Post-Alexander “Dark Ages”.

- **Antique IIa (AIIa): ca. 280 to mid. 3rd c. BCE.**
  - Characteristics: Afrasiab IIA; Ai Khanoum I; Seleucids in Bactria and Sogdiana; Hellenizing Chorasmia.

- **Antique IIb (AIIb): ca. mid. 3rd c. BCE – early 2nd c. BCE.**
  - Characteristics: Afrasiab hiatus, beginning of Afrasiab IIB; first Greco-Bactrian kingdom (Diodotids-Eucratids); Sogdian dissolution.

- **Antique IIc (AIIc): ca. early 2nd c. BCE – ca. 145/135 BCE.**
  - Characteristics: Afrasiab IIB; Ai Khanoum VII, VIII; Second Greco-Bactrian State (Euthydemus); possibly brief Greco-Bactrian occupation at Afrasiab; independent Sogdiana.

- **Antique IIIa (AIIIa): ca. 145/135 BCE to mid. 1st c. CE.**
  - Characteristics: Afrasiab III (first third of 1st c. BCE); appearance of high-footed goblets; Hellenic dissolution; “Yueh-chi” migrations (i.e. “migrant nomadic confederacies”); rise and rule of the Arsacids; “Kangu” confederacy in Sogdiana.

- **Antique IIIb (AIIIb): mid. 1st c. CE to mid. 2nd c. CE.**
  - Characteristics: Afrasiab III continued; First Kushan kingdom; Parthian dissolution; Sogdian independence continued.

- **Antique IIIc (AIIIc): mid. 2nd c. CE to late 3rd/early 4th c. CE.**
  - Characteristics: Second Kushan state (i.e. post-Kanishka), brief Sogdian Dark Ages (2nd c. CE), rise of fortified manor houses; Sasanian Iran and Margiana.
Chapter 3. Aspects of rural life in Bactria from the 4th c. BCE – 1st c. BCE.

3.1. Introduction.

The territory of Ancient Bactria roughly corresponds with modern northern Afghanistan and the southern reaches of Uzbekistan and Tajikistan (Figure 1). These countries share a boundary at the Amu Darya / Darya-i Panj River network which is generally agreed to have constituted the Oxus River frequently mentioned in the works of ancient Mediterranean historians and geographers. The river system forms the heart of southern Central Asia as its swiftest river. It begins as glacial melt in the Pamir Mountains to the east, some of the tallest on Earth, and flows west-northwest for just over 3500km before discharging into the Aral Sea delta in northern Turkmenistan and Uzbekistan. North of the Amu Darya, life is largely beholden to the riverine watersheds of intermontane valleys, some of which are quite large and fertile for substantive agricultural production.

Generally speaking, Bactria occupies three principal environmental settings that are dictated by variability in the region’s geology (Figure 4). Most of Bactria was bounded by and interactive with extremely rugged mountainous zones that are extensions of the Pamir Mountains to the east. At the north, Bactria was bounded by the Hissar Mountains and at the south the Hindu Kush (ancient Parapomisodae). Within the mountains there is a lot of ecological diversity due to their magisterial heights that reach up to 7,500m in the easternmost region of Badakhshan. However, most of Bactria’s mountainous zones do not exceed 4,000m, and within that, elevations of around 2,000m and less are most common. These lower mountainous zones provide pasturage for herds of sheep and goats as much today as they certainly did in antiquity.
Mountainous areas are interspersed with lowland alluvial valleys and steppe which benefit from alluvial runoff that is rich in minerals and discharge into the region’s hundreds of rivers. Therefore, rainfed agriculture and dry farming has been well supported for the entirety of the Late Holocene, but some areas did rely on complex irrigation networks as far as back as the Bronze Age, such as the Balkh Oasis and the Dasht-i Qala plains of northern Afghanistan. However, since all zones are considered semi-arid to arid, there is much ecological sensitivity to the availability of water, which has never changed. Additionally, parts of Bactria (especially southern Bactria) did consist of fully arid desert zones, such as the Dasht-i Leili desert in northwestern Afghanistan near Sheberghan and a narrow strip of barchan dunes that separates the Balkh deltaic oasis from the Amu Darya River.

This chapter roughly covers a period from the 4th century BCE to 1st century CE with some discussion of earlier traditions that emerged in the Neolithic and Bronze Age that influenced the ways in which rural populations lived in such ecologically complex landscapes. In this chapter I review evidence for rural settlements and house-types where the evidence indicates that resident populations were engaged in sedentary agriculture and local pastoralism. As is discussed throughout the following chapters, in Central Asian archaeology, and even in the wider study of rural vernacular architecture, there is a trend to see a one-to-one correlation between non-elite pit-house or dugout architecture as a surefire marker of mobility. As I show here and in the following chapter, almost all evidence seems to indicate that this house type was used by sedentary agriculturalists.

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226 Gardin and Genetelle 1976.
227 Villinga, Oliver, Bridge 2007: 45.
228 For example Итина 1963; Lhullier and Mashkour 2017: 668; Lyonnet 2021.
Whether other members of these communities also engaged in any mode of mobility is a topic for another study.

The historical period in question coincides with a moment of the Late Holocene in which Central Asia was undergoing slow aridification (ca. 4,000–2,000 kya). Some areas were more affected by these processes, such as the area around the Bukhara Oasis in western Sogdiana and in the Aral Sea Delta. By the middle of the 2nd millennium BCE sites situated around the Murghab Delta and elsewhere were already indirectly affected in the early stage of this aridification process in a period that coincided with a complete shift in settlement strategies, social life, religious practice, and in some places subsistence. However, much of Bactria seems like it was not so adversely affected because populations had more landscape adaptive options in their favor, especially ones involving the control of water.

Ancient Bactria was never a unified geographical entity across the first millennium BCE (Figure 1). It seems certain that current debates over the conceptual, political, and cultural limits between Bactria and its northern neighbor, Sogdiana, do not typically align because human experience of these factors was always in flux. There are some firm guidelines that do help us establish geographic boundaries, especially when approaching the issue from the perspective of rural life rather than political rule. First, there is no question that the Amy Darya River and Darya-i Panj Rivers, which form the modern boundaries between Afghanistan, Uzbekistan, and Tajikistan, were culturally part of Bactria in antiquity. Whereas some see this river as the border between Bactria and

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229 Fouache, Cez, Andrieu-Ponel, and Rante 2021.
230 Luneau 2021.
Sogdiana on account of ancient testimonies of Alexander’s campaign, I think it is more important to consider the Amu / Panj riverine system (the ancient Oxus) as a vehicle for intraregional connectivity. Not only did the river facilitate trade, but a distinctive riverine micro-culture seems to have emerged at sites like Kampyrtepa, Termez, and Takht-i Sangin out of lifeways associated with riverine travel, commerce, and sacred commitments. This network would have also been critical in maintaining Bactrian ties with Margiana to the west and Chorasmia to the northwest, where the Amu Darya once discharged into the Aral Sea. This centers the ancient Oxus as a river that functioned more like the Nile or Tigris and Euphrates, if only in the sense that these rivers were substantive avenues for connecting communities along its course.

Second, during at least the late 3rd century BCE, when Bactria was under Diodotid and Euthydemid rule, there are some key indications that justify a northern border of Bactria as the Hissar Mountains and its spurs along Baysun in the southwest. Most salient is that recent excavations at Uzundara in Baysun have confirmed further evidence for the militarization of the Iron Gates connecting the oases of Surkhandarya and Kashkadarya. The existence of fortifications and garrisons by Alexander is already known from excavations of Kurganzol and the massive system of long-walls which funneled traffic and taxation into Derbent allows us to assume that this zone was

231 Рапеп 2020.
232 Lerner 2014.
233 Lest one thinks this is the case, I do not mean to suggest that the Oxus River fertilized riverine sites along its course, something that only happens substantively in Chorasmia.
234 Ртвеладзе и Двуреченская 2015; Двуреченская, Двуреченский, Мокробородов, Рукавишникова, и Рукавишников. 2014; Двуреченская 2015; 2018; 2019; Dvurchenskaya 2019;
235 Sverchkov 2008; Сверчков 2013.
perceived as a border crossing by regular Sogdians and Bactrians,\textsuperscript{236} even if at times the political reality fluctuated.

Fortified sites seem to emerge in the Hellenistic period to regulate key trade routes throughout all of Central Asia. This much has been demonstrated already by S. Stark for routes between western Sogdiana and Margiana as well as Martinez-Sève for southern Bactria.\textsuperscript{237} This view will continue to be reinforced across all of Bactria and Sogdiana as this text moves forward, with clear continuity and expansion of these efforts in the post-Hellenistic and Kushan periods. The substantial military investment into the fortress of Uzundara only seems to justify this claim, but we should note that the size of Uzundara is unlike most other known Hellenistic Central Asian fortifications during this period and suggests other layers of meaning.

Finally, from the perspective of rural engagements with Seleucid and Greco-Bactrian colonial power there is a significant cultural difference that is delineated by the Hissar Mountains. This point does not seem to be emphasized enough, but I think it will be made quite clear from the datasets considered in this chapter as well as the next. Bactria features a great variety of rural house types that ranges from modest, simple pit-house structures to substantial, elite manor houses that must have controlled large swaths of agricultural land. The simpler structures are the common vernacular, non-elite architecture of rural Sogdiana. However, both in Bactria and Sogdiana this house type has clear roots in agricultural communities of the Central Asian Neolithic and Bronze Age in the Hissar Valley in southern Tajikistan as much as the Eurasian steppe. It is for

\textsuperscript{236} Ртвеладзе 1986; Рапен, Бо, Грёнет, Рахманов 2006.
this reason they were chosen as a proxy for indigenous lifeways here and in the next chapter. Elite housing is a different story altogether. Quite important is that not one elite manor house has been archaeologically verified in Sogdiana from the 4th–1st century BCE. In Bactria they exist as a parallel tradition in most landscapes, with a few notable exceptions such as Yavan and the Panj Valley. Whereas excavators of these elite Hellenistic manor houses have identified influences in this house type in elite contexts in Margiana, Mesopotamia, and Greece,238 there are also more local influences from Surkhandarya and Chorasmia in the 6th–4th centuries BCE that were overlooked. Therefore, while in chapter two I contextualized the archaeology of elite architecture at Ai Khanoum strictly within the sphere of Seleucid and Greco-Bactrian royal expressions that point to Greece, Mesopotamia, and Iran, in the context of elite rural houses there is a far more complicated intercultural relationship that has nothing to do with royal identity.

The point here is that in addition to substantial fortification networks, the Hissar Mountains are justifiable boundaries between Bactria and Sogdiana on account of the cultural discontinuity between Bactrian and Sogdian rural housing. I do emphasize however that this is still partly a superficial arrangement that changes slightly if one were to prioritize other material classes. For instance, excavations of late Achaemenid and early Hellenistic houses in eastern Kashkadarya in Sogdiana demonstrated more of a connection with Bactrian Surkhandarya in its tradition of handmade wares than other parts of Sogdiana, suggesting a more complex social interaction among communities on either side of the Hissar spurs. This only demonstrates that the question of borders is not one of delineation, but one of politically and culturally mediated interactions.

238 Francfort 2013.
My analysis of rural settlements in Bactria therefore adheres to the following arrangement. I begin in the Dasht-i Qala plain, or “plain of Ai Khanoum,” in northeast Afghanistan to situate the reader in the best researched area of Hellenistic Central Asia. Whereas the literature about urban Ai Khanoum is large, less attention has been paid to the suburban and rural zones outside of the city— even with our ideal publication record for urban / rural and rural / environmental dynamics in the Dasht-i Qala plain. In that analysis I emphasize only a few key points that have not received much attention. First, the types of elite rural architecture within the hinterland of Ai Khanoum are uncommon for the rest of southern Central Asia. While other examples are documented in Parkhar to the north of the Dasht-i Qala plain, and are likely in Dangara, they represent only an elite rural lifestyle that was in conversation with the urban culture of Greco-Bactrians. Beginning here is an excellent way to establish the overwhelming contrast with non-elite rural life that lived in parallel to Greek culture. Second is that Ai Khanoum is an excellent case study for probing questions related to urban-suburban-rural interactions on account of excellent preservation and rigorous documentation. Beginning here allows me to situate rural Dasht-i Qala within its economic relationship with the city and environs while also considering possible evidence for indigenous knowledge in homebuilding strategies that are not found within the city.

From Dasht-I Qala I move east into Badakhshan to consider an area that has hardly been considered in relation to Hellenistic and post-Hellenistic life. Here there remains an open question about whether the Seleucids and Greco-Bactrians tried to

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240 Lerner 2016.
secure routes into the Tarim basin in northwest China. As is shown, we can already establish that Badakhshan was in some economic / extractive relationship with Hellenistic Bactria. Pushing what is known further, and using the AMCAA as a guide, I consider evidence for pastoral life in the Wakhan Corridor and beyond. Within the context of indigenous pastoral life I approach the difficult question of the emergence of fortification networks that were possibly Hellenistic, but certainly Kushan.

From Badakhshan I move north of Ai Khanoum to a region that remains a bit of a blank spot in our understanding of the Hellenistic period, the plains of Parkhar-Kulob and intermontane micro-oases around Dangara. It is here that some work carried out by Soviet archaeologists, as well as recent explorations by the Deutsche Archeologische Institute (DAI) under G. Lindström have provided some gloss to rural lifeways in a region that had to have been integrated into the Greco-Bactrian kingdom more directly than we currently understand.

Next comes a brief discussion about Yavan in Tajikistan to the west of the plain of Kulob, a region that did not experience much by way of colonization which was perhaps a decision made by the local community. Interestingly, however, Yavan has one of the best excavated non-elite rural settlements in all of Bactria at the dual site of Tamoshotepa-Karaultepa. Since there are very few settlements to consider I analyze Tamoshotepa in some depth and present much data about the site that has not yet been reproduced outside of the original Russian interim reports.

From Yavan I move south to consider eastern Bactrian settlements along the Amu Darya River. It is there I introduce the idea of a riverine micro-culture structured around

241 Lerner 2016; Бартольд 1964.
the Amu Darya and Vakhsh Rivers. This is especially evident at Takht-i Sangin, famous as the location of the “Oxus Temple” venerated to the river deity Vakhsh in a Hellenic-syncretic fashion. Leaving the temple aside, I tease out evidence for the settlement strategies within the town surrounding the temple. Within that context I also make my first argument that pit-house architecture does not in itself have anything to do with nomadism or semi-pastoralism. To articulate the point, I consider other pit-house settlements within the same vicinity such as at Baitudasht in the Panj Oasis and especially Kampyrtepa at the southern outflow of the Sherabad river, one of the best excavated Hellenistic sites outside of Ai Khanoum. There I draw parallels to the riverine micro-culture introduced at Takht-i Sangin and explain its significance in relation to the rural hinterland.

After these riverine sites I move north again to the Hissar Valley just south of the Hissar Mountains and the location of Tajikistan’s capital at Dushanbe. This region is the northernmost reach of Bactria. Archaeological research in this area has lagged in the past twenty years and is only now renewed by G. Lindström and the DAI. Previous work revealed a vast rural and fortification landscape and hinted at the possibility of a major Hellenistic town located under modern Dushanbe. Most important, however, is that it seems that the Hissar Valley is one epicenter of the emergence of rural traditions that begin much earlier than the Hellenistic period. To build my case for indigeneity in rural Bactrian and Sogdian life I focus on key case studies that argue for long-standing continuity and conservatism in the settlement structure of sedentary life over the course of several millennia.
From the Hissar Valley I enter Surkhandarya, a region that is now well trodden in academic literature but still has much to reveal to us about rural life in Hellenistic Central Asia. There I consider evidence for settlement patterning that originates in the Achaemenid period but seems to decline during the Hellenistic period. I consider our state of knowledge on rural life in this area and consider the settlement patterns in light of evidence for the militarization of the mountainous region to the immediate west of Surkhandarya – Baysun.

Within this geographic arrangement there are some areas I do not deal with in great depth. First, I do not engage directly with Bactra, the capital city of ancient Bactria located in modern Balkh for the simple reason that there is just not enough evidence to characterize rural life in this area beyond a very superficial engagement. Since A. Foucher’s excavations at Balkh (Bactra) in the early days of DAFA our understanding of Hellenistic Bactra has not really evolved, even with recent renewed investigations and good work done on shifts in the flow of the Bactra river that forced a change in settlement patterning over time.\textsuperscript{242} While deeply invested in researching and writing this chapter, R. Mairs’ edited book \textit{The Greco-Bactrians and Indo-Greeks} was published, which contains three very important chapters on Hellenistic Bactria that each provided long-overdue context for most archaeologically attested sites in southern, northern, and eastern Bactria.\textsuperscript{243} The chapter on southern and eastern Bactria by L. Martinez-Sève provides a detailed overview of the settlement patterns of the region between the Balkh Oasis and plain of Ai Khanoum demonstrating that our knowledge (but not the ancient

\textsuperscript{242} Fouache, Cez, Andrieu-Ponel, and Rante 2021; Fouache, Besenval, Cosandey, Coussot, Ghilardi, Huot, and Lamothe 2012.
\textsuperscript{243} Lindström 2021; Martinez-Sève 2021; Stančo 2021.
reality) of rural settlements in Hellenistic Bactria remains concentrated in the east. My own dataset incorporated into the Archaeological Map of Central Asia in Antiquity (AMCAA) is entirely derivative from the dataset that Martinez-Sève utilized in her synthesis. These data are the results of several expeditions conducted over the life of the Délégation Archéologique Française en Afghanistan (DAFA) not least of which includes the results of the DAFA-led detachment from the Ai Khanoum excavations titled Prospections Archéologiques en Bactriane orientale from 1974–78. Other DAFA expeditions, as well as an intensive survey by P. Kohl from 1975–76, were incorporated into W. Ball’s Archaeological Gazetteer of Afghanistan which was first published in 1988 but revised in 2019. Given that this work has been synthesized so effectively and in such an accessible publication, I do not see a need to provide such a detailed synthesis of my own, even within the context of rural settlement patterns—which accounts for most of the sites included in that dataset. Therefore, for southern Bactria I highlight the importance of excavated contexts of rural houses and consider them within their landscape context, avoiding the sort of comprehensive accounting of all known rural sites that the reader will encounter in other parts of this dissertation (especially in the next chapter on Sogdiana).

My consideration of Badakhshan and northern Bactria is more detailed than southern Bactria, although remains outside of the scope achieved in the next chapter. Like Martinez-Sève’s article on southern Bactria in the same volume, L. Stančo and G. Lindström have come closer to providing a comprehensive overview of northern Bactria. My own accounting of that region was closer to completion when The Greco-Bactrians

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244 Kohl 1978.
and Indo-Greeks was published and so I do cover similar terrain addressed in those important articles. Yet, like for southern Bactria, I abandoned my initial goal of providing a full accounting of rural sites that unified Soviet and post-Soviet datasets with other more accessible works, such as L. Stančo and P. Tušlová’s Sherabad Oasis (2019) and S. Stride’s dissertation Geographie archéologique de la province du Surkhan Darya (2004). While I think the AMCAA now approaches a complete catalogue of northern Bactria, I do not engage in a thick description of every single site as was initially planned, only addressing key site clusters, trends, and most importantly excavated rural contexts.

3.2. Ai Khanoum and the Dasht-i Qala plain in northeast Afghanistan.

In the far northeast of Afghanistan is a mostly rugged, mountainous region that comprises all of the Badakhshan and Takhar provinces (Figure 5, Figure 6). Over two million people currently call this area home, most of which reside in the capital cities of Fayzabad and Taloqan. Whereas all of Badakhshan is extremely rugged and remote (albeit not to those living there), much of the Takhar province is flat and semi-arid. Nonetheless there are nearly five millennia of irrigation history in this region, making it one of the most successful anthropogenic landscapes in Central Asia. One of these agricultural plains in Takhar is in Dasht-i Qala, famous for the discovery of the Bronze Age Harappan colony at Shortughai and the substantial Hellenistic city Ai Khanoum. As discussed in the next section, this region is the logical launching point to talk about rural settlements in Hellenistic and post-Hellenistic Central Asia. Not only was the site well-preserved, there was an excellent, rigorous research strategy that sought to document the rural hinterland of one of the most remarkable Hellenistic sites in Asia. In the following section I highlight the work of previous scholars on this region (which has been
incorporated into the AMCAAn) to explore a different angle than is usually taken in focusing exclusively on the rural hinterland and suburbs, as opposed to reiterating what is known from Ai Khanoum’s urban fabric. In doing so I hope to draw out some aspects of local, Bactrian traditions that found their way into the local Hellenizing culture.

3.2.a. Rural settlements in the Dasht-I Qala plain.

In 2014 the long-anticipated ninth volume of Fouilles d’Aî Khanoum was published, edited by G. Lecuyot and breaking a twelve-year gap in the final publication of Ai Khanoum.\(^{245}\) Ostensibly dedicated to publishing the excavation of the Hellenistic city’s southwestern residential quarter, the book exceeded expectations in its inclusion of a chapter by H.P. Francfort dedicated to the ancient rural hinterland.\(^ {246}\) As far as I know, this now completes the publication of the *chora* of the main city, having added to the previously published series *Prospections archéologiques en Bactriane orientale* released in three volumes from 1989–98.\(^ {247}\) These earlier publications provided a comprehensive history of the environmental and hydrological development, the ceramic chronology, and the settlement patterning. H.P. Francfort’s chapter gives the final piece to explore the rural dynamics of the Hellenistic and post-Hellenistic plain and follows up on his own unpublished independent survey of the rural and suburban areas outside of Ai Khanoum that were otherwise ingested into the third volume of *Prospections*.\(^ {248}\) These are the only comprehensive publications of a rural context in Hellenistic and post-Hellenistic Central

\(^ {245}\) Lecyot 2014.
\(^ {246}\) Francfort 2013.
\(^ {247}\) Gentelle 1989; Lyonnet 1997; Gardin 1998.
Asia and an excellent synthesis of this work by L. Martinez-Sève has recently appeared, negating an early written incarnation of this subchapter that had attempted the same.

I will only summarize the key elements of rural settlement patterning in the Dasht-i Qala plain on account of the more detailed published treatments that are widely accessible. As is regularly acknowledged, three canals of the Dasht-i Qala Plain were first installed in the late Bronze Age and were associated with the Harappan colony at Shortughai. For the most part, these same canals continue to irrigate the entire plain today. In the literature these canals are identified as AK1, AK2, and AK3 (Figure 7) and proceed numerically from east to west. All of these canals have evidence for restoration at some point during the Hellenistic period when they provided water for a rural plain of over 10,000 hectares.

In terms of pre-Hellenistic settlements, there was some disagreement between B. Lyonnet and J.C. Gardin about the periodization of Bronze and Iron Age materials which might have had some impact on the periodization and therefore designation of sites observed in the 1974–78 survey of the region. Lyonnet identified only two sites dated to the Yaz I early Iron Age period, 19 Yaz II sites, and 24 Yaz III sites. Martinez-Sève has described these later sites as clustered zones of four or five “villages.” For the Hellenistic period their expedition did not attempt to distinguish granular changes in

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249 Martinez-Sève 2021.
250 Francfort 1989.
252 Gardin 1998: 42.
chronology. Therefore, all the pottery from the 3rd–mid 2nd century BCE was grouped together into one phase, unlike the more nuanced periodization found at Ai Khanoum.255

During the late Achaemenid period before the foundation of Ai Khanoum, the most likely administrative center was located 2km north the Hellenistic city at Kohna Qala (Figure 10; AMCAA 180). The site is increasingly recognized for its importance only after a scathing critique of the publication record of archaeological missions by DAFA in the Dasht-i Qala plain was published by G. Fussman.256 Kohna Qala is a massive fortification on the bank of the Darya-i Panj with a semi-circular plan that utilizes the bank of the river at its northwest for completing its circuit. It features both an inner and an outer semicircular fortification wall. The plan and river-adjacent fortification strategy is very similar to the late Achaemenid fortification at Chim Qurghan (AMCAA 85) in the plain of Imam Sahib in Afghanistan southwest of Ai Khanoum.257 At its widest Kohna Qala is 1.18km along a northwest-southeast axis, and from the river to the extent of the eastern wall the width is 600 meters. Overall this is an area of 29 hectares. It seems very likely from satellite imagery that the site has been partly eroded by the Panj. Curiously the site was never subject to sondages despite other sites being selected in the plain for excavation. Rather remarkably, H.P. Francfort disagrees that this site had any tangible significance before the Hellenistic period. In noting that late Iron Age (Yaz III) pottery is not well-represented in the plain he also suggests that Kohna Qala only developed into a “city” after the arrival of Greeks—a view based entirely on an observable increase in Hellenistic pottery at that site in comparison to the earlier

256 Fussman 1996.
Within this context, the imprint of a residential area located between the inner and outer fortification wall observable from the surface could be dated to the Hellenistic period. While speculative without actual excavations, this would have significant implications for the status of Ai Khanoum, which would then emerge as a dual Hellenistic city like Zeugma-Apamaea in Syria, for example, as opposed to the singular capital city as it is currently understood.

The only excavated site from which Achaemenid period ceramics emerged was Zulm (AMCAA 340), located 9.75km east of Ai Khanoum at the foot of the Rustaq mountains along canal AK2. The finds were rather unremarkable but no less significant for understanding the development of the plain. Two meters below the modern surface, a layer of scattered ceramics was found with no associated architecture. The function of the site was undeterminable other than the fact that this area was already topographically elevated in antiquity, which led Francfort to suggest that the ancient elevation was the site of a nomadic encampment. Some handmade ceramics featured formal characteristics that indicate continuity from the end of the second millennium BCE into the late Iron Age, suggesting long-term transmission of indigenous traditions.

After the collapse of the Achaemenid Empire, the administration of Bactria passed to the Alexander and then the Seleucids (first under Seleucus Nikator, then his son Antiochus I). While Ai Khanoum was founded around 280 BCE it was not until the reign

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258 Francfort 2013: 176, n. 408.
261 Ibid.
262 Lyonnet 1997: 373, Figure 34; Francfort 2013: n. 347.
of Eu克拉ides from 170-145 BCE that the city had reached its peak development. This included settlement expansion into an extramural suburban area that increased the footprint of the city another 300ha. The documentation of Ai Khanoum’s suburbs far surpasses what is known about the suburbs and other contemporary cities like Er Kurgan in Kashkadarya or extramural Afrasiab. These suburbs were mostly explored by H.P. Francfort from 1974–75, who observed the contours of extramural manor houses covered with roof tiles and brick and stone architectural fragments in an area concentrated one kilometer east of the acropolis of Ai Khanoum and up to the walls of Kohna Qala. The plans of these houses were discernible enough for him to note that they were like the elite housing of the southwest corner of the city, so much so that one house and a nearby extramural temple were excavated.

Beyond the suburbs was a vast rural plain that sprawled to the north, northeast, and east. Like the suburbs, Francfort noted that he regularly encountered roof tiles and stone column fragments across the entire landscape. Only a few of these sites were mapped during Gardin, Gentelle, and Lyonnet’s prospections at the end of the 1970’s but were documented in greater detail by Francfort in his own independent survey of 1975. The difference between both surveys was between documentation strategy rather than quality, with Francfort placing greater emphasis on dense settlement clusters in the modern agricultural zone as opposed to restricting himself to the patterns of tepa

265 Ibid: 42.
266 Lecuyot 2013: 103-134; Downey 1988: 73-75.
267 This information is transmitted by way of J.-P. Gardin (1998: 41-42).
268 Gardin 1998: 42.
distribution across the plain. The plain of Ai Khanoum was so densely packed with archaeological material that the identification of individual “sites” was effectively meaningless for Francfort.269 Acknowledging that the entire area immediately outside of Ai Khanoum was a dense anthropogenic landscape, Gardin’s method is useful for making quick reference to other concentrated areas within the rural plains outside of the suburban area.

Both expeditions observed two roads leading from the main eastern city wall through the suburbs and further into the rural areas. The first progressed in a straight line in a northerly direction passing by Kohna Qala one kilometer to the east and continuing directly into the rural hinterland toward the next significant Hellenistic settlement at Yangi Qala 40 kilometers to the northeast (AMCAA 176, 158). The second followed the topography of Ai Khanoum’s acropolis and generally followed the Kokcha River into the mountains of Badakhshan towards the Sar-i Sang lapis lazuli mines and the Wakhan Corridor. Several other ancient roads were documented between these two main arteries and following the incline of the plain’s topography. Most suburban houses that were discernible on the surface by Francfort were situated along roads with canals adjoining the rear courtyard areas of the homes.270 What is more, major roads also had offshoots that led into other concentrated neighborhoods or villages beyond the suburban area.

Documented house architecture was very similar to the courtyard houses of Ai Khanoum’s southwest corner, but with some differences that distinguish suburban life from the city within the walls. Unlike homes within the city, suburban homes around Ai

269 Gardin 1998: 238, Figure 3.4B; Francfort 2013.
270 Gardin 1998: 42.
Khanoum were probably associated with small plots of accompanying land. This is known because of the regular identification of ancient vineyards and orchards within the wider vicinity of dispersed suburban manor houses.\textsuperscript{271} The clearest example is a Hellenistic vineyard directly to the east of the acropolis (Figure 11). Francfort noted that these vineyards were especially concentrated in areas close to Kohna Qala and were nonetheless associated with the footprints of other large and small buildings, such as non-elite homes, manor houses, and possibly more temples.\textsuperscript{272}

While grape cultivation and wine production were clear staples of Ai Khanoum’s rural economy, the main activities of rural life were likely arranged around grain cultivation and processing. Querns, mortars, and pestles are some of the most common artifacts found within the city, the suburbs, and the rural hinterland. Francfort has noted the likelihood of grain processing on two different scales, one for urban industry and another situated at the household level.\textsuperscript{273} The evidence for urban grain storage is only indirect since no grain silos were found at Ai Khanoum, surely they existed somewhere. We can speculate that these silos took the form of Hellenistic period silos found at Afrasiab in Samarkand, where they took the form of large mudbrick chambers for the heaping of grain.\textsuperscript{274}

The economics of local grain processing further complicated when one considers the types of querns and grain grinders that were found in the suburbs. These fall into two categories, horizontal grinding querns akin to metates and rotary axis grinders.\textsuperscript{275}

\begin{thebibliography}{9}
\bibitem{271} Ibid: 41-42.
\bibitem{272} Ibid: 42.
\bibitem{273} Francfort 2013.
\bibitem{274} Baratin and Martinez-Séve 2013.
\bibitem{275} Gardin 1998: 238, Figure 3.4B.
\end{thebibliography}
second type seems to be more common (5 examples) than the horizontal quern (1 example). The distribution of rotary grinders seems to fall directly on the outskirts of the dense suburban area whereas only single quern of the other type was found within the suburbs. This might indicate that flour production was a suburban industry rather than urban, as is also indicated at the outer settlement of the Hissar Fortress known as Kurgoni Kulobi in the eastern Hissar Valley of northern Bactria (see below). In such a scenario grain would be brought from the dispersed rural fields in the north around Shortughai (AMCAA 290) that radiated out north and east of Ai Khanoum and its suburbs, processed at the boundaries of the suburbs, and then traded into suburban communities and within Ai Khanoum itself.

In terms of local trade, there was no discernable difference between the pottery found anywhere in the city, the suburbs, and the rural hinterland. Rather unsurprisingly all areas of the Dasht-i Qala plain were integrated into a single economic network with everyone acquiring their pottery from the same local masters. Spindle whorls were found in each of the excavated rural houses, indicating that weaving was done at the household level.

For rural site clusters documented around during the 1974–78 prospections of Gardin, Lyonnet, and Genetelle we have the following information, again bearing in mind that this really only represents documented tepas at the outskirts of the aforementioned suburban and rural zones. To the east of Ai Khanoum is a small cluster of mounds that date from the Achaemenid through Kushan periods. One of these is Zulm, Zulm,

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276 Т.И. Зеймаль и Е.В. Зеймаль 1988: 277.
277 Francfort 2013: 170.
278 Gardin 1998: 42-44.
mentioned above. The other sites are two rural farmsteads, “Tepe 97” (AMCAA 94) and Turghai Tepe (AMCAA 314), both of which seem to be established in the 3rd century BCE and inhabited until the mid. 2nd century BCE and were each built 800–1000m north of canal AK2. I will discuss Tepe 97 below in the context of rural housing. While Turghai Tepe is unexcavated, it is just as possible that the site was a fortification since it still towers over the surrounding plain at a height of 10m and with a diameter of 60m.279 A series of low mounds associated with Turghai, which have not been published, were noted stretching 1.5km south and east of the main tepa suggesting that each followed the bank of an ancient canal.280

While there is no known Hellenistic occupation phase at Zulm, 2k to the northeast of Turghai Tepe, a jar burial dating to this period was found at the site. The jar was laid on its side and contained the remains of an adult lying on their back.281 As Francfort notes, this method of burial is not common at Ai Khanoum and instead is more connected with Bronze Age burial traditions of Sapallitepa and Djarkutan, as well as a Kushan period burial at Hissar, at 6th–2nd centuries BCE burials from Zaghuluk and Djoumboulaq Koum in Xinjiang, as well as many other connections with the steppe world.282 Francfort associates the burial with the arrival of newcomers after the so-called invasion of the mid-2nd century BCE.283 This may indeed be the case, but we should also consider that nomads probably lived alongside rural populations for much of the Iron Age and after.284

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279 Ibid: 42.
280 Ball 2019: 396, no. 1205.
281 Francfort 2013: 176-77.
282 Francfort 2013: 159.
283 Ibid.
284 Stark 2021.
Moving now to the northeast of Ai Khanoum, there are several clusters of mounded settlements. The first is a pair of mounds called Ghuz Tepa (AMCAA 110, 111) encountered 8.5km northeast of Ai Khanoum and 1km west of canal AK3. Like the previously mentioned mounds, the Ghuz Tepa mounds were firmly located in Ai Khanoum’s rural hinterland beyond the suburbs. These sites were only surveyed with ceramics dating from the 4th century BCE – 4th century CE without a clear break in sequence. The most significant excavated Hellenistic site in the Dasht-i Qala plain outside of Ai Khanoum is the Hellenistic manor house at Shortughai (AMCAA 290). This site could have been watered by either or both of canals AK2 and AK3.

It is perhaps significant that a fortified site was set up along the Darya-i Panj 13km northeast of Ai Khanoum and 6km southwest of Shortughai at Arab Kakul (AMCAA 142). This site is a medium sized rectangular fortification or watchtower with no towers or bastions and measuring approximately 200m x 100m and preserved to a height of two meters. Two additional small mounds measuring 40m x 40m and 80m x 40m were documented 150m to the southeast of the fortification, which were interpreted as housing for the fortification staff. Larger habitation areas were also documented within the immediate vicinity of the site but beyond the satellite mounds and on the lower western terrace of the Darya-i Panj riverbank all with sherds dating to the Achaemenid through Greco-Bactrian period. From satellite imagery the site seems to have been eroded away by the Panj. It may be the case that this fortification reflects an effort by

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287 Gardin 1998: 43. The pottery of these adjacent sites was reported as contemporary to the fortification.
288 Ibid. These lower sites are almost certainly lost to erosion now.
local governors to monitor riverine traffic as well as the road between the rural plain and the main city. Based on the ceramic chronology we can speculate further that Arab Kakul coincided with a redevelopment of Khona Qala from an Achaemenid fortification into a more substantial fortified site. At any rate the site reflects local interests in monitoring riverine traffic and the rural hinterland, which is a feature that we will encounter again here.

In addition to investment in developing Dasht-i Qala into a rural landscape there were also efforts to expand agriculture south of Ai Khanoum across the Kokcha River into places which were previously uninhabited. This coincided with uneven redevelopments of other previously unoccupied plains of Amu Darya’s left bank, such as at Archi, Imam Sahib, Taluqan, and Kunduz plains.289 These latter regions have recently been covered in full by L. Martinez Sève and will not be reanalyzed here although I have incorporated them into the AMCAA.290 Returning to the area directly across the Kokcha River from Ai Khanoum across the Kokcha river, I only emphasize the previously uninhabited plains of Kwhaja Gar and Hazar Bagh. These newly settled zones were irrigated by a single source, the Rud-i Shahrawan canal, the construction of which was completed in the Hellenistic period. However, there are indications that the construction of this canal was already underway during the late Achaemenid period.291 This remarkable feat of engineering involved cutting a 20 meters deep trench through parts of the plain for 800 meters reflecting a high degree of careful planning and coordinated

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289 Gardin 1998: 64-65; Martinez Sève 2021: 229
290 Martinez Sève 2021: 229-235.
execution. Thus, while rural expansion into these new zones coincided with Seleucid and Greco-Bactrian administration, these were long-term projects that were not initiated by Greeks. While the new administration would have no doubt benefitted from economic improvements and revenues from an increase in population, agricultural supply, and taxation, planning and maintenance schedules could have been a locally managed affair with immediate returns for rural inhabitants.

Returning again to Dasht-i Qala, now further north than Shortughai, the next cluster of rural sites and fortifications is located 45km northeast of Ai Khanoum at the northern outflow of the Panj River from the Rustaq Mountains, particularly at the confluence between the Panj and the Rud-i Jilga River that originates in Badakhshan. This is the Yangi Qala Plain, within which is located several sites of the Zard Kamar and Kaldīsh group of settlements and production areas that date to the late Achaemenid or Yaz III period (AMCAA 158, 159, 160, 161, 176, 334, 336, 337, 338). There is a drastic decrease in the number of settlements in this area during the 3rd century BCE when the northernmost mound of Zard Kamar (AMCAA 158) and Kwāja Hafiz (AMCAA 176) are converted into fortifications protecting the outflow of the Rud-i Jilga (Figure 5, Figure 6). This is significant for two reasons. The first is that these fortifications are, in fact, closer to the next rural plains of Bactria, Parkhar and Kulob around Sakhsanokour, rather than Ai Khanoum, although there are problems with assuming they were within a sphere associated with known sites north of the Darya-i Panj. Second, the Rud-i Jilga is one

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293 Martinez Sève 2021: 229-30 also notes the depletion of settlement in the Hellenistic period but does not consider these fortifications. It is likely that she has access to more information than what has been published about these sites.
significant passage into the eastern mountainous zone of Badakhshan that was economically integrated into Ai Khanoum’s sphere of influence. It is during the Hellenistic period that a series of fortifications first appear along major arteries into Badakhshan specifically, but along major roads across Bactria and Sogdiana more generally,\textsuperscript{294} with significant expansion in the early Kushan period. Thus, it is quite important that several fortifications and unfortified settlements appear along the Rud-i Jilga that probably date to the late 3\textsuperscript{rd} or early 2\textsuperscript{nd} century BCE, at least one of which over an Achaemenid period production area (AMCAA 117). This increase in settlement is found at the following sites Bīsh Ka’īk (AMCAA 45, 46, 47), Gugari (AMCAA 112), and the large fortification at Kāfir Qal’a Rustaq (AMCAA 139). At Kāfir Qal’a Rustaq, settlement size peaked in the Kushan period at 300m x 200m, although the area was otherwise occupied continuously from the Middle Bronze Age (ca. 2500–1500 BCE).\textsuperscript{295} In reality, we know nothing about the phasing of the fortification. Deeper into the mountains two settlements also appear at Takhnābād (AMCAA 303, 304) dating from the 3rd–mid. 2\textsuperscript{nd} century BCE that are only known through a 100m x 50m area of scattered ceramics and several low mounds that might have been mudbrick houses.\textsuperscript{296} While we know nothing more about these sites, they are perhaps indicative of an early phase of economic integration of Badakhshan into Bactria, a point I will emphasize further in my analysis of sites in the eastern mountainous region of Bactria.

\textsuperscript{294} Ibid: 240.
\textsuperscript{295} Ball 2019: 190, no. 495.
\textsuperscript{296} Ibid: 374, no. 1132.
3.2.b. Rural domestic architecture in the plain of Ai Khanoum: some observations.

As indicated in the previous section, from 1976–79 several rural farmsteads in the Dasht-I Qala plain were excavated by DAFA and only recently published. Some of these emerged as rural settlements and farmsteads dating to the late Achaemenid, Hellenistic, and post-Hellenistic or Kushan periods. Specifically, these are Zulm (AMCAA 340), “Tepe 97” (AMCAA 94), Tepe 106 (AMCAA 1204), Turghai Tepe (AMCAA 314), and Shortughai (AMCAA 290). I will only summarize some key aspects of rural architectural strategies across these excavated examples since these houses are now published in an easily accessible format. While not recognized in that publication, these houses represent distinctly elite types of rural farmsteads that are only archaeologically attested at one other site in Bactria, Saksanokhur in Parkhar in southern Tajikistan. In the previous section I emphasized that the entire suburban and rural sphere of Ai Khanoum was in a direct economic relationship with the main city. Because Ai Khanoum is really the only known Hellenistic city of its class in Central Asia, the rural settlements of its immediate hinterland cannot be taken as the rule for the rest of Central Asia. However, it is useful to begin an emphasis on rural Bactrian and Sogdian rural housing with these anomalous structures. Most importantly, these houses currently the most accessible reference for rural housing of the available archaeological literature. As this study progresses it will become clear that their form and settlement context is somewhat of an anomaly across Bactria and Sogdiana. Yet even within their unique status these elite structures are not quite the Greco-Mesopotamian-Iranian imports that we find in the architectural syntax of the royal city of Ai Khanoum. In the rural sphere we

297 Francfort 2013.
find more interaction with veritable indigenous Central Asian traditions than within the
city, and this is what I would like to emphasize in my summary of sites here. I also
explore some minor differences in the economic basis of these rural structures.

Having noted that the plain of Ai Khanoum is unique, I should also be clear that
there is no question that elite houses of the types excavated in the Dasht-I Qala and
Parkhar were dispersed elsewhere in Bactria. However these contexts are at a smaller
scale than at Ai Khanoum and are otherwise only hinted at archaeologically in very few
places. The best candidate area seems to be situated in the Dangara plain, a point I will
explore further in discussing that region below. Beyond Bactria, no farmsteads like these
are found anywhere in Sogdiana. Otherwise, most houses in Bactria are like those of
Sogdiana, in that they are very simple pit-house structures. Beginning with these elite
structures is an excellent way to contrast everything that comes after.

Excavated rural houses are found at Shortughai (AMCAA 290, known in the Ai
Khanoum publications as the “Hellenistic manor”), “Tepe 97” (AMCAA 94, aka the
“Hellenistic farm”), and “Tepe 106” (AMCAA 1204, aka the “Achaemenid and Kushan
farm”). I will approach these sites in this order. Quite interesting is that each house has a
slightly different plan than the other, with different architectural influences, and with
assemblages of different qualities. The detailed stratigraphic excavations of the DAFA
team even allow us to consider possible room functions, albeit with caution considering
the complexity of depositional practices in abandoned households.298

The most significant Hellenistic rural manor in the Dasht-I Qala plain is
Shortughai (Figure 12; AMCAA 290). Whereas the site is widely recognized for its

298 LaMotta and Schiffer 1999.
Bronze Age, Harappan phases, it has only been the last few years where a more complete picture of the upper Hellenistic layers have been clarified since they were excavated in 1976, 1978, and 1979.300 While it was only partially excavated, this is a broadly excavated farmstead with a household economy focused on the cultivation of grain and possibly viticulture. Overall, the main building of the farm measured 20m x 20m with an adjacent square courtyard located to the north.301 In this arrangement the house is like residences of the suburbs just outside of Ai Khanoum and the urban dwellings of the southern quarter. The entire structure was made of mudbricks measuring 41cm x 41cm x 10cm thick. Some rooms were coated with a greenish or white plaster. The layout of the building is not fully understood, since this was only a limited excavation, but probably looked similar to another local rural site, Tepe 97 (Figure 9).

For the ease of legibility I have summarized the size, contents, and function of each excavated room at Shortughai in Table 1. Only four rooms were excavated and featured finds that attest to the productive aspects of the household, especially in Room 1. It is clear that grain cultivation and processing was the main activity at this farm. Mortars, querns, and pestles were found in each room although the amounts were not published. Two grain silos were found, one in a partially excavated northern room and another fully excavated in Room 1. The Room 1 silo was very large—2.4m x 1.2m x 1.10m, which Francfort estimated could hold between 1400–2400kg of grain. Assuming that is all one yield, he estimates a hypothetical wheat field size to be one hectare,302

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300 Francfort 2013: 165-70.
301 Ibid.
302 Francfort 2013: 170.
which is roughly the size of a modern football pitch. Generally speaking, it is therefore likely that the resident family at Shortughai were producing a range of foods that served the immediate needs of the household with a small trade surplus.

Other activities point to a household as well as an animal economy. Faunal remains from the house were all domesticates and included one camel, horse, pig, sheep, goat, and cattle although the statistical distribution of the assemblage is not published. Phytoliths from dogs were found in the silo of Room 1 perhaps due to post-abandonment rummaging. Archaeobotanical remains were not collected. Tandour style fireplaces also found in Room 1 were found alongside niches in the walls that clearly indicate cooking and thermal retention of cooked food. All pottery was reported as the assemblage that can be found at Ai Khanoum during the Hellenistic period.

Table 1. Shortughai. Room sizes, hypothetical functions, key finds (after Francfort 2013: 165-70)

<table>
<thead>
<tr>
<th>Room #</th>
<th>Size</th>
<th>Function</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5.9m x 7m; 1.1m–1.59m thick walls</td>
<td>Storage, production</td>
<td>Loom weights; millstones, silo (2.4m x 1.2m, 1.1m deep); possible annex of room 2</td>
</tr>
<tr>
<td>1, north</td>
<td>(not fully excavated)</td>
<td>Storage; cooking.</td>
<td>Silo (1.06m x 2.06m, 1.1m deep, not fully excavated); tandor hearth jar; millstone; 20 clay pyramid weights</td>
</tr>
<tr>
<td>1, west</td>
<td>Exterior</td>
<td>Exterior; cooking; low fences(?); midden(?)</td>
<td>Exterior space; figurine; fineware (krater); tandor #2</td>
</tr>
<tr>
<td>1, south</td>
<td>(not fully excavated)</td>
<td>Courtyard</td>
<td>Post holes (10–12cm) with wood columns preserved; pit with plaster lining; pottery deposit (trash?); camel bones; hearth (2 phases)</td>
</tr>
<tr>
<td>2</td>
<td>4.1m x 4.4m, 0.9m–1.3m thick walls</td>
<td>Domestic production; heating</td>
<td>Plastered walls with green wash; Massive hearth with niche (1.1m x 0.7m, opening 0.6m); millstones,</td>
</tr>
<tr>
<td>No.</td>
<td>Dimension</td>
<td>Feature</td>
<td>Notes</td>
</tr>
<tr>
<td>-------</td>
<td>-----------</td>
<td>--------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>3</td>
<td>4.4m x ? (not full excavated); 0.8m thick walls</td>
<td>Heating; Dining</td>
<td>Massive hearth with niche (1.4m x 0.9m; 10cm thick); Silo (0.5m d., shallow); dining pottery layer; weights; lamp.</td>
</tr>
<tr>
<td>2,3 north</td>
<td>unknown</td>
<td>unknown</td>
<td>n/a</td>
</tr>
<tr>
<td>2,3 southeast</td>
<td>Exterior</td>
<td>Trampled surfaces (17 layers)</td>
<td>4m of trampled surface between 2,3 south and annex 4</td>
</tr>
<tr>
<td>4</td>
<td>2 rooms; 2.5m e-w; walls 0.5–1m thick</td>
<td>Storage</td>
<td>Jars and large pits line the north wall, some embedded in clay; weights; mortar</td>
</tr>
<tr>
<td>4, south</td>
<td>n/a, exterior</td>
<td>n/a, exterior</td>
<td>none</td>
</tr>
<tr>
<td>4m east</td>
<td>n/a, exterior</td>
<td>n/a, exterior</td>
<td>none</td>
</tr>
</tbody>
</table>

Shortughai is particularly interesting when compared to a rural farmstead excavated to the east of Ai Khanoum. This is “Tepe 97” (AMCAA 94), one of several small hillocks located in an area that is now heavily cultivated 300m away from a branch of canal AK2. Francfort described this house as “purely Greek” on account of architectural similarities to the urban mansions of Ai Khanoum, yet at the same time questioned whether the house was inhabited by an indigenous Bactrian. This question was raised on account of the lack of what he describes as typically “Greek” luxury materials such as lamps, terracotta figurines, and shale pyxides. While there is no need to ponder the ethnicity of the homeowner based on negative evidence, there are some clear Central Asian influences in the house plan. The structure is roughly square, 16.8m from east to west and 17.45m on the north-south axis. Ten rooms were exposed in the interior, most of which flank a central vestibule which is a design principle well established in Chorasmia south of the Aral Sea by the 6th–5th century BCE. Such is the case for a

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medium-size manor house excavated at Dingildje in Chorasmia excavated by M.G. Vorobeva in the late 1960’s (Figure 13). While Francfort does note the similarities, no significance is given to this fact in comparison to what features that are (or are not) perceptibly “Greek.”

Tepe 97 was excavated more completely than Shortughai and had three clear phases. Like Shortughai the house plan is similar to Dingildje. The most recent is a layer of mudbrick collapse and sandy wash sediment that was heavily damaged by the effects of standing water. The second phase is a clear occupation layer utilizing walls from the earliest phase. The external plan of the earliest phase is imprecisely known due to ground water damage. The building materials of the house could only be determined in areas not damaged by standing water, indicating walls constructed of unbaked mudbricks. The remains of these bricks measured 40cm x 40cm x 10cm. All walls were coated with plaster of which 1–2cm thickness is preserved and the lowest levels of foundation blocks were 1 – 1.2m in length.

The building is clearly a domestic residence and a farmhouse based on the material culture, summarized in Table 2. Enough material was present on room floors to make general statements about the productive economy of the farm. Based on the assemblage it is clear that agricultural production was a central activity in the household. Two grain silos set into the floor of Room 2 were exposed; one was 1m x 0.8m x 1m deep and the other 1.8m x 1.2m x 1m deep. Thus, like Shortughai there was a high capacity for grain storage here. Additionally, the presence of spindle whorls and clay scales attest to the importance of weaving at the household level. No faunal or

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archaeobotanical remains were kept but one might assume that at least the faunal assemblage would reflect that of Shortughai.

Table 2. Room sizes, hypothetical functions, and key finds of the first phase Francfort 2013: 161–65).

<table>
<thead>
<tr>
<th>Room #</th>
<th>Size</th>
<th>Type / Function</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ca. 2.6m x 1.7m</td>
<td>Corridor / Transition</td>
<td>no</td>
</tr>
<tr>
<td>2</td>
<td>4.40m x 7.40m</td>
<td>Grain storage</td>
<td>2 silos</td>
</tr>
<tr>
<td>3</td>
<td>6m x 5.60m</td>
<td>?</td>
<td>Millstone; hearth</td>
</tr>
<tr>
<td>4</td>
<td>5.30m x 7.25m</td>
<td>Kitchen</td>
<td>Hearth</td>
</tr>
<tr>
<td>5</td>
<td>6m x 3.5m (p 1); 5.6m x 5.6m (p 2)</td>
<td>Bathroom</td>
<td>Pebble layer for drainage; pipe terminus</td>
</tr>
<tr>
<td>6</td>
<td>2.50m x 4.50m</td>
<td>?</td>
<td>Water pipe transits from outside to Room 3</td>
</tr>
<tr>
<td>7</td>
<td>2.5m x 4.5m</td>
<td>Storage/ Closet?</td>
<td>Storage vessels</td>
</tr>
<tr>
<td>8</td>
<td>4.49m x 5.65m</td>
<td>?</td>
<td>Jar and ashy area in northwest corner</td>
</tr>
<tr>
<td>9</td>
<td>5.15m x 5.80m</td>
<td>Production activities</td>
<td>Fireplace; Spindle whorls; loom weights; millstone; iron point</td>
</tr>
<tr>
<td>10</td>
<td>2.65m x 1.70m</td>
<td>Corridor / Vestibule 1</td>
<td>no</td>
</tr>
</tbody>
</table>

Before concluding this overview, Returning briefly to within the walls of Ai Khanoum, there seems to be an open question about the status of houses partially excavated on the acropolis that have sometimes been referred to as the homes of “indigenous Bactrians” and more recently the homes of Greek soldiers.⁴⁰⁵ To my mind there is nothing that convincingly indicates either, although the latter seems more likely. The excavations of these houses received a single page mention in the fortifications volume of *Fouilles d’Aï Khanoum*.⁴⁰⁶ These structures were cell-like rooms that were

haphazardly situated along a north-south axis and sometimes sharing double party walls. Walls utilized mixed construction material with mudbricks of 44–46cm x 44–46cm. Room sizes generally ranged from 4m x 3.5m, 5m x 3m, and 4.5m x 5m. Sometimes house units had multiple simple rooms. Some rooms had rectangular hearths set up against the walls of the unit. They were also partly disturbed by 1st century BCE – 1st century CE graves and a later Timurid wall. The only reported assemblage from any structure is pottery, sharing the same period. All date to the very end of the reign of Eucratides I, so close to the destruction of the city in 145/135 BCE. On such scant information it is difficult to see the justification for calling these units the homes of indigenous or “local” Bactrians based essentially on empty and haphazard architecture.

Finally, one post-Hellenistic house east of canal AK1 excavated by H.P. Francfort might be a pit-house. This was at “Tepe 106” (AMCAA 1204) which is also referred to as the Kushan farmhouse.307 This was a small room, 2.6m x 2.3m in size and surrounded with a 40cm high sufa (couch). In terms of dating, this structure is later than the others mentioned here, generally dating to the Kushan or Kushano-Sasanian period. In his report, Francfort noted that the structure featured four walls but no entryways (i.e., the room was entirely enclosed).308 It does not seem that the external areas outside of the room were excavated, which is important for indicating whether this structure was above the ancient surface or a pit-house. If so, then this house is more directly tied into the rural traditions of Central Asia than has been appreciated.

307 Francfort 2013: 159-161.
308 Francfort 2013: 160.
To summarize, while the rural houses in the plain of Ai Khanoum were far more fully integrated into the local economy, there were some cultural aspects that situate farm life within indigenous practices. This is especially evident at Tepe 97 which shares formal characteristics with earlier house types known to Chorasmia, very far from northeast Bactria but nonetheless also near the Amu Darya. That said, these houses are anomalous for wider Bactria and Sogdiana. As we shall see, only one other excavated site, Sakhsanokour in Parkhar, attests to the scale of housing documented around Ai Khanoum. It will be shown however that this other site poses significant problems that I feel have somehow escaped the notice of others. Finally, while Tepe 106 is later in date and built under quite different political circumstances, the prospect of pit-houses in the plain of Ai Khanoum should come as no surprise. As I will show repeatedly, Tepe 106 was actually within the local vernacular of rural architecture.

3.3. The eastern limits of Bactria in Gorno-Badakhshan. Life in the mountains.

When the last Greco-Bactrian king was deposed at Ai Khanoum, likely Heliocles I (ca. 145-135 BCE), he left the wealth of eastern Bactria behind in the treasury of the palace. This treasury was ransacked, but some of the most valuable materials were left behind. Worked and unworked semi-precious stones such as lapis lazuli, turquoise, quartz, garnet, beryl, agate, onyx, carnelian, and calcite were found in rooms 104 and 109 of the palace treasury. Each stone attests to an economic relationship between the rulers of Ai Khanoum and a different geographic region. Among this assemblage only the

geological origin of lapis lazuli is known to be one of two local sources: the Sar-i Sang mine of inner Badakhshan, worked since at least the third millennium BCE,\(^{310}\) as well as an overlooked source in Gorno-Badakhshan region of the Tajik Pamir mountains that is currently receiving renewed attention.\(^{311}\) It is likely that onyx and carnelian came from the Indus Valley.\(^{312}\) On turquoise, a testimony of Theophrastus suggests a source in northern Bactria, where horsemen rode out and collected turquoise from desert sands after it was exposed by the wind.\(^{313}\) He might be referring to known turquoise sources in the Bukuntau-Tamdytau-Kuldchuktau ranges in the inner Kyzylkum where ancient mines are exposed (or inner Kyzylkym ancient turquoise processing sites such as Besh Bulak around these same mountains) or the mountains north of ancient Chach (Tashkent), northwest and northeast of Sogdiana respectively. The mining of sources around Nishapur in Iran are also well documented both archaeologically and among early historians in Medieval Iran.\(^{314}\) Garnet was also mined in Badakhshan, so we at least know that Greco-Bactrian relations with communities within the mountains were not only focused on lapis.

Two deposits of lapis lazuli were found in the palace treasury at Ai Khanoum. One was substantial, weighing 75kg and completely untouched by the usurpers, since the

\(^{310}\) Herrmann 1968.
\(^{311}\) Steiniger and Junker 2020.
\(^{312}\) Bernard and Francfort 1978.
\(^{313}\) Theophrastus *Peri Lithon* 31-55. Theophrastus refers to the stone as lapis lazuli (*kyanos*) but he clearly confuses lapis with turquois. The varieties of lapis he describes more reflect the colors and qualities of turquoise rather than lapis lazuli, which is mostly known for its deep azure blue qualities (although a very rare green variant is also known from Sar-i Sang). Alternatively, one wonders if Theophrastus does refer to lapis collected from a an exposed archaeological site such as Shahr-i Sokhta in Seistan, where evidence for ancient lapis production is relatively close to the modern surface.
pile still retained the shape of its storage basket.\textsuperscript{315} This is the largest assemblage of lapis lazuli in a single context since the early 1\textsuperscript{st} millennium BCE across the wider Near East and appears after a gap of several centuries of any significant archaeological evidence for lapis consumption (although it certainly continued to some degree).\textsuperscript{316} Considering that lapis lazuli had so few sources in Badakhshan, it is reasonable to assume from the Ai treasury assemblage that there is renewed intensification in mining efforts within that zone by the Hellenistic kings. While the late Greco-Bactrian rulers governed deteriorating geographic borders, they nonetheless maintained participation in an elite system of economic exchange with distant regions such as Parthia and the Sogdian nomadic “states” in the north. The fact that these items were not taken after the expulsion of the Greco-Bactrians points to different values between the rebels and city elites.

While there is no concrete evidence for lapis mining at its source during the Hellenistic period, there was surely a community set up there to support its infrastructure. What about the rest of Badakhshan and moreover, the eastern boundaries of Bactria? We only have a marginal understanding of settlement patterns in Badakhshan during the 3\textsuperscript{rd}–2\textsuperscript{nd} century BCE although there is more evidence for the post-Hellenistic and Kushan periods, but there is enough to consider some key aspects pertaining to life in the mountains during this period. Both rivers that water Ai Khanoum’s agricultural plain originate deep within Badakhshan and the Pamir Mountains more generally. The Darya-i Panj is the strongest river of the entire region and is fed from glacial melt within this zone. The Wakhan Corridor is also located in these mountains—the only narrow border

\textsuperscript{315} Bernard 1978: 455.
\textsuperscript{316} Silvia 2016.
modern Afghanistan shares with the Tarim Basin in northwest China. This is not a small and insignificant region and while our evidence is very thin these mountains do seem to have had some relationship with Bactria during the Hellenistic period.

The presence of so much lapis and garnet at Ai Khanoum suggests that there was some economic relationship between Badakhshan and Bactria, particularly along the Kokcha and Panj Rivers. This would surely be restricted to the west although knowledge of the Wakhan Corridor by Greco-Bactrian kings should be assumed. The long tradition of lapis mining, dating back the the 4th millennium BCE, was indicated above. A mining economy remained characteristic of this region in an unbroken sequence throughout the 1st and 2nd millennium CE and into the present day. While this includes lapis lazuli, other materials such as gold and silver were mined from at least the 9th century CE.317

Life in the eastern Pamirs was largely defined by seasonal pastoralism until very recently. When the Russian Tsarist army established the “Pamirski Post” frontier encampment in 1891, a nucleated town emerged from the settlement of pastoral communities that were attracted to reliable fuel sources brought by the army and a trade in animals.318 By the mid-20th century this outpost had turned into the modern town Murghab which remains the largest town in the easternmost region of Gorno-Badakhshan despite having a population of only 4,000 people. In the context of ancient Badakhshan, some leading researchers of the area are wholly dismissal to the idea that there was a Hellenistic Bactrian presence in the Pamirs and instead interpret all archaeological sites with chronological crossover with this period, as built by ethnic Saka living in the

mountains and practicing agriculture.\textsuperscript{319} This includes monumental fortification systems. This general lack of sedentism for most of human history means that there is a lighter archaeological imprint that attests to changes in lifeways over time, especially two thousand years ago.

The early development of human occupation in Badakhshan is very poorly understood. Badakhshan and the Pamir Mountains more generally are some of the least accessible areas on Earth for researchers so everything we think we know about this region will probably change. In general Neolithic life in these mountains was part of a wider tradition shared with regions immediately to the west in Tajikistan such as the Hissar Valley and the Turkestan Range.\textsuperscript{320} Other areas with elements related to the Hissar Culture were found in the Alai Valley of Osh and Lake Issyk Kul in Kyrgyzstan, in Ferghana, around Tashkent, and in Baysun west of Surkhundarya.\textsuperscript{321} This cultural interconnectivity with the mountainous zone bordering China was first observed from 1956–60 by V.A. Ranov who surveyed the Eastern Pamir Mountains to provide a general characterization of ancient life.\textsuperscript{322} Most of this interconnectivity was formed on the basis of shared stone tool technologies of a Neolithic period that was mostly aceramic until its final stage in the late 3\textsuperscript{rd}–early 2\textsuperscript{nd} millennium BCE.\textsuperscript{323} The discovery of this unique cultural zone inevitably prompted discussions about the Neolithic economy of Hissar sites with V.A. Ranov, G.F. Korobkova, and A.P. Okladikov initially seeing the origins

\begin{flushleft}
\textsuperscript{319} Бабаев 2006: 36-85, 257-282.
\textsuperscript{320} Ранов 1964.
\textsuperscript{321} For a bibliography see Ранов и Коробкова 1971: 133.
\textsuperscript{322} Ранов 1964.
\textsuperscript{323} Ранов и Коробкова 1971: 134.
\end{flushleft}
of cattle based pastoralism and dry farming already in development.\textsuperscript{324} This was in contrast to V.M. Masson who saw a Neolithic society fully engaged with hunting and gathering.\textsuperscript{325} It seems more likely that the first opinion is correct. There is no clear indication of what happens in these mountains for most of the 2\textsuperscript{nd} millennium BCE.

The transition from Late Bronze and early Iron Age Badakhshan seems to have happened much later than other parts of Central Asia although a refinement of this periodization seems to have stalled over the past thirty years.\textsuperscript{326} This scheme is directly tied to a \textit{hypothetical} introduction of bronze into the Pamirs generally dated to between 10\textsuperscript{th}–8\textsuperscript{th} centuries BCE, which is nonetheless described as the end of the Bronze Age. However, there are no known sites dating from this late Bronze Age period so the question of the introduction of bronze is not scientifically attested.\textsuperscript{327} Iron only appears from the 3\textsuperscript{rd}–2\textsuperscript{nd} century BCE although early Iron Age as a period generally begins in the 7\textsuperscript{th} century BCE in this period and is almost entirely restricted to mortuary evidence. J. Lerner recently suggested that Badakhshan was the location of the tax-paying region of Sakai described by Herodotus during the reign of the Achaemenid king Darius I.\textsuperscript{328} Earlier, Mandel’shtam suggested that Badakhshan was part of east Bactria as the location of the Aigloi,\textsuperscript{329} a tribe described by Herodotus as part of the twelfth tax-paying district alongside Bactria.\textsuperscript{330}

\begin{itemize}
\item[^{324}] Ранов 1964; Ранов и Коробкова 1971.
\item[^{325}] Массон 1966.
\item[^{326}] Сагдуллаев 1982.
\item[^{327}] Бубнова 1997: 33.
\item[^{328}] Lerner 2016: 110.
\item[^{329}] Мандельштам 1957, 73–74.
\item[^{330}] Herodotus 3.92.
\end{itemize}
Achaemenid period sites are restricted to burials, most of which are kurgans. From west to east along the Panj River in the Wakhan corridor these are found at Misildigar (AMCAA 747) explored by Babaev in 1962, Yamchun II (AMCAA 750), Richive (AMCAA 753), and Chehel Kand (AMCAA 82). Misildigar, Richive, and Chehel Kand are the only pre-Hellenistic period sites with burials dating to no later than the 4th century BCE. Yamchun II was completely excavated by Babaev in 1966 and features individual graves dated from the 4th–2nd century BCE. During the late 4th c. BCE another collection of kurgans was excavated between 1962-63 by A.D. Babaev at Chilkhana (AMCAA 748), who referred to it as a Saka burial ground.331 Like Yamchun II this location was no longer used for burials by the end of the 2nd century BCE. However, we should note that Bubnova questioned the Achaemenid date of some of these graves on account of the presence of iron akinikes and stylistic elements of bronze mirrors found in some assemblages.332 Instead she prefers a chronology that restricts all of these graves to the 3rd–2nd century BCE.

Explorations of Shakhty I cave along the Saly-Unkyor-Sai just southwest of Murghab village lead V.A. Ranov to conclude that some microlithic tools uncovered there dated to the first half of the 1st millennium BCE.333 While we should treat this claim with caution, this would be the only non-mortuary site in the region to date to this period. A petroglyph in this same cave depicting a hunter in bird costume pursuing a wild boar and bear could also date to this period, but it is likely earlier.

333 Ранов 1964: 46.
The Wakhan Corridor is the most likely route taken by Yueh-chi migrants fleeing the confederacy of Han and Xiongnu forces in the 2nd century BCE. It is from the post-Hellenistic and early Kushan periods that substantial fortifications emerged in the Wakhan corridor such as Kaakhaka (Figure 15; AMCAA 746), Rin II (AMCAA 745), Yamchun (AMCAA 749), Bād-I Āsyā (AMCAA 32), and Ratm (AMCAA 751, 752). The only fortified sites in the Wakhan Valley with evidence for actual settlements are Kaakha and Yamchun II. Kaakhka is the first of three substantial fortifications in the Wakhan Valley that might have been founded as early as the 3rd c. BCE (Figure 16). The other fortifications are Yamchun II and Ratm. Greco-Bactrian ceramics have been found at all three sites but not in secure enough contexts to associate with the substantial fortification architecture. The fortress of Yamchun is unusually well-preserved and is located along the Panj on a treacherous rocky slope above the village of Yamchun near Shitharv. Also well preserved is the fortified site at Ratm I with the associated watchtower Ratm II, 45km kilometers east of Yamchun II.

However, known sites are not restricted to the Wakhan Corridor. Roughly 50km to the north of Wakhan is east-west oriented Shakhdara River, which is a tributary of the Panj River. Here three distinct clusters of kurgans were found near the village of Dzhavshangoz in a particularly isolated part of the Pamir mountains. These are the sites Jaushangaz III (AMCAA 742), Jaushangaz IV (AMCAA 743), and Jaushangaz VI (AMCAA 744) excavated by Bubnova in 1990 and 1997. Jaushangaz IV only dates to 4th c. BCE whereas both Jaushangaz III and VI were continuously used mortuary landscapes from the early 3rd c. BCE to the middle of the 2nd c. CE. At Badamara I twenty-one

kurgans were excavated by Bubnova in 1976, 1980, and then 1997 at the confluence of the Shakhdara and Badamdarya Rivers (AMCAA 741).

While these sites attest to a continuity of pastoralist traditions, these populations were not in isolation. Three fortified sites following the same pattern as the Wakhan corridor commanded the Gunt River, the next northern tributary of the Panj 45km north of the Shakhdara. Unlike the Shakhdara there are no known kurgan sites. Instead, the fortifications Chartim (AMCAA 738), Baikala (AMCAA 739), and Miyenakukh I (AMCAA 740) each cluster along the Gunt and control what was likely a secondary corridor into the Tarim basin. Ceramics found at these sites feature an unbroken continuity from the early 3rd c. BCE into the Medieval period, which perhaps testifies to the significance of this route in monitoring incursions but especially trade. The dating of these sites is subject to the same problems as those along the Wakhan corridor in which these fortifications are likely early Kushan but nonetheless featuring some form of Hellenistic period settlement beforehand.

In excavating the late Iron Age graves noted above, Babaev suggested that the foundations of Wakhan and Gunt fortifications began in the 4th–3rd c. BCE and were representative of a settling of Saka nomads into a sedentary agricultural way of life. Writing earlier, Mandel’shtam had already proposed that Greco-Bactrians would have reinforced this region to maintain economic routes within the Pamir Mountains. J. Lerner is to my knowledge the only one to have revived questions about the dating and status of Wakhan Corridor fortresses, especially in their relationship with the Greco-

336 Мандельштам 1957: 57.
Bactrian and Kushan kingdoms.\textsuperscript{337} He notes that the earliest phases of settlement of these sites should be taken seriously, but that such an early date for the fortification infrastructure nor its construction by the Saka has gained traction.\textsuperscript{338} I have nothing to add except to reiterate that we are not at a stage where we can say with confidence that there were no Greco-Bactrian efforts to fortify this region or at least set up a trade outpost. Each of these sites do have earlier phases with Hellenistic pottery, the most compelling being the presence of moldmade Megarian bowls. Rather than implying that there was direct control, the possible scenarios are diplomatic or at least trade agreements with Saka tribes within the Pamirs.\textsuperscript{339} They should be viewed cautiously since none of this collected material was kept for future analysis and the prospect for a new project in Wakhan is unlikely.\textsuperscript{340}

This dataset attests to the few sites that are known at the end of the first millennium BCE. There is at least no question that fortified sites along the Wakhan Corridor were active in the by the early 1\textsuperscript{st} century CE and in this case might reflect a conquest of the Badakhshan by Kujula Kadphises. It is in the early 1\textsuperscript{st} century CE that the Wakhan Corridor enters the Han Chinese historical record as the polity “Xiumi” in the \textit{Hou Hanhsu}.\textsuperscript{341} This fortification program would be in line with other efforts to control the inner waterways and intermontane routes further west in Bactria that otherwise monitored trade with northern Gandhara, such as a the large fortified settlement at Kuri (AMCAA 184) in Faizabad along the Kokcha River and Gauhar (AMCAA 107) and

\textsuperscript{337} Lerner 2016.  
\textsuperscript{338} Lerner 2016: 117-118.  
\textsuperscript{339} Lerner 2016: 119-20.  
\textsuperscript{340} Lerner 2016.  
Ghuraidara (AMCAA 109) along the connected Anjorman river. For example, P. Kohl noted that unworked lapis was found on the surface of Ghuraidara. While at a glance these fortifications might indicate a response to threats, they also indicate an increase in traffic. It is during the Kushan period that the greatest evidence for intra-Pamir trade between Xianjang, Bactria, and Sogdiana comes into focus and the intensification of settlement in Badakshan is a reflection of one piece of a larger interconnected geopolitical whole.

We should consider that parallel to these Greco-Bactrian and Kushan political efforts were small pockets of nomadic pastoral populations practicing transhumance within the same environment. Northwest of Tashkurgan, in the most remote regions of Badakhshan’s northeastern eastern zones there are indications, strictly from surface finds, that pastoral populations were still using Neolithic stone tool technology. While we should appreciate the possibility that this is the case, we should only accept this claim cautiously. This local technological vernacular is part of the late Neolithic Hissar Culture mode of production, which is itself a tradition that was extremely conservative in the Hissar Valley of Tajikistan as compared to otherwise rapidly changing technologies of its contemporaries in southern Turkmenistan.

Yet the persistence of this tradition is perhaps less surprising when one considers that such extreme technological conservatism was already a characteristic feature of earlier Neolithic societies living in the same region. The earlier Mousterian, “Paleolithic,” tradition of *racloir* technology was found to continue well into the Neolithic period even

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343 Ранов 1964.
as middle and late Neolithic developments in stone tool production emerging in the Hissar Valley began to take hold within Badakhshan.\textsuperscript{344} No doubt the extreme remoteness of this part of Central Asia was a contributing factor in the slow adoption of technologies originating outside of Badakhshan, but we should also assume that lack of necessity for change (given a lack of intensive agriculture in eastern Badakhshan) and/or also a deliberate rejection of outsider technologies well into the first millennium BCE. This lag or rejection of material elements of contemporaries is known in other areas, such as the known continuation of Palaeolithic stone tool technology during the early Neolithic period of the Hissar Valley.\textsuperscript{345} A lesser example, but still in this vein, in the western Pamirs metal agricultural implements were possibly only introduced in the 3\textsuperscript{rd} century BCE when Saka tribes of the eastern Pamirs began to migrate westward.\textsuperscript{346}

This raises an interesting conundrum not addressed enough in archaeological literature of southern Central Asia, which is that we cannot expect cultural change to always happen rapidly and evenly across every micro-region. Some regions will lag whereas others will change quickly, especially in the face of a colonial event. This can be on account of an imbalance of contact (for example, if a population is geographically isolated) as much as local resistance to technological change (if change is unnecessary and perceived as bringing no benefit to an indigenous community). A resolution to this problem is to produce secure radiocarbon dates for assemblages that would otherwise be classified as an early technology, and taking seriously results that seem out of the ordinary. This of course also assumes a careful approach to stratigraphic excavation that

\textsuperscript{344} Ранов 1964: 49.
\textsuperscript{345} Бобомуллоев 2015: 38-50.
\textsuperscript{346} Lerner 2016: 114; Бабаев 1968а: 4–5.
could involve a slow approach to determine the micro-morphology of sedimentation and depositional processes.

Returning to the Greco-Bactrian period, the evidence for settlement is both scarce and poorly understood. As Lerner has suggested, there is reason to entertain an idea posited by V.V. Barthold in which the Greco-Bactrian kingdom extended as far east as the Sarykul range within the Pamir mountains along a route to Tashkurgan in the Tarim Basin of China.\(^{347}\) Barthold himself formulated this idea in response to the Orientalist J. Marquart who argued that the invasion of the Yueh-Chi in the mid 2\(^{nd}\) century BCE was a political reprisal against Greco-Bactrian expansionism into the Pamir Mountains.\(^{348}\) Marquart’s idea seems unlikely, but in principle Greco-Bactrian activities in the Pamir Mountains does lend itself to the Han envoy Zhang Qian’s mention that Bactria (Daxia) had attempted to communicate with the Han court prior to his arrival in Bactria.\(^{349}\) Barthold experimented with this idea suggesting the possibility that if Greco-Bactrians established themselves in the Pamirs it would be to establish trade with communities in the Tarim Basin, although he was more committed to the idea that economic relations with populations east of Bactria were facilitated through India.\(^{350}\) This notion is complicated by the fact that the ceramics that Bernshtam used to date some fortresses as to the “Greco-Bactrian” period are comparable only to forms found in Ferghana and Sogdiana and thus unlikely to be established through Greco-Bactrian policies.\(^{351}\) These are hemispherical cups with white engobe and a ceramic package known especially to

\(^{347}\) Lerner 2016: 111-112; Бартольд 1964.

\(^{348}\) Marquart 1901: 206-208.

\(^{349}\) Sima Qian (Watson tr.) Shiji 123.

\(^{350}\) Бартольд 1964: 458-59.

\(^{351}\) Бернштам 1947: 341-42.
Kafir-tepa at Karshi.\textsuperscript{352} However interesting these speculations are, we should remain extremely cautious. Bernshtam noted that most fortified sites in the mountains were at least early Kushan with rapid expansion in the early first millennium CE, a point which was reaffirmed by Babaev who favored an early Kushan date for all fortifications in the Wakhan corridor more generally.\textsuperscript{353} At the least we can only speculate on ephemeral trade connections between the Tarim basin and Bactria facilitated by mountain populations living along the Panj in the Wakhan corridor.\textsuperscript{354}

We should also consider sites outside of the eastern Pamirs. The Panj River flows southward from roughly 140km north of Ai Khanoum. However, the Panj flows north for most of its course before arriving at this point and shifting to a southwesterly direction following the natural contour of the mountains. Thirty kilometers north of this broad elbow of the river is a mountainous site called Sariab (AMCAA 736) near the village of Sagirdasht in Tajikistan (Figure 17). This site is our only evidence for non-elite vernacular architecture in the entirety of Badakhshan in antiquity, and it is quite interesting. Sariab has been visited by several travelers, geologists, and archaeologists in expeditions several times since 1892.\textsuperscript{355} It seems that the site was an ancient and Medieval gold panning outpost operative from the 3\textsuperscript{rd}–2\textsuperscript{nd} century BCE and 5\textsuperscript{th}–8\textsuperscript{th} centuries CE.\textsuperscript{356} This is a particularly interesting insight when one considers a passing reference to Bactrian gold found in pseudo-Aristotle’s \textit{De mirabilibus auscultationibus},

\textsuperscript{352} Lerner 2016: 115 after Тереножкин 1947: 187.
\textsuperscript{353} Бабаев 1973.
\textsuperscript{354} Mandel’shtam 1957.
\textsuperscript{356} Никонов, Веселой, Вахов 1984.
that the Oxus River brings down lumps of gold in large quantities.\textsuperscript{357} The sentiment is echoed again in Aelian’s \textit{Characteristics of Animals} who claims that Bactrian miners were guarded by gryphons that originated in India.\textsuperscript{358}

Sariab is located along the Darvaz-Karakul fault 7 kilometers southwest of the village of Sagirdasht. An intricate system of gravel, stone, and boulder lined canals were built to channel water from high mountain ridges into six known lower valley areas where earthen and stone dams were constructed at the canal thalwegs for the purpose of water catchments. These dams are preserved to heights of 0.5 – 1.5m. Behind these catchments, water was directed further to extraction zones where waste dumps were documented. Living quarters for the miners are documented. These were single room dugout structures built into the shallow slopes of hills with three sides. The documented house was modest in size, measuring 1.8m x 2.6m and utilized a stone façade and superstructure. While we should be cautious about the phasing, fragments of red engobe ceramics and jugs known from the 3\textsuperscript{rd}–2\textsuperscript{nd} century BCE were found near the house alongside the Medieval material. It is reasonable to consider a Medieval occupation of an earlier Hellenistic period dugout since no other architectural form was noted here.

Sariab represents a different engagement with the landscape during the 3\textsuperscript{rd}–2\textsuperscript{nd} century BCE in the westernmost areas of Badakhshan, north of Ai Khanoum, than the entirety of the eastern Badakhshan zone. At Sariab we find the outpost of miners with an unclear identity but who were almost certainly mining gold for Bactrian and/or Sogdian

\textsuperscript{357} Ps.-Aristotle \textit{De mirabilibus auscultationibus} 46; “Φασὶ δὲ καὶ ἐν Βάκτροις τὸν Ὤξον ποταμὸν καταφέρειν βωλία χρυσοῦ πλήθει πολλά…”

\textsuperscript{358} Aelian \textit{Characteristics of Animals}, IV.27.
elites. We should perhaps not expect to find any sites that emerged from sedentary agricultural communities in the Wakhan corridor or adjacent intermontane river valleys. Instead, the region was characterized by an extremely conservative mode of pastoralism, Saka nomads also engaged in pastoralism and burying their dead in kurgans along rivers, followed by the possibility of Greco-Bactrian fortifications and trade outposts. There is of course the certainty that a colony would have existed at Sar-i Sang responsible for the treacherous work of mining lapis lazuli. There is no question that these same social dynamics intensified in the early Kushan period with the heavy investment in fortifying key trade routes into the Tarim Basin and Gandhara. This in fact reflects a trend that I will continue to point out over the course of this dissertation, which in most cases begins in the Hellenistic period but only to drastically increase in scale with the rise of the Kushans.

3.4. The poorly understood northeastern region of Bactria – Parkhar, Kulob, and Dangara.

North of Dasht-i Qala and west of Badakhshan are the plains of Parkhar and Kulob with the adjacent intermontane zone associated with the Tajik city Dangara. Parkhar (sometimes called Parkhar) is an alluvial plain located northwest on the right bank of the Panj River. At the west Parkhar is defined by the Karatau Mountain chain, which is one of several north-south running extensions of the Hissar Mountains. This region is a wide, fertile alluvial plain that receives regular water from the Hissar Mountains to the north and Badakhshan to the east. While it seems ideal for settlements of the same order documented around Ai Khanoum, we know remarkably little about ancient life in this area. Between Parkhar and Kulob is the Moskovsky oasis, which as G.
Lindström has noted, features no known archaeological sites because of heavy accumulations of sediments.  However, there are clear indicators that these regions were inhabited and integrated into the Bactrian sphere of cultural influence. Given the proximity of Parkhar to Ai Khanoum and other densely inhabited regions of Hellenistic habitation this should come as no surprise.

A recent article by G. Lindström’s comprehensively covered the evidence for settlement patterning of the Parkhar-Kulob oases. Therefore I only need to summarize some key aspects here before turning to rural life in this region. At Saksanokhur (AMCAA 735) located approximately 35km directly north of Ai Khanoum in Parkhar excavations exposed a large palatial complex, possibly cultic area, and artisanal quarter whose closest analogy clearly comes from the palace at Ai Khanoum. R. Mairs has suggested that this palace was likely located on the only surviving elevation of a much larger settlement that has been destroyed by centuries of local cultivation. Yet there are no indications from any archaeological report or wider micro-regional survey that pottery or architectural fragments are found beyond the relative confines of this site, although it is just as likely that enough focused research simply has not been undertaken here. I take a closer look at Saksanokhur in its rural context in the next section.

Less is known about the interfluvial region south of Sakhsanokour between the Kyzylsu River and the northern channel of the Panj / Farkhor River, for any ancient period. An expedition led by S. Bobomulloev in 2013–15 explored the necropolis of

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359 Lindström 2021: 297-299.
360 Lindström 2021.
361 Mairs 2014: 79.
Farkhor near Chiltanbobo village on the outskirts of the city of Parkhar. Most graves proved to be modern but a significant number of burials were excavated dating from the late 3rd–early 2nd millennium BCE. Most of the middle Bronze Age burials were simple pits dug into alluvial soil, but several were more elaborate chamber tombs and cenotaphs. At least one burial was disturbed in the early Iron Age. The Bronze Age burials revealed strong interregional connections with Namazga IV and V sites in northeast Iran, northern Afghanistan, and Zamanbaba culture sites of the Bukhara Oasis. Since these influences are from earlier sites, it is now becoming more accepted that the Bronze Age Vakhsh Culture was in some way related to the Zamanbaba culture. Notably biconical vessels of a local type but analogous to forms at Altyn-Depe, Sapalli, and Jarkutan bore painted motifs typical of Hissar IIIB and Namazga IV. Only a few relatively obscure sites are known dating to the late Iron Age / Achaemenid period. At Makonimor (AMCAA 1239) just south of Saksanokhur at the foothills of the Kiratau-Birgket range only a few unpublished graves are considered to be late Iron Age among what is otherwise a massive Vakhsh culture (i.e. late Bronze Age) burial ground. One inscription in Greek acquired in the vicinity of Kulob provide tantalizing evidence for the presence of a more integrated relationship between this region and elite Greco-Bactrian culture. This text is an altar piece inscribed in trochaic tetrameters and mentions a dedication for Hestia for the Greco-Bactrian king Euthydemus

and Demetrius in a sacred grove of Zeus.\textsuperscript{366} As R. Mairs noted however, there is not a single site that attests to their presence in this area and it could be that the inscriptions were just being traded through dealers in this region.\textsuperscript{367} On the contrary, a sacred grove of this sort would be typical for both cities and rural area from an ancient Greek perspective.\textsuperscript{368} Such groves were typically (but not always) comprised of trees rather than durable architecture and utilized landscape features to delineate temenos boundaries. If such a religious framework were adopted around Kulob, as Quintus Curtius Rufus reports they were for the settlement of the Branchidae elsewhere in Bactria,\textsuperscript{369} then we can accept the inscription at face-value as evidence for Greek colonization of this landscape in both physical and metaphysical senses. The erecting of an inscription to Euthydemus lends itself as a verification that not only did Greco-Bactrians did administer the Parkhar region, but that local Greek populations were invested in their success.\textsuperscript{370}

An even more promising region for a Greco-Bactrian rural landscape comparable to that documented just outside of Ai Khanoum is around the modern town of Dangara in Tajikistan, nestled between the Vakhsh and Karatau Mountain ranges. This region has been the focus of several expeditions by G. Lindström under the Deutsche Archäologische Institute (DAI) since 2013, first at the Hellenistic sanctuary at Torbulok (2013–2021; AMCAA 1220) and now with excavations of a Hellenistic settlement at Zoli Zard (2021–present; AMCAA 1205). The town of Dangara already had an Achaemenid period settlement (AMCAA 1227) when the micro-oasis was settled by elite Greco-

\begin{itemize}
\item \textsuperscript{366} Bernard, Pinault, Rougemont 2004: 333-337; Mairs 2011: 26.
\item \textsuperscript{367} Mairs 2011: 30.
\item \textsuperscript{368} Bowe 2009.
\item \textsuperscript{369} Quintus Curtius Rufus VII.vi.32-35.
\item \textsuperscript{370} Bernard, Pinault, Rougemont 2004: 335.
\end{itemize}
As noted by Lindström, unfortified settlements emerged in the southern foothills of the Zimistan spurs of the Vakhsh range around the 3rd century BCE at Khoki Safed (AMCAA 845) and Gidzhovak (AMCAA 1223). The surveys of T.G. Filimonova and Akhmetzyanov from 2012–16 documented the regular occurrence of limestone column bases and household altars at Sebiston (AMCAA 1219), Sariob (AMCAA 1229), Tutbulak, Malikova (AMCAA 1228), Oksu (AMCAA 1222), Zoli Zard (AMCAA 1205), Mavolono Todshiddin (AMCAA 1231), the Dangara settlement, Pushing (AMCAA 1230), and Bulyoni Bobo (AMCAA 1221). The regular distribution of limestone column bases within such a concentrated micro-oasis is not yet documented elsewhere outside of the Dasht-i Qala plain, and specifically within a 2–3 kilometer radius around Ai Khanoum. It is remains possible that this reflects an intensification of elite settlements in the Kushan period rather than Hellenistic since none of these sites are excavated. Yet work at the Hellenistic period Bactrian rural sanctuary at Torbulok (AMCAA 1220) do seem to indicate that these patterns emerged in the 3rd–2nd century BCE. The site has been excavated by G. Lindström in a joint expedition between the Tajik Academy of Sciences and DAI since 2013, prompted by the discovery of a large perirrhanterion for a distinctively Greek practice of ritual handwashing. Column bases and a temenos wall both indicate that the sanctuary probably followed a sacred spatial arrangement known at Takht-I Sangin or Ai Khanoum’s urban Temple of Indented Niches. Seven altars were found for offerings, which to my knowledge is a higher number than those found at the aforementioned sites, but if they follow Greek practice they would have been used for a

371 Филимонова и Ахметзянов 2012; 2016, 227; Lindström 2021: 300.
372 Lindström 2021: 300.
373 Lindström 2021: 303.
range of sacrifices of animals and foodstuffs. Perhaps most remarkable is Lindström’s
description of two long rectangular pits dug into sterile soil and filled with sacrificial
debris such as animal bones and pottery but separated by layers of organic sediments and
possibly ash. These pits were separated by a 2m² area of baked clay. To my mind these
pits might be bothroi for a sacrifice to a chthonic deity, if and only if this Greek religious
practice also arrived in Central Asia. Together, the plain of Dangara is somewhat of an
anomaly compared to other parts of Bactria in its concentration of distinctly Greek
traditions within this rural landscape. The question will only be resolved through more
field research.

We do not have a clear understanding of the political situation around Dangara
during the Hellenistic period. With the migrations of Yuezhi nomads into the region
coinciding with the dissolution of the Greco-Bactrian kingdom there is a tendency to
draw conclusions about the direct role these nomads played in dismantling Greek rule in
Central Asia. For one, tribes did not just aim to settle in the Bactrian power centers like
Ai Khanoum and Balkh, as noted in my discussion of Badakhshan, it is likely that
migrants settled across all mountains and valleys of northern Bactria. A good example is
Ksirov (AMCAA 1024) located 13km west of Dangara. This is a site composed of ten
kurgans grouped together that were all dated from the 2nd–1st century BCE – 1st century
CE.374 And were investigated by E.P. Denisov in 1978 and were rich in grave goods,
notably exquisite examples of gold filigree jewelry in the form of roosters and amphorae
as well as a single crude imitation obol of Eucratides.375 The aesthetics of metalwork

374 Денисов 1984; Lindström 2021: 300.
375 Денисов 1979.
from this site draws clear connections with such goods found in the northern Tien-Shan and southern Semiriche yet metallurgical analysis indicates production more local to northern Bactria. This indicates that the producers of these objects were locally resident to the area and leaving us with two options. The first is that the graves represent a population in parallel to elites living in Dangara. The second is that these communities were one in the same and shared the same local landscape while performing traditions and knowledge learned. The second seems most attractive.

3.4.a. Rural architecture in Parkhar and Kulob? Sakhsanokour and Tepai Diniston.

Turning now to our only evidence for Hellenistic period settlements in Parkhar and Kulob (we have no excavated homes in Dangara, although this will likely change soon with ongoing excavations at Zoli Zard) we are faced with a bit of a problem. Our evidence from Parkhar is the palatial complex briefly excavated and subsequently destroyed at Sakhsanokour (AMCAA 735)—a site that can hardly be considered representative of a rural estate and is otherwise difficult to accept as anything other than Kushan. Our evidence from Kulob is a manmade cave at Tepai Diniston (AMCAA 1206), which is an equally anomalous feature among all our evidence for pit-houses and farmsteads. Rather than take an overly pessimistic view, I will treat them here nonetheless.

Sakhsanokour is located 35km directly north of Ai Khanoum past the right bank of the Darya-i Panj (Figure 18). The Kyzylsu River runs parallel to Sakhsanokour’s

376 Guerra, Demortier, Vitobello, Bobomulloev, Bagault, Borel, and Mirsaidov 2009.
palatial complex approximately 3.5km to the west. While the site was discovered in 1951 it was only excavated in a single season in 1966 under the direction of B.A. Litvinskii before it was obliterated by modern farming. In fact, the site was already in the process of being destroyed when excavations began leaving only the palace and an artisanal quarter with some residences. Because of this destruction event the walls of the palace were only preserved to a height of 20–40cm whereas the artisanal quarter, which was located at a lower elevation in antiquity, was preserved up to one meter. The full plan of the site is not known, but the excavations exposed an area measuring 64m x 50m. All walls were built of pakhsa and some floors were paved with square format mudbricks.

What remained of the palace was a palatial complex that dates to the post-Hellenistic or early Kushan period. Litvinskii and Mukhitdinov proposed a foundation date of the early 2nd century BCE based entirely on formal architectural analogies with the city palace at Ai Khanoum, which was destroyed in the mid. 2nd century BCE. Therefore, this early 2nd century BCE date for Sakhsanokour does indeed seem likely. However, there remains a significant problem. Both Litvinskii and Mukhitdinov were clear that only 20–40cm of alluvial infilling overlaid the floors of the palace. While this infilling was rich in artifacts, most of which are clearly Kushan as they are associated with coins of early and late Kushan kings, the excavators noted that the actual floors of the building were very poor in finds. Nonetheless, this alluvial infilling would have accumulated through a fairly natural depositional process and thus we should be extremely cautious in trying to associate the artifacts from this fill with specific periods

377 Litvinский и Мухитдинов 1969.
outside of the 2\textsuperscript{nd} century BCE – 1\textsuperscript{st} century CE.\textsuperscript{379} What is more, the site was heavily plowed over by modern farm tractors and it is unclear from the report to what degree this 20–40cm infilling was disturbed.

What we are left with is a post-Hellenistic building with no stratified deposits that clearly date to the Hellenistic period. This runs counter to how the site is often presented in comparisons to Ai Khanoum, which only seems valid in terms of the formal architectural qualities as long as we recognize that while a 2\textsuperscript{nd} century BCE date is reasonable, it will never be confirmed. Moving now to the site within the context of rural Parkhor (and here taking for granted a Hellenistic date), it is reasonable to consider that the palace did control a vast agricultural area between the palace and the river, but is Sakhsanokour representative of a rural estate? This can hardly be the case. The palace here is completely within the “architectural vernacular” of the city palace at Ai Khanoum,\textsuperscript{380} that is, directly in conversation with an idea of royal expression that I argued in chapter one is representative of a very specific elite context. Both structures feature a large central courtyard with southern facing aiwan, although the Sakhsanokour palace is at a smaller scale. The remains of limestone Corinthian capitals are very similar to those found across Ai Khanoum. One important difference is that apartments encircle the courtyard at Sakhsanokour with a domestic residence focused directly to the south, whereas the living quarters of the Ai Khanoum palace are located further within a southern extension of the building in an inaccessible area. Nonetheless, it is very likely that Sakhsanokour was a retreat for some royal family (Greco-Bactrian or later) or their

\textsuperscript{379} Here accepting an early date for Kanishka the Great.
\textsuperscript{380} Mairs 2014: 79.
associates, rather than an estate that is engaged with agricultural production and trade in the same sense as other farmsteads within the Dasht-i Qala plain. In fact, we do not have any clear understanding of how royal elites managed estates in Bactria. As I noted in my discussion of Ai Khanoum, our evidence only presents one side of the economic exchange with agricultural goods flowing into suburbs and then into the city. There is simply nothing comparable from the limited evidence we have at Sakhsanokour.

One site which represents a stark contrast to the palatial manor house of Sakhsanokour is Tepai Diniston (Figure 19; AMCAA 1206) in the far northeastern reaches of Kulob in the micro-oasis of Muminabad in the Khazratishak Mountains. Unlike Sakhsanokour, Tepai Diniston is more securely dated to the end of the 3rd century BCE. The site was explored by E.P. Denisov during a single season in 1975.\textsuperscript{381} The site offers a rare glimpse into the reception of elite Hellenistic material culture into an entirely rural context especially in regard to elite drinking practices. However, the function of this site remains unclear. It is just as plausibly a domestic structure as it is a gathering place for ritual drinking. The site is a cave complex that is sometimes referred to as a pit-house (but is not).\textsuperscript{382} Instead three independent cave-like dugouts consisting of small round rooms were cut into the earth of a natural elevation. I should note that this is the only known dugout cave in southern Central Asia during this period. The roof did not survive so it is unclear if these were true caves or unique dugouts. These earthen walls were preserved up to a height of one meter and at a slight incline. Three of these types of dugouts were excavated but the only excavations from Room 1 were reported. This was

\textsuperscript{381} Денисов 1980, all of the following is found in this single source.
\textsuperscript{382} Lindstrom 2021: 297.
an oval shaped room that was 2.48m wide x 2.10m long. Vertical cuts, or niches were carved into the walls, which Denisov reasonably suggested were imitation joins between groin wall blocks.\textsuperscript{383} It seems more plausible that these niches held wooden support beams for roofing, either as a reinforcement for the earth overhead or to hold a post and beam roof.

The finds from Room 1 were indicative of domestic activities such as loom weights, a portable hearth, and a large amount of tableware—particularly drinking vessels.\textsuperscript{384} Interestingly, among cookware only poorly preserved cauldrons are reported, although it is likely that not all of the excavated ceramics made it into the report. Tablewares include “cylindro-conical” goblets with a thick paste with micaceous inclusions, which suggests a clay source near mountains or near a river with a source originating in the mountains. The bases of these “goblets” are small-beveled bases. Among these, most are thick-walled without engobe, but also thin walled goblets with uneven layers of dark and light brown engobe, which Denisov suggests was an effect made from misfiring. Yet other ceramics at the site apparently had similar characteristics, such as small pots with uneven coverage of engobe. Thin-walled cups tend to feature black engobe on the inside and uneven black coating on the outside, or black outside and brown inside, or red inside with partial coverage on the outside. It is entirely possible that local potters developed a particular aesthetic style here.

In terms of drinking practice, there is the presence of a single crudely made “Megarian bowl.” To my knowledge Tepai Diniston is the only pit-house in Bactria

\textsuperscript{383} Денисов 1980: 107-108.
\textsuperscript{384} Ibid: 107-108.
where this distinctive form of elite life is found. First, the site can be dated based on the presence of this bowl, which cannot have arrived before the last third of the 3rd century BCE. There was probably a production center for Bactrian imitations of Megarian bowls at Ai Khanoum,385 so at the least the technological idea for production in Northern Bactria, or outright trade, originated from there. However, the Tepai Diniston types are of poorer quality than those made at Ai Khanoum, as far as we can tell. So there was either another production center that made lesser quality Megarian bowls in Kulob or elsewhere, or this bowl is simply a unique type traded from Ai Khanoum. Nonetheless, there is clearly an interest among this rural household in modes of elite drinking although the presence of one bowl does not imply total emulation. Instead, it seems to me more reasonable that the reception of Greek drinking culture at this non-elite level would have been incorporated into the syntax of local dining culture.

3.5. Tamoshotepa: a misunderstood site in Yavan, Tajikistan.

Moving west to the plain of Yavan, we find a rural landscape of an entirely different order than what is known about Parkhar, Kulob, and especially Dangara. It is in Yavan that our best evidence indicates an entirely non-elite rural lifestyle dedicated to agricultural production and pastoralism, without the columns and temples of Dangara and Ai Khanoum. This is remarkable considering that Yavan is an alluvial oasis at least five times the size of Dangara, which is only 40km to the east. The ecology of the two plains might play a role in differential sedimentation that obscures “true” settlement patterns in

385 Gardin 1973: 171;
Yavan on account of alluvial outflow as opposed to Dangara’s situation on a piedmont terrace and not along a major river. Yet only a few sites evolved into tepas over time, which might be an indicator that Yavan was not heavily settled. This might be why most settlements documented in Yavan are on the outskirts of the plain along foothills (Figure 20), however the plain has not been systematically surveyed and so the vestiges of other sites could emerge from pottery churned by modern tractors. However, G. Lindström notes that the region in fact has low sedimentation so it might be the case that the inner plain indeed had a low anthropogenic footprint in antiquity.\textsuperscript{386}

Yavan is bound at the east by the Sarsaryk and Teriklitau extension of the Vakhsh mountains and at the north and west by the Aruktau spurs of the Rangun Range. The plain watered by the Yavonsu, a river that originates only to the north in the Rangun Range, flowing south before it joins the Shurdarya, a river that defines the southern boundary of Yavan. South of Yavan is the plain of Vakhsh, which takes its name from the swift flowing Vakhsh River that brings fresh glacial melt from far north in the eastern extent of the Hissar Mountains. From Yavan this same river flows south in the Amu Darya where near its confluence is located the Oxus Temple at Takht-i Sangin—venerated to the god of this very river. Taken as a unit, both Yavan and Vakhsh are the breadbasket of Tajikistan, which only adds to the mystery as to why there are so few known settlements of antiquity. Whereas Vakhsh is well attested as having a distinct Bronze Age culture, there are no known Hellenistic sites.

Is it possible that the plain of Yavan was populated by communities that were culturally distinct from elite Greco-Bactrian life but nonetheless engaged and integrated

\textsuperscript{386} Lindström 2021: 304.
into its economy? I think this might be the case as it seems that like similar communities living in the Hissar Valley during the Hellenistic period, the people of Yavan reflected a more indigenous engagement with their landscape. At present our only evidence for habitation in the Hellenistic period comes from the dual site Tamoshotepa and Karaultepa 1–4. The site is only recently recognized for its importance, however there continues to be confusion about the site’s phasing, architecture, and material culture. This is certainly due to conflicting and incomplete information in the site’s interim reports published by A.A. Abdullaev.

No final, synthesizing report exists for Tamoshotepa and nearly nothing is published about this site in English other than passing references. Nonetheless, Tamoshotepa is the most interesting, and best published, non-elite site in Hellenistic Bactria. Tamoshotepa and Karaultepa were excavated by A.A. Abdullaev from 1972–77 with Tamoshotepa receiving the bulk of attention. We only can rely on interim reports and some additional details published by T.G. Filimonova, A.Kh. Yusupov, and A.L. Abdullaev in their archaeological gazetteer of Yavan. The ceramic assemblage was most recently subject to reanalysis by Tikhanov who has emphasized the importance of local forms over Hellenistic. Some aspects of mortuary evidence from Tamoshotepa were considered recently very briefly by V.V. Mokrobrodov. I have attempted to summarize key aspects of the site’s stratigraphy, finds, and landscape context from the

388 See note 391.
390 Филимонова, Юсупов, и Абдуллаев 2016: 24-25; 172-174
391 Тихонов 2019.
392 Мокробородов 2018: 42.
original reports. I have also redrawn the plan of Tamoshotepa for accessibility (Figure 17).

Tamoshotepa and Karaultepa 1–4 are a group of five “sites” located south of the village of Naryn in Yavan at the foot of the Rongun Mountain range (Figure 20). The two sites are actually one settlement (AMCAA 729, 730), although this is not clearly indicated in any of the publications of Tamoshotepa. Tamoshotepa refers to a small citadel, roughly 0.3ha in the center of a larger fortified mound that is 13ha in size (Figure 21). These outer areas are now completely destroyed by cultivation. Immediately outside of the Tamoshotepa citadel are four contemporary low mounds referred to as Karaultepa. A large fortification wall delineates the settlement, roughly 300m x 400m and to a preserved height of 3m at the time of excavation. The entire mound is situated along a southwest-northeast axis and would have been accessed through the northwest and southwest sides. These entrances face the mountains rather than the valley. All of these “sites” likely date to the end of the 3rd century BCE except Tamoshotepa, which was inhabited until the 1st century BCE. However, as I note below, there are some problems with the dating of the site that I cannot attempt to resolve here.

The settlement of Tamoshotepa area is 3,000m² (again, this excludes the settled area of Karaultepa), existing in an area of roughly 50m x 50m. The Tamoshotepa citadel existed in two main phases but with subdivisions within those phases. Two phases of habitations were revealed that cluster around the center of the mound, a pattern now also observed with our own excavations of Bashtepa in the Bukhaara Oasis. The first phase
(P-1) is a village of pit-house structures dating from the late 4th–3rd century BCE, although more likely just the 3rd century BCE (see below). Some areas were also clearly ancient livestock corrals. The site remained a village in its second phase (P-2), only its homes were then built above ground. The second phase dates from to no earlier than the beginning of the 2nd century BCE. The whole mound was surrounded by a pakhsa fortification wall with a width of 3m, which was built on sterile soil. A stratigraphic trench was cut into the fortification walls but remains unpublished and so the dating of this important construction phase remains unclear.

The most intensively settled area was at the citadel of Tamoshotepa. At the highest point of the citadel a broad stratigraphic trench was opened, trench 3 (17x2m), to obtain the most comprehensive profile. It was here that the site’s two main phases (and two sub-phases) were obtained. Acting as a control for the rest of the excavation, comparison with trenches elsewhere on the citadel were clear that not each part of the mound was utilized simultaneously and that habitation areas shifted from one zone of the mound to others. At no point was Tamoshotepa ever a densely populated, architecturally agglomerated town.

The first phase of the settlement (P-1) was of a small village of semi-subterranean pit-houses and economic pits dug into sterile soil (Figure 25). Houses were installed at a depth ranging from 0.4–0.6m from the ancient ground surface with above ground “lips”

393 Abdullaev (1976b) suggested a date of 5th-4th c. BCE. Tikhonov’s recent analysis confirms a later dating of P-1 based on the presence of Hellenistic fish plates with T and L-shaped rims; see below.
394 Lindström 2021: 304 reports the phasing in reverse, stating that the above ground architecture was the earliest phase and pit-houses as the most recent. This contrary to how the site was described by A.A. Abdullaev or Filimonova, et. al. 2016: 172-73.
of 0.25m–0.35m to support a light frame superstructure and deflect rainwater. Subsurface earthen walls were reinforced with a mixture of pakhsa and unbaked mud brick, which also formed the lip of the pit-house.

Each P-1 pit-house dwelling consisted of a single room clustered around amorphous “yards,” situated near the center of the Tamoshotepa settlement. The published plan of this phase, predominantly in excavation area 9 (Figure 22), is somewhat unclear and thus we are slightly more dependent upon Abdullaev’s description. The sizes of five tentative “dwellings” are provided by Abdullaev: House 47: 2.1 x 1.4 x 1.3m; House 45: 4.3 x 1.75 x .78m; House 56: 1.8 x .6 x .75m (extends into balk, not completely exposed); House 60: 2.7 x 1.05 x 0.4m; House 52: 2 x 1 x 1.3m. Thus, from the dimensions alone it is obvious that only House 45 and possibly House 56 could be a dwelling. The others are inconceivable as large enough to even provide basic sleeping space for a single individual. Houses tend to be accompanied by external buried storage pits and household pits. Storage pits were elongated and rectangular shaped, such as pit 52 (Figure 22). Some storage pits also featured buried khums, such as a 75cm tall vessel found in pit 48.

At least ten inhumation burials were uncovered underneath the floors of several houses at Tamoshotepa (but not at Karaultepa) and are contemporary with the short life of this site.\textsuperscript{396} While most burials were without grave goods, burials tended to be placed in shallow graves under the floor level and under a new coat of floor plaster.\textsuperscript{397} Within the wider context of southern Central Asia, this appears to be a practice only known at a

\textsuperscript{396} Abdullaev 1976a: 42.
\textsuperscript{397} Ibid.
few sites in Bactria and Sogdiana, such as the final phase of Kurgancha in the Guzar Oasis in Sogdiana. Floor burials also seem to be present at Kyzylytepa and Kyzlcha I. A recent reconsideration of the Tamoshotepa burials by Mokrobodov indicates that this was an intentional practice but does not find them significant since the practice was rare.

There are some significant aspects related to the ceramic assemblages of the first phase of houses at Tamoshotepa. Overall, they reflect typical activities associated with rural domestic life but with access to elite material culture from Ai Khanoum. Representing typical household activities were wheelmade fine wares with red-pink, white, or light grey engobe are common, mostly associated with bowls, plates, and cups. However, other typical Yaz III forms (cylindro-conical cups) for eating and drinking were also documented and especially large cylindro-conical storage vessels with 38inch rim diameters. It is clear that long term storage was a concern. Handmade cooking and storage vessels were well levigated and mixed with fine gypsum and sand inclusions and had fabrics ranging from deep red with white or red engobe to vessels with grey fabric. Other kitchen-related wares feature a grey fabric with chamotte (crushed potsherds) and occasionally clay inclusions. These vessels are jugs, cooking pots, khums, and khumchas.

The date of P-1 is largely reliant upon the presence of fish plates in the assemblage. The dates of Tamoshotepa were recently revised down from the late 4th–early 3rd century BCE based on the likeness of P-1 fish plates to those excavated at Ai

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399 Сагдулаев 1990: 30-35.
400 Мокробородов 2018: 41.
401 Мокробородов 2018.
Khanoum in the Heroon of Kineas. The second phase of the site is based on a grey burnishing that imitates black glazed wares that appeared in Central Asia in the second half of the 3rd century BCE. They are reported as very common in the P-2 assemblage. Abdullaev sees these as local imitations of types found at Parthian Nisa, and Kobadian II. However, Tikhonov, following Sedov, noted distinct features of these fish plates that seem unique to the Tamoshotepa assemblage, suggesting local production although on the whole they are similar to those found in the earliest levels at Ai Khanoum, although they are still clearly produced local to the Yavan valley.

Apart from the imitation of Hellenic vessels produced in the region, Abdullaev noted that the entire ceramic assemblage is otherwise within longstanding, broad Central Asian tradition, as are other aspects of material culture such as grain grinding implements. The cylindro-conical vessels of Tamoshotepa are in line with those found at Kobadian I, Lower Baldai 1-2, Gyaurkala, Yaz-Depe 2-3, Afrasiab 1-2, and Dingildje. Without the presence of fish plates, Abdullaev notes that he would have assigned a date of the 6th–4th century BCE. Tamoshotepa variants have a reduced quality in engobe technique as well as the introduction of round vessels and narrow neck jug that Abdullaev attributes to connections with Khorezm.

Karaultepa comprises four low mounds of pit-houses that were all contemporary with the first phase of Tamoshotepa. Tepe 1 is located 100m west of Tamoshotepa,

403 Абдуллаев 1976б.
404 Абдуллаев 1978: 43.
405 Ibid.
406 Тихонов 2019.
408 Абдуллаев 1976б; Абдуллаев 1978: 46.
409 Abdullaev 1978: 44.
Karaultepa 2 is 150m west, Karaultepa is 300m south, and Karaultepa 4 is 400m southeast. Mounds 1-3 are roughly 25m x 20m in size. There is no published plan indicating the precise location of each of these mounds. The only plan that exists (Figure 21, redrawn) incorrectly labels the entire settlement as Tamoshotepa but really includes all of the excavated sites. Excavated areas are indicated in grey. Presumably some of these correspond to Karaultepe 1–4 but it cannot be true for all since there are no excavated zones indicated west of the Tamoshotepa citadel.

Like Tamoshotepa, the mounds of Karaultepa were the sites of pit-house habitations of the 3rd century BCE. Unlike the former there is no evidence for a later phase of above ground structures.\textsuperscript{411} Thus, it is likely that the settlement shrank between the fourth and first centuries as the inhabitants moved from pit-house to above ground living. The only published results of the Karaultepa excavations describe Tepe 3, 300m south-southeast of the citadel.\textsuperscript{412} Prior to excavation this area was already disturbed by equipment for cotton cultivation and processing. Four pit-houses were exposed but only two were fully excavated. A stone and gravel “platform” separated some of the houses, 3.5m wide, indicating a hard surface outdoor living area. It is possible that this is functionally similar to thin pakhsa platforms found at Baitudasht 2 and with stone platforms found in late Neolithic Hissar Culture sites, a point I will return to in a later section.

\textsuperscript{411} Абдуллаев 1980; Филимонова, Юсупов, и Абдуллаев 2016: 173-174.
\textsuperscript{412} Абдуллаев 1980: 93-95; Filimonova, Yusupov, and Abdullaev 2016: 173-174 confuses Tepe-4 with what is reported as Tepe-3 in Abdullaev 1980.
Pit-house 1 (“pit #1”) was semicircular in shape and accessed at the south and the size of the longest wall was 1.2m wide with a 1m vertical drop. The pit was dug into sterile soil. In the east the depth of the pit reached only 50–60cm where a sufa bench was cut into the wall. The sufa was in turn 25cm high from the floor, which means in the east of the pit-house the floor was 75–85cm deep. Thus, the floor of the pit-house was somewhat uneven overall. All walls were earthen with no evidence for plastering over the exposed soil. A dense ash layer overlaid the floor indicating the collapse of a burned organic superstructure such as post and reed (kamysh).

A second pit-house (“pit #2”) was also found at Karaultepe 3, 2.4m west of the first. This pit-house was rectangular with vertical walls. The widest wall was 1.18m and all walls were earthen although there may have been a pakhsa superstructure, as bits of this material were found in the infilling of the house. Overall, the house is 1.34m deep. A shelf niche was found in the western wall at a height of 60cm from the floor.

Karaultepa pit-houses 1 and 2 were filled with wheel made and handmade ceramics that were contemporary with each other and identical to the types of ceramics found in the earliest phases of Tamoshotepa, such as a cup with a T-shaped rim with red engobe on its interior and light yellow engobe on its exterior. Flat bottom khums with a mouth of 36cm were also found, one of which with red engobe on the vessel exterior. Handmade vessels were restricted to jugs with triangular, beak shaped rims and protruding shoulders (rim d. 22cm).

The second phase (P-2) reflects a fundamental change to domestic architecture in that pit-houses ceased to be built in favor of entirely above ground farmsteads. Two to

413 Abdullaev does not provide complete dimensions for the house.
three residential complexes were exposed, one of which was quite large. The largest dwelling was built in a system of semi-magazine type corridor rooms that were annexes off of a courtyard/main room area (Figure 23, Figure 26). All architectural structures were made of a dense pakhsa. Three well preserved corridor rooms were documented. Room 1 had dimensions of 4.8m x 1.4m with wall height preserved to a level of one meter. Room 2, to the west of Room 1 and divided by a 0.6m pakhsa wall is slightly smaller. Room 4 is situated directly west of Room 2 and has a length of 3.9m x 1.4m x 1.55m (preserved height) and was dug into the ground by 15–20cm. Each corridor room opened directly into a shared room that Abdullaev described as a courtyard area. Another room, Room 5, was partially excavated to the west of room 4 and separated from a wide pakhsa wall.\footnote{\textsuperscript{414} It is likely that Room 5 was not a corridor and possibly connected the house to the “courtyard” area further to the west. Abdullaev was unable to propose that each of these spaces were part of a single residential complex, yet there is no reason to exclude the possibility. What is more, there was a door at the south of the “courtyard” that opened to another large activity area, where the complex’s main cooking hearth is to be found surrounded by a broad ash deposit. Each of the large rooms had \textit{sufa} installations for seating and presumably sleeping. Ceramics of the upper layer are dated by the relative comparison of the P-2 fine wares with the assemblage of Afrasiab IIB, likely dated from the early 2\textsuperscript{nd} century BCE but certainly no earlier than the end of the 3\textsuperscript{rd} century BCE.} \footnote{\textsuperscript{415} The room extends into the western balk of the excavation area.} It is likely that Room 5 was not a corridor and possibly connected the house to the “courtyard” area further to the west. Abdullaev was unable to propose that each of these spaces were part of a single residential complex, yet there is no reason to exclude the possibility. What is more, there was a door at the south of the “courtyard” that opened to another large activity area, where the complex’s main cooking hearth is to be found surrounded by a broad ash deposit. Each of the large rooms had \textit{sufa} installations for seating and presumably sleeping. Ceramics of the upper layer are dated by the relative comparison of the P-2 fine wares with the assemblage of Afrasiab IIB, likely dated from the early 2\textsuperscript{nd} century BCE but certainly no earlier than the end of the 3\textsuperscript{rd} century BCE.\footnote{\textsuperscript{415} Abdullaev 1978: 45 but now revised based on our recent understanding Afrasiab’s IIA and IIB chronology (Lyonnet 2018: 425-433).}
Activity areas of the complex were also found to the north of the corridor rooms. Rectangular and square pits were dug into sterile soil and the pakhsa walls of the complex were built up around their perimeter which were also plastered. Up to seven of these pit types were cleared and were clearly economic and used for storage. These storage pits were placed in between the main complex and the southern extent of another residential complex that continues into the northern balk. The proximity of each pit between both residences raises the possibility of shared storage areas between the homes and points towards a social arrangement of the communal sharing of goods. It is clear then that there is a substantial change in dwelling type between the first and second phases—between the use of small pit-houses with external storage and hearth areas and substantial above ground pakhsa structures with shared storage areas.

The special finds of both phases reflected purely domestic and agricultural activities: bone needles, mortars (sandstone), pestles (sandstone), querns (a substantial number, all of sandstone), spindle whorls made of recycled pottery (particularly recycled handmade vessels), disc and pyramid shaped clay weights, iron knives with a single edge, querns, mortars, and pestles, clay balls (likely for plaster repair), beads of various materials, as well as zoomorphic figurines. These items are typical for the household economy, but broader production industries can be implied by the evidence for a local ceramic production which has long-standing Central Asian traditions which also integrated newly arrived traditions from the Mediterranean world. In this respect, Abdullaev also notes the multi-functional use of querns, which in here are typologically
similar to those found virtually everywhere in southern Central Asia since the end of the second millennium BCE. 416

After the abandonment of Tamoshotepa in the 1st century BCE there is no evidence for settlement at the eastern foothills of the Rangon mountains until the 2nd century CE, when settlement shifts 5.7km to the northeast to the fortified site of Garavkala (AMCAA 726) with only two additional settlements, Chirochki Kala (AMCAA 725) and Kuimot-3 (AMCAA 724) emerging in the late Kushan period. We should also note that the entire Yavan plain has never been subject to a systematic survey and so any new evidence would be unsurprising.


3.6.a. Settlement along the Oxus River: rural and otherwise.

The previous subchapters established three different ways rural populations lived in Hellenistic Bactria. Around Ai Khanoum, Parkhar, and Dangara there is clear evidence for an emergence of a Hellenized rural culture in which elite estate owners (they need not have been Greek) owned and cultivated land, processed grain into flour, were engaged in viticulture (at least at Ai Khanoum and Kalai Mir) and participated in particularly Greek or “Seleucid” modes of architectural representation. They also worshiped local deities alongside their Greek counterparts with very specific Greek religious modes of veneration. The second group are purely pastoral populations, who are difficult to access in the archaeological record for the Hellenistic period but were certainly integrated into

the wider rural economy of Bactria. The third group were non-elite farmers who were also engaged in a more sedentary form of local pastoralism, since they occupied landscapes like Yavan where there was likely very little need to mobilize animals.

In this subchapter I move geographically to settlements along the Amu Darya in southern Tajikistan and Uzbekistan, and northern Afghanistan, to consider another way in which local populations lived along the Oxus River in Bactria. This is a way of life that emerged in support of an economy situated around riverine life. While the following sites tend to be discussed in relation to the oasis valleys that they are a part of, here I allow the river itself to be the cultural connection between these sites. While their relationship to their independent oases is also important, I think focusing on riverine life is one way, albeit experimental and unconventional, to draw out relationships between settlements located along the river. In this section I will explore the patterns of settlement along the river and consider the similarities and differences of riverine life. In the next section I will draw out specific examples of settlement architecture to consider some of these settlements in the context of rural lifeways. This approach will also serve as an important challenge to a theme addressed repeatedly throughout this dissertation that challenges prevailing opinions that see a direct, one-to-one relationship between pit-house use and mobile populations. It is among these riverine sites that we find an unavoidable problem with that paradigm which helps contextualize other arguments made in this chapter and the next about perceived functional roles of rural vernacular domestic architecture.

In its simplest form, some settlements emerged along the Oxus River (Darya-i Panj and Amu Darya) to regulate river crossings. Three well excavated sites in lower

Surkhandarya, Shortepa (AMCAA 535), Old Termez (AMCAA 418, 419), and Kampyrtepa (AMCAA 458) were clearly these types of places at different times. However, there is also evidence that rural populations were also situated along the river and engaged in pastoralism and agriculture. These are sites situated further east in the plains of Panj (technically the Saraikamar Valley) and Archi which are situated opposite each other along the Amu Darya. In the micro-oases of Panj, we find evidence for a community who was able to utilize the river as a natural defensive boundary but perhaps also as an enclosure to contain flocks. This is the Late Iron age settlement of Baitudasht 2 and 4 (AMCAA 732, 733).

Other sites along the river had different functions. East of Termez, a dense settlement emerged between Takht-i Kuvad (AMCAA 810) and Takht-i Sangin (AMCAA 734) in support of the economy of the “Oxus Temple” venerated to the Bactrian River deity Vakhsh. Here mooring docks along the Amu Darya were the end point of a straight road leading to the doors of the Oxus Temple.418 A traveler who arrived by boat would immediately enter what was likely a bazaar before stopping in the temple to make a dedication. It was only from there that they might enter the neighborhoods to the north and south.

Apart from Old Termez, each of these towns share an important factor in common. Most of their residents lived in pit-houses. This fact is quite significant for our understanding of rural life, even if most of these sites weren’t themselves rural. Their presence challenges a recurring concept that will enter the conversation about rural pit-house use as this dissertation progresses. This is the idea that there is a one-to-one

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418 Druzhinina 2006: 100.
correlation between pit-house use and nomadism and/or semi-pastoralism. If they are not seen as evidence for fully mobile peoples, at the least they are often described as spaces built for summer or winter dwelling for those practicing transhumance. In considering the settlement structure of these towns I introduce a new argument against this essentializing idea about what amounts to a very basic architectural form.

Considering these sites part of a distinctive riverine culture also gives us the opportunity to explore the Amu Darya as an interactive highway between different areas in and outside of Bactria. In exploring ancient pit-house living along the Amu Darya we are also given the opportunity to consider the settlement structure and subsistence strategies of pit-houses dwellers more generally, allowing to us to situate Hellenistic sites like Tamoshotepa, the Hissar Fortress, or many Sogdian examples explored in the next chapter, within a well-rooted southern Central Asian indigenous tradition of non-elite house construction.

Some of the best evidence for understanding the development of rural settlements in the late Iron Age comes from Baitudasht, a flat piedmont terrace that overlooks the plain of Panj on the Tajik and Afghan border, 35km west of Ai Khanoum (Figure 28). This is the easternmost group discussed in this subchapter on riverine sites. This part of Panj is essentially two terraces, a lower agricultural plain along the Darya-i Panj with an area of 200km² and the Baitudasht terrace seated above. Our archaeological evidence comes from a single site, Kyzytlepe (AMCAA 1245) in the agricultural plain as well as the upper terrace where eight individual sites were documented by A.A. Abdullaev during the 1970’s–80’s in a wider area of 870 hectares. These latter sites are simply

referred to as Baitudasht 1-8, numbered from south to north, most of which are relevant to our discussion here although Baitudasht 1 and 3 are much later in date. The overall dating of Baitudasht 1–8 ranges from the 7th century BCE through 10th/11th centuries CE. Unfortunately, no published plans of the excavated areas or archaeological features exist, so we must rely entirely on descriptions of the excavation.

I restrict my discussion only to the late Iron Age / Achaemenid period settlement. Kyzyltepe is the only late Iron Age site known in the lower terrace. This is because these early layers are only accessible under 4–8m of alluvial sedimentation and mountain runoff. In 1974 a sondage was laid into Kyzyltepe by T.I. Zeimal’ to develop a local chronology for the development of nearby Medieval canals. In the lowest layers of the trench two stratigraphic horizons dating from the 5th–3rd century BCE were identified. The upper layer was representative of a collapsed building built of mudbrick and pakhsa. Ashy layers and a dense assemblage of animal bones were found on the only identifiable floor surface. Ceramics associated with this layer were described as typical Yaz III assemblages of cylindro-conical vessels. Under this collapsed building was a dense pakhsa layer which contained an assemblage contemporary with the upper layer. It seems likely that this is a platform for the later building. Unfortunately, there was no indications about the function of this building.

The most important sites of rural Panj are Baitudasht 2 (AMCAA 732) and Baitudasht 4 (AMCAA 733) although a string of concentrated areas of surface level ceramics dating to the late Iron Age period found along the ridge of the plateau north of

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420 Зеймаль 1979: 139-140.
421 Зеймаль 1979.
422 Ibid.
Baitudasht 4 (Figure 29). These are Baitudasht 5 (AMCAA 1241), Baitudasht 6 (AMCAA 1242), Baitudasht 7 (AMCAA 1243), Baitudasht 8 (AMCAA 1244). Baitudasht 4 (AMCAA 733) is a fortified area of roughly 5ha, within which stood a temple complex dating from the 6th–5th/4th century BCE. It has been an unsuccessful candidate for UNESCO World Heritage Site status since 1999. The settlement is triangle shaped roughly measuring 280, x 240m x 330m and is surrounded on three sides by the Gurdarsai gorge, which plummets to a depth of 40–50m over the cliff face. The temple measured 450m² and featured four rooms furnished with sufás and walls painted red, black, and blue which were arranged along a corridor. One room was clearly for rituals that involved the use of an altar. Bits of leather were also found within the room. The remains of the site’s fortification system are only extant at the east (the only accessible side) and were preserved to a height of 1–1.5m and only in a 20m long section. Seven round towers and a 5m-wide gate have also been documented. It is clear then that this was a locus of administrative and cult life for this small area. The settlement outside of Baitudasht 4 covers a much wider area and is located to the north and to the south. Most of the extramural settlement is located to the north and is represented by large pockets of scattered ceramics along the Baitudasht terrace ridge (Baitudasht 5–8). A conservative estimate of the size of this area is roughly 50ha. The only extramural settlement that has been excavated is Baitudasht 2 located 3km southeast of Baitudasht 4. This settlement is a loose agglomeration of pit-houses and platforms with clear evidence

425 Lindström 2021: 300.
for agricultural production, which will be explored in greater depth in the next section on domestic architecture.

As noted, only a single site dating from the late Iron Age has been found in the lower terrace of Panj between the Baitudasht terrace and the Darya-i Panj river. There is nothing in Panj that dates to the Hellenistic period although it is important to mention again that if these sites exist they lay under 4–8m of alluvium. This contrasts with what is known about settlements directly across from the Panj Valley in northern Afghanistan where there is an abundance of settlements within the plain of Archi date to the end of the first millennium BCE (Figure 27). However, the wider plain of Imam Sahib, just to the west of Archi in southern Bactria seems to reflect the settlement patterning of Panj in its desolation. All 22 sites known within that plain date to as early as the 2nd century CE (AMCAA 128, 129, 130, 177, 190, 191, 192, 193, 194, 216, 217, 218, 224, 225, 239, 240, 241, 243). In the plain of Archi only at the small mound Mullāh Qūli (AMCAA 196) is there any indication of late Iron Age occupation along the left bank of the Darya-i Panj across from Panj and Baitudasht. However, Mullāh Qūli is probably more associated with the Kāfir Qal’a-Bājauri Tepe Gudamdar group of late Achaemenid sites (AMCAA 40, 135, 136, 137, 138) 5km to the south in the plain of Archi than anything along the Darya-i Panj. In the 3rd century BCE sites like the Mullāh Qūli eastern extension (AMCAA 195), Shāhrawan Gur (AMCAA 271), Shāhrawan Gur Tepe (AMCAA 270), and Qarluq (AMCAA 228) all appear along a westward route from Ai Khanoum along the Darya-i Panj towards ancient Bactra. It is at this time that there is a significant increase in irrigation infrastructure in the plain of Archi with a steep rise in the number of
settlements (18) as the agricultural zone of Ai Khanoum extends into southern Bactria (AMCAA 16, 17, 18, 20, 21, 23, 39, 41, 68, 69, 70, 71, 74, 75, 95, 96, 238, 326).

In the early Kushan period sites like Chim Qurghān (AMCAA 85) and Nayib Dum (AMCAA 202) appeared along this same road as the network of Kushan sites within the plain of Imam Sahib. Thus, contrasting the plains directly across the Darya-i Panj from Panj-Baitudasht and Archi-Imam Sahib in northern Afghanistan, there is very little development along the river in quite the same way that occurs among the settlements at Baitudasht. Instead, it is only in the Hellenistic period that there is an increase in settlements, which are restricted to Archi’s alluvial plain and associated with agricultural expansion that radiated out from Ai Khanoum. For inexplicable reasons the plains of Imam Sahib and Baitudasht were left unsettled during the Hellenistic period although we might imagine that both areas were utilized by pastoralists for sheep, goat, and cattle grazing. It is only in the Kushan period that there is heavy investment around Imam Sahib, and even then, sites are situated along major roads connecting southern Bactria along the Darya-i Panj.

Moving now 75km west of the plain of Panj and Baitudasht we find an area that is a contrast to what is known of Baitudasht, although there are nonetheless some interesting similarities between both sites. This is the settlement at Takht-i Sangin (AMCAA 734), home to the famous Oxus Temple venerated to the Bactrian deity Vakhsh. Like Baitudasht a cultic center was the locus of a surrounding settlement. Also similar is that the settlements of both places were composed almost entirely of pit-house structures. Whereas the settlement at Baitudasht was somewhat dispersed and engaged in both agricultural production and pastoralism, Takht-i Sangin was quite different in this
regard. Here there was no possibility of farming on account of the dense clustering of pit-houses (and some above ground structures) and an animal economy was probably very limited, if it even existed. I will explore these houses more thoroughly in the next section within the context of domestic architecture, here restricting myself to settlement patterning.

Takht-i Sangin is located on a very narrow strip of coast along the Oxus River. Just north of here is the southern extent of the Vakhsh River at its confluence with the Darya-i Panj. It is in this general vicinity that five major rivers converge, the Kizil Su, Vakhsh, Kokcha, Kunduz, and Darya-I Panj which together combine to form the origin of the Amu Darya river. The combination of these rivers makes the Amu Darya one of the swiftest rivers in the world. It is perhaps no coincidence then that the Oxus Temple venerated to the Bactrian river god Vakhsh is located just south of this convergence. Indeed, Vakhsh is the namesake of the Oxus itself, the vestige of which is found within the etymology of the modern river Vakhsh that now feeds the Amu from the north.426

The remarkable finds of Greco-Bactrian and post-Hellenistic (or even Kushan?) period architecture and objects of cultic art have made the Oxus Temple at Takht-i Sangin easily recognizable in archaeological literature. In terms of Achaemenid and Hellenistic influence in southern Tajikistan, the temple is the most significant site. Recognizing its importance the temple has a long history of excavation, B. Litvinskii and I. Pichikyan achieved a near full exposure of the complex from 1976–91 with the southern Tajik Archaeological Excavation.427 The site is very well published, the

426 Lyonnet 1993: 197, n. 3.
historiography of which does not need to be repeated here. It was during the Achaemenid period, specifically the 5th century BCE, that the Oxus Temple was established and encircled by an enclosure wall on the citadel.

The narrow riverbank valley within which Takht-i Sangin is located was fortified sometime in the late Achaemenid period—likely around the time the Oxus Temple was first established. This fortification delimited the northern and southern extent of the site by marking off an area of 2km with the temple situated at a well-protected distance in the middle of the fortified area. Beyond the fortification wall 4.5km to the south is Takht-i Kuvad, a fortified site that was clearly established to monitor riverine and overland traffic into Takht-i Sangin (AMCAA 810). This settlement context of the Oxus Temple was the subject of intensive survey and excavation by the Tajik Academy of Sciences under the direction of A. Druzhinina from 1998–2010.428 At this early stage only the walls and the Oxus temple existed however a substantial town would gradually develop here in the Hellenistic and post-Hellenistic periods with internal fortification walls also added (described in the next section). There is debate among interested parties as to whether the site can be considered “urban” or a “city.” At its height, the settlement at Takht-i Sangin covered an area of 105ha, 83ha of which was occupied by residential houses which extended for several kilometers outside of the southern fortification wall by the end of the 2nd century BCE. Druzhinina has suggested that Takht-I Sangin was an urban site on the basis of settlement size and evidence for advanced city planning (i.e. the siting of fortification walls distant from the temple complex).429 However, despite the scale of the

428 Druzhinina 2016.
429 Druzhinina 2016: 57, 100.
residential area, houses were predominantly dispersed rather than in the agglomerative structure of a typical city. Moreover, domestic structures tended to be single room pit-houses or above ground stone structures that would have been unable to accommodate large families, limiting the population capacity of the settlement overall, which I will consider further in the next section. Regardless, Takht-i Sangin gradually developed as a town from the 4th century BCE through the late 2nd century BCE and is an excellent case study for understanding the growth of a Bactrian town during the Hellenistic period.

Approximately 15km west of Takht-I Sangin through a fortified pass in the Teshiktash mountains is the Kafirnigan watershed, or oasis of Kobadian. The region is only a narrow oasis that stretches along a north-south axis for 60km along the Kafirnigan River. I reference this region frequently in the following discussion of the Hissar Valley and interconnectivity with the Amu Darya. While my aim here is to situate Takht-i Sangin as a riverine town, the site was of course interactive with other inland settlements along the Kafirnigan or those mentioned above in the Vakhsh Valley to the northeast. Yet there are also riverine sites located at the southern reaches of the Kafirnigan such as Khirman Tepe (AMCAA 1208) and Tapai-Shakh (AMCAA 1207). It is this area that E. Rtveladze describes as the Aibadzh river crossing.430 Directly across the river in northern Afghanistan is Khisht Tepa, which could only be Kushan (i.e. post-1st century CE) although some have made the unlikely claim that this site hosted an as of yet undiscovered temple which was the true location of the Oxus Treasure instead of Takht-I Kuvad or Takht-i Sangin.431

430 Ртвеладзе 2012:
Only four sites are known from the Achaemenid period, which are situated at opposite ends of the oasis. These are Munchak-Tepe (AMCAA 836; D’yakanov 1953), Khirman-Tepa (Litvinskii and Sedov 1983), Kalai Mir (AMCAA 760), and Kei Kobad Shah (AMCAA 1247). The most significant site within this area is Kobadian (AMCAA 760), which is often referred to as Kalai Mir. This site is the first in northern Bactria where Yaz III pottery was recognized during the excavation campaigns of M.M. D’yakanov and the Tajik Archaeological Expedition as early as 1950. In the earliest excavation a domestic complex was exposed within a 150m x 120m citadel which would help situate the ceramic chronology of northern Bactria within the Iron Age columns under simultaneous development in the Murghab Oasis in Turkmenistan and Afrasiab in central Uzbekistan. These excavations were explored in tandem with those of Kai-Kobad-Shah just 1.5km to the east and part of the same settlement system. Together they established a reliable chronology from the 7th century BCE – 3rd century CE, but unfortunately were less detailed in describing the architecture of the latter site.

Three major riverine sites located on the right bank of the Amu Darya in southern Surkhandarya are generally considered to be the main ancient crossing points from Bactra (Balkh) in northern Afghanistan into northern Bactria. These are Shortepa (AMCAA 535), Kampyrtepa (AMCAA 458), and Old Termez (418, 419). Each of these sites are located within the same 20km stretch of coast along the Amu Darya river and range from 60–70km north of Bactra. They are representative of two major river crossings in antiquity— the Shurob crossing at Shortepa and Kampyrtepa and the Termez crossing at

432 Дьяканов 1954.
the city of the same name. Shortepa is the earliest of these sites, dating from the 5th–4th century BCE. In the late 4th century BCE Kampyrtepa was founded approximately one kilometer to the east of Shortepa and gradually replaced the earlier site as the main river crossing. Kampyrtepa maintained this function while also serving as a major Seleucid, Greco-Bactrian, and then Kushan fortification. Yet already in the Hellenistic period a new river crossing emerged at Old Termez, which would eventually overtake Kampyrtepa as the main river crossing by the 2nd century CE. Modern Termez is located only 10km southeast of Old Termez and now serves as the main river crossing.

Shortepa is another interesting example of pit-houses dug into a substantial, pre-existing city during the Hellenistic period. The site was briefly excavated by E. Rtveladze in 1971. From the 6th–4th century BCE the site operated as a fortified river crossing with small interior settlement to support operations. Overall, the site measures 300m x 130–150m and features a small marina that is still extant to a depth of 2–3m along the bank of the Amu Darya. For much of the Achaemenid period the settlement consisted of pit-houses measuring at least 3m x 3m, but probably larger since they are only known from a very small stratigraphic trench. An ancient dock still exists along the Amu Darya that leads up through the southern fortification wall. Pit houses were found along the road leading from the dock into the settlement, which is a feature also replicated at Kampyrtepa and Takht-i Sangin.

The case study is made even more interesting by its topographic setting, along the right bank of the Amu Darya not far from the more substantial settlement Kampyrtepa. Rtveladze seems to indicate that the site was a substantial fortification of the Achaemenid and “post-Achaemenid” period (i.e. period of Alexander and immediately after). However, with the construction of Kampyrtepa in the Seleucid period only half a kilometer to the east of Shortepa, the earlier site fell out of use (with only a brief reoccupation in the 3rd century CE). It is during the main occupation period of Kampyrtepa that a depopulation of urbanites left the city and pit-house using rural settlers moved in.

Kampyrtepa was a fortified settlement established in the early Hellenistic period to control traffic across the Amu Darya. The site is situated directly on the southern coast of Surkhandarya roughly 20km northwest of Old Termez and only half a kilometer east of Shortepa. The town is not particularly large and is irregularly shaped, featuring two straight walls of 250m x 130m. The bulk of the fortification wall is curved and bulges outward to the north for 300m overall delineated a space of 2.6ha. In its earliest phase dating to the 4th century BCE the site was both residential and functional. It was characterized by homes cut deeply into sterile soil, some of which were as deep as 2–2.5m, as well as a docking area for boats located at the south of the site. A raised citadel is also present, creating an “upper town” and “lower town” that are both densely packed with buildings in an area of 0.7ha. I will explore some of these houses and their context within the town at greater length in the next section. A monumental fortification wall

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437 Ртвеладзе 1977.
438 Двуренческая 2012: 71.
with 12 towers was added to the site in the Kushan period. It was by this time that above
ground residences were constructed over the accumulated debris of the earlier pit-houses.
Immediately outside of the fortification walls was a large necropolis and a Greco-
Bactrian and Kushan period ceramic production area, which together almost double the
footprint of the size of the town. Naturally the site became a locus of riverine commerce
like Takht-i Sangin from which a vibrant settlement emerged out of the trade economy,
although this view has recently been challenged.\textsuperscript{439} The site features metallurgical and
ceramic craft production areas, communal kitchens, a marketplace, and a dock. Because
of this unique situation and its long excavation tradition, Kampyrtepa is one of the most
important Greco-Bactrian and Kushan sites.

Kampyrtepa has been an object of archaeological interest since 1972 with at least
70\% of the total ancient town (although now surely closer to 75\%) fully excavated. The
late E.V. Rtveladze was the first to direct excavations here from 1979–91 under the
Uzbek-Art-Historical Expedition headed by G.A. Pugachenkova. Excavations continued
under Rtveladze from 1999–2010 in a joint collaboration between the Uzbek-led
Tokharistan Archaeological Expedition of the Fine Arts Institute with the Institute of
Archaeology of the Russian Academy of Sciences and the Kyoto University of Art and
Design. The publication output of the site is quite large with most technical reports
appearing in the series \textit{Materialy Tokharistanskoi Ekspeditsii}. From 2000–2011
excavations the residential area and fortifications were explored by the Tokharistan
Archaeological Expedition of the Fine Arts Institute under the direction of S.B. Bolelov.
In 2007 Rtveladze summarized his own contribution to the archaeology of this site and

\textsuperscript{439} Балахванцев 2019.
the historical geography of Hellenistic Bactrian river crossings more generally in his 
*Kampyrtepa – Aleksandriya Oksianskaya: gorod-krepost’ na beregu Oksa v
ellinisticheskoe postellenisticheskoe vremya*. A final synthesis of all excavations was published by S.B. Bolelov in 2018 as *Kampyrtepa – Kushanskaya krepost’ na Okse* which covers the residences and fortifications.

Southeast of Kampyrtepa is Old Termez, a site founded in the Hellenistic period but is mostly known for post-Hellenistic, Kushan, and Islamic finds and architecture. P. Leriche considers the site as the Kushan capital of northern Bactria beginning as early as 50 BCE. The oldest phases are concentrated around a large, fortified citadel measuring 10ha located at the south of the site. However, Yaz III pottery has been documented in the immediate vicinity of the citadel and in the wider plain. By the Islamic period Termez evolved into a large riverine city that encompassed an area of at least 700ha. Directly to the west of the citadel is another fortified mound known as Tchingiz Tepe which from the 2nd century BCE and later emerged as a particularly elite area of the town within which elaborately carved bas-relief fragments, molded lintels, acanthus tiles, and Attic column bases were found adorning a palace under Yueh-chi rule (this certainly challenges the notion of a fierce nomadic sweep against Hellenism in 145/135 century BCE). The fortification walls of Tchingiz Tepe were built over levelled bedrock radiocarbon dated to the end of the 2nd or early 1st century BCE. A first curtain wall was added sometime in the mid-2nd century CE which would have coincided, or nearly

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coincided, with Yuezhi migrations into Bactria.\textsuperscript{444} The earliest evidence of habitation at Tchingiz Tepe dates to as early as the 1\textsuperscript{st} century CE, although actual dwellings detected were only dated to the mid 2\textsuperscript{nd}-3\textsuperscript{rd} centuries CE and were found between the two main excavated fortification towers, 5 and 7. These were single or two room above ground dwellings that were irregularly shaped and built of a mixed technique of mudbricks or pakhsa and coated with white lime and red paint plaster.\textsuperscript{445} Structures are irregularly shaped and share party walls with each other, running parallel to the fortification walls. Palaeobotanical analysis of charcoal samples taken that date to the 1\textsuperscript{st} century BCE – 3\textsuperscript{rd} century CE revealed the presence of “Salicaceae (willow trees), monocotyledons [probably wheat], \textit{Elaeagnus angustifolia} (oleaster [still edible despite being a false olive]), and \textit{Vitis vinifera} (common grape), \textit{Tamarix sp.} (tamarisk), \textit{Platanus orientalis} (plane trees), \textit{Prunus sp.} (fruit-bearing trees) and \textit{Juniper sp.} (junipers),”\textsuperscript{446} which are likely representative of the types of materials available in the southern reaches of Surkhan Darya region around the turn of the millennium.

Excavations at Old Termez are approaching their centennial anniversary. The earliest expeditions were led by the Moscow Museum of Eastern Cultures from 1926–28 and the Termez Archaeological Complex Expedition from 1936–38.\textsuperscript{447} A Hellenistic phase at Termez was first archaeologically attested in 1980 by Sh. Pidaev in an excavation of the town’s citadel.\textsuperscript{448} The citadel was re-examined from 1993–2006 by P. Leriche under the auspices of the French-Uzbek Archaeological Mission who continued

\textsuperscript{444} Ibid : 427.
\textsuperscript{445} Ibid : 428.
\textsuperscript{446} Ibid.
\textsuperscript{447} Annaev 2018: 215.
\textsuperscript{448} Пидаев 1987.
work on the citadel and in the immediate vicinity at Tchingiz Tepe A synthetic work of both Pidaev and Leriche’s excavations was published in 2008 as *Termez sur Oxus: cité-capitale d’Asie Centrale* which was recently updated in a brief article. Simultaneous to the MAFOuz expedition was an Uzbek Academy of Sciences expedition that explored a 25km radius around Old Termez, which was able to establish a general outline of rural territories during the Medieval period in which local *dekhans* or lords ruled over large agricultural estates from their fortified manor houses.

It is very possible that a yet-unattested late Iron Age site existed at Old Termez. Two sites explored by T.Dzh. Annaev attest to the importance of this area as a river crossing and trade entrepot in the late Achaemenid period. These are scattered Yaz III ceramics documented across all 3,044 hectares of Aral Pajgambar Island (AMCAA 1246) situated in the middle of the Amu Darya between Afghanistan and Uzbekistan, and Talitagora (AMCAA 428). Talitagora was only occasionally excavated by T.Dzh. Annaev with seasons in 1979 and 1985 before more systematic excavations from 2011–18. The site is a well-preserved fortification measuring 87m x 87m although it is known that three sides of the mound had been drastically reduced for agricultural expansion. The earliest layers dating from the 6th–4th century BCE although the character of the Achaemenid settlement is not entirely clear. In the 3rd century BCE a Hellenistic phase began in which inner buildings were constructed using architectural stone with relief carvings of a river deity and stone columns. Annaev attributes the development of the site to the installation of irrigation canals within this area and the western zone

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449 Leriche 2018.
450 Annaev 2018.
towards Old Termez. At present there is no data about the particularities of the Hellenistic settlement structure nor domestic architecture. Yet, looking forward even further to the post-Hellenistic period there are indications that this southernmost part of Surkhandarya continued to be integrated into trade networks along the river outside of the main fortified river crossing (by now Old Termez). Excavations at Mirzakul’tepa (AMCAA 519) from 1973–74 by Sh. Pidaev exposed a massive storage center that included two independent areas featuring 26 and 28 khums (large storage vessels).\(^452\)

In the following section I will look focus discussion more directly on the structure and spatial arrangement of sites in lower Surkhandarya (when able) with an emphasis on domestic architecture. In drawing attention to the spatial arrangement of these sites we can push beyond the familiar functionalist syntax of meaning of riverine sites along the Oxus River as river crossings. While each of these sites may have had that function, these were nonetheless inhabited places within which people lived out their lives, engaged in different occupations and identities that were defined by life along the river. While there is only enough space here to briefly touch upon this idea, I believe it is one worth exploring even as a hypothetical, in much the same way that I have and will continue to do for populations living in the rural hinterland of Bactria and Sogdiana. In drawing attention to domestic architecture at each site I emphasize another point, which is that one common aspect of “life along the river” was the prevalence of populations to live in pit-houses. Interestingly, there is some variety in pit-house construction types at each site under review here. As I continue to argue, the presence of this house form at riverine sites makes it impossible for us to accept a one-to-one correlation with this type of vernacular

\(^{452}\) Пидаев 1987.
architecture and mobile lifeways. Instead, this section lends itself to the case that I am building overall, that pit-house architecture is one aspect of indigenous cultural life in southern Central Asia with millennia of history. As I show in the next section they could be used by anyone, in the same mundane sense that above ground mudbrick architecture is a cultural choice based on local and generational knowledge of home construction.


We do not have in Bactria or Sogdiana a settlement as well documented as sites in the ancient Mediterranean and Near Eastern world, such as Olynthos, where we can analyze and compare multiple households to reconstruct family life and social interactions. At that site, the full exposure of household units and now micro-stratigraphic approaches have led to a crystallization of methods that have yet to find accessible candidate sites in Hellenistic Central Asia. However, we do have the smaller towns of Takht-i Sangin and Kampyrtepa from which there has at least been enough targeted excavations where we can attempt an approach similar to N. Cahill’s in trying to situate domestic life within a community context. As indicated above, in this section I attempt to approach riverine sites in Bactria with an eye towards the relationship between the domestic sphere and the community. Also, unlike Olynthos we do not have multiple well-stratified Hellenistic household units to compare across a whole town. However, the near full exposure of a post-Hellenistic and Kushan town at Kampyrtepa, and the limited exposure of the Hellenistic Takht-i Sangin settlement, does allow us to look inside the

household level and draw some conclusions about community interaction—with some very interesting results that I believe also shed light on how rural populations interacted at the household level across Bactria and Sogdiana. What is more, the limited excavations of pit-house dwellings in these non-rural, “urbanizing” sites can be said to draw on long-standing traditions of pit-house use in southern Central Asia. While these deeper traditions will be established in the next subchapter, it is useful to know now that a case can be made that towns were as capable of structuring their residential areas utilizing pit-houses according to local traditions as much as the above ground structures more commonly encountered across the Near East and Mediterranean. In this respect Bactrian towns are like Olynthos, in that homes are structured according to a deep-rooted local vernacular.

One of the unifying features of riverine life along the Amu Darya / Oxus River is the tendency to live in clustered communities of pit-houses. Turning now to this question, it is appropriate to review the evidence for domestic architecture within these settlements to consider how people inhabited these riverine landscapes, but also to push back against the idea that pit-houses are a distinguishing marker of mobile or transhumant populations. Every other micro-regional analysis of this dissertation situates pit-houses within a distinctly rural context, leaving open questions about how people inhabited those spaces. While I continue to argue that our evidence speaks to pit-house inhabitants who are mostly sedentary or at least practicing local pastoralism (and thus able to return to one home every day, rather than migrate between several over the course of the year), in many cases a resolution for or against this argument is really a best guess. This cannot be the case for sites like Takht-i Sangin, Shortepa, and Kampyrtepa because these sites are
small towns engaged in broader economic activities that reflect life along a river, such as maintaining a border crossing or supporting a more intensive trade economy that merges riverine and overland trade into several nodes.

Turning now to Baitudasht now at a more local level, I will consider that Late Iron Age settlement’s structure and mode of domestic living as I believe it serves as an excellent proxy for the sort of rural site that existed in many parts of Bactria and Sogdiana during the Achaemenid period. As indicated above, Baitudasht is indeed a rural site of clustered pit-houses whose inhabitants engaged in agricultural production and pastoralism that is more in line with other pit-house dominant sites described here and in the next chapter. Yet Baitudasht establishes a local cultural foundation for contemporary Iron Age sites (Shortepa), and later Hellenistic sites (Kamyrtepa, Takht-i Sangin), from which riverine towns composed of pit-houses conceptually “makes sense.”

As noted above, the sites that constitute the Baitudasht settlement are located on a natural plateau overlooking 200km² the lower plain of Panj. The only other Achaemenid site in the lower Panj Valley is Kyzyltepe (AMCAA 1245), although surely other settlements existed under the 4-8m of alluvium. The wider settlement area of Baitudasht 2 (AMCAA 734) is oval in shape with an area of about 16ha on the plateau overlooking Kyzyltepe. Thus the site is also strategically located on an isolated outcrop on the western edge of the plateau on the right bank of the Uchkulsai ravine. Steep cliffs prevent access to the site from the north. Overall, the site is about 0.6ha. From the 7th–4th centuries BCE a rural community of pit-house dwellers inhabited the area.
The Baitudasht 2 pit-houses were dug into sterile soil and featured light framed post and beam superstructures (Figure 30).\(^\text{454}\) In Trench 1 a pit-house was partly exposed measuring roughly 1.5x1m with a depth of 0.75m (the room extended into the balk so the complete dimensions are unknown). A.L. Abdullaev reported that the dwelling was entirely filled with ash,\(^\text{455}\) which is likely the burned collapse of a scorched organic superstructure. Abdullaev does not report the presence of adobe lined or mudbrick foundation walls, so it can be assumed that all walls of the pit-house were earthen and probably plastered as a retainer. The only objects reported in the ash fill are unspecified Yaz III cylindro-conical vessels.

Sixteen meters to the east of this pit-house the excavators found a round platform made of solid pakhsa measuring 9m in diameter, 40cm thick in the center and radiating outwards to 20–25cm in thickness at the edges. In the center of the platform was a pit which was 1m in diameter. This central pit was filled with a thin, loose layer of earth, and under this a layer of windblown sand, 40–50cm in depth, intermixed with ceramic fragments and mortars (types undescribed). It is unclear how this platform functionally but as I will discuss below, these platforms seem to continue a tradition of circular platform building found at the late Neolithic Hissar Culture site of Turtkaul in Nurek along the Vakhsh River.\(^\text{456}\) Unlike the late Iron Age variants, these earlier structures were built of specially cut stone and densely compacted gravel.

An earlier pakhsa platform layer, also 9m in diameter and 20–30cm thick was found under this platform, built over sterile soil and a series of large shallow pits. A pit-\(^\text{454}\) Абдуллаев 1983: 74-77; Омелеchenko 2003: 59.
\(^\text{455}\) Абдуллаев 1983: 74.
\(^\text{456}\) Ранов и Коробкова 1971.
house was dug into the center of the pakhsa platform. This is similar to the earlier Turtkaul practice in which one stone platform was built one meter into the earth. However the earlier structures were quite large with a diameter of 12m. The Baitudasht pit-house measured 1.5m x 1.2m with a depth of 30cm, but could have been part of the wider pakhsa platform that approaches the scale of the Neolithic house. If this platform was for processing agricultural goods it is entirely possible this pit is actually a large silo. Like the pit-house of Trench 1, this pit was filled with ash intermixed with fragments of a bone bow and an iron hook. Other pit-houses and economic pits were found dug into the sterile soil under the platform, the largest having a diameter of 1.8m and 20–30cm depth. Another is rectangular, 1.5m x 0.70m and filled with ash. Objects found in these pits are cylindro-conical vessels, khums, jugs, cups, and plates. Another fragment of a bone bow was found as well as a sickle shaped knife.

The largest pit-house of the site was found in a third trench laid 9m south of Trench 2. This pit was found under a thick layer of compacted, pakhsa-like earth. The eastern area of the house extends into the balk, leaving known house dimensions at 4m x 5m (depth and orientation are not reported) and filled with micro-layers of ashy humus intermixed with architectural debris. The house was dug into sterile soil. Other large pits were found dug into sterile soil around the house perimeter, both square (1.5m x 1.4m) and oval (1.5m x 1m) in shape. Like other pits of Baitudasht 2 these were filled with ash and fragments of cylindro-conical vessels.

We can now contrast Baitudasht to a settlement that emerges 100km to the west at Takht-i Sangin once Baitudasht is abandoned. Like Baitudasht, Takht-i Sangin was largely built of pit-houses although there are many above ground homes also built at the
same time. Takht-I Sangin’s first occupation phase dates to the Neolithic period, followed by a long gap until the Achaemenid period. At the outset of Takht-i Sangin’s Iron Age foundation its northern and southern boundaries were delimited by fortification walls. The eastern boundary was demarcated by the Amu Darya and the western boundary was demarcated by a steep ridge. It was during the 5th century BCE, that the Oxus Temple was established and encircled by an enclosure wall on the citadel. It remains the clearest candidate for the provenance of the Oxus Treasure. Less known to many is that the site was also the location of a substantial town in the Hellenistic and Kushan periods. There is debate among interested parties as to whether the site can be considered “urban” or a “city.” At its height, the settlement at Takht-i Sangin covered an area of 105ha, 83ha of which was occupied by residential houses. Druzinina has suggested that Takht-I Sangin was an urban site on the basis of size and evidence for advanced city planning. However, despite the scale of the residential area, houses were predominantly dispersed rather than the agglomerative structure of a typical city. Moreover, domestic structures tended to be single room pit-houses or above ground stone structures that would have been unable to accommodate large families, limiting the population capacity of the settlement overall.

The 2016 published survey of Druzinina provided a details description of the development of the settlement at Takht-i Sangin. Druzinina was able to detect 179

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457 Druzinina 2016: 80.
459 Druzinina 2016: 57.
460 Ibid: 92.
461 Druzinina 2016: 80.
likely domestic units in total through surface survey and targeted excavation.\textsuperscript{462} Units were dated through the collection of surface pottery and confirmed by soundings of specific units. The site was divided into arbitrary sectors, A–H (Figure 31), separated by anthropogenic features such as fortification walls and topographic features such as sais. It is not necessary to review each sector in detail. It suffices to note that only sectors immediately surrounding the citadel (D, F, G) seem to have been occupied during the early Hellenistic period. All domestic structures dating to this period are pit-houses installed according to a variety of construction techniques, discussed further below.

Expansion into sectors A, B, and H was restricted to the Greco-Bactrian period. No post-Hellenistic or Kushan occupation is evident outside of the Oxus Temple. Thus, the habitation period of residences at Takht-i Sangin is similar to Ai Khanoum, although there is no comparable evidence of a destruction event or salvage economy. The settlement at Takht-i Sangin appears to have been simply abandoned.

As noted, 179 likely domestic structures were detected, representing a snapshot of the density of settlement at Takht-i Sangin’s peak occupation. Most reported structures are small, although a few units were multi-room large households. Taking the size of the fully excavated pit-house of Southern City Trench 2 in Sector D as representative, we can assume a typical house at Takht-i Sangin was around 3 x 4.5m in size. The presence of a horseshoe-shaped portable hearth found within this house suggests that cooking was an outdoor activity, moved indoors in disagreeable weather.\textsuperscript{463} Therefore, we should reasonably expect that the house was primarily a shelter with a maximum occupancy of

\textsuperscript{462} The number of units is not explicitly stated by Druzhinina. I tabulated this number by adding together the number of reported units in each section.

\textsuperscript{463} This is common for pit-house living, such as at Kyzylktyr 2 in Bukhara.
4–5 people. Based on the number of detected units (assuming they were all houses, which of course they were not) we estimate 716–895, or approximately 1,000, residents of Takht-i Sangin during the Greco-Bactrian period. Given the poor preservation of most structures, we should also assume that many buildings are no longer extant. Arbitrarily doubling the number of houses and occupants only brings the population size to 2,000, yet this doesn’t allow for animal grazing or small plots of farmland within the settlement walls to sustain this small number of people. Taking this into account 2,000 occupants at Takht-i Sangin seems a bit generous.

At present no substantial economic production installations were identified across all of Takht-I Sangin. Three unexcavated round structures in sector B are candidates for pottery production as Druzhinina reported that some slag was found just southwest of the southwest corner of the citadel in Sector D but does not emphasize whether these are metal or ceramic slags. The same author conducted soundings (2 x 2m) 1 kilometer north of the outer fortification wall (wall 737) in an area identified as a clay source (site 819) for mudbrick and pakhsa architectural materials used in house construction within the settlement. Just northwest of this clay source Druzhnina also explored the remains of a limestone quarry (site 818) clearly used for the extraction and working of stone used in the construction of the Oxus Temple, citadel enclosure walls, and the palace/administrative complex.

We should also reiterate the lack of evidence for major craft production areas that are typically necessary to sustain the inner operations of a city. If present, these production areas would have been detected by Druzhinina given the surface level preservation of the Hellenistic and Greco-Bactrian settlement. It is possible that such
areas were located beyond the northernmost fortification wall (wall 737) under alluvial runoff. Until there is further excavation in this area we can only speculate. Instead, the only evidence for production is a limestone quarry to the north and mudbrick clay extraction zone which supplied the inner infrastructure of the town.

There is some evidence for the coordination of trade activities between the docking area and the temple (Figure 32). A central street led directly from the temple entrance to the river which terminated at a paved square that has been loosely interpreted as a marketplace. This same square was flanked at the south by a structure known as the “large building” that Druzhinina has proposed as an administrative building “where Greco-Bactrian authority controlled both cultic life and existing trade routes.” East of the Oxus Temple is a dock along the Amu Darya. A 10m wide crushed gravel and gypsum road connects the Oxus Temple to an inlet in the eastern riverside retaining wall of the citadel. North of this road is a stone platform adjacent to the river that could have also accommodated boats. In the southeast of the citadel, a curved stone ramp connects the level of the citadel to that of the water, interpreted as a water channeling device. It is also possible that such a ramp could have accommodated foot traffic to the water level. Finally, a wide circular stone platform was documented at the inlet of the retaining wall. During the Hellenistic period this platform was apparently devoid of flanking buildings. Such buildings were erected during the Kushan period. The lack of Hellenistic buildings here combined with proximity to riverine infrastructure has led Druzhinina to conclude

464 Druzhinina 2016: 100.
465 Ibid.
466 Ibid: 72.
that this area was a marketplace, of course coordinated by the Oxus Temple administration.

While it is clear that the site was once the location of a bustling community, it does not seem appropriate to classify the settlement as anything more than a medium or large settlement. First, while there have been substantial excavations conducted over several decades, the concentration of research activity on the temple has meant that other aspects of the site are not as well known, such as the production and trade areas nor the intra-site communication network of the structures actually documented. Many excavated structures remain unpublished and there is not yet a publication of any of Takht-i Sangin’s ceramics. Thus, we do not yet know how the settlement internally operated aside from its central role in coordinating the religious life of Vakhsh. Given the size of the sanctuary we should presume that there was a large support staff for sanctuary management. It is unclear what proportion of the residential zones within Takht-i Sangin housed the sanctuary personnel.

While there is no publication of the ceramics, Druzhinina did summarize the types found across the site. I have organized her description in the following table to the best of my ability:

Table 3. The Ceramic Chronology of Takht-i Sangin.

<table>
<thead>
<tr>
<th>Period</th>
<th>Date</th>
<th>Characteristics</th>
<th>Basis</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Takht-i Sangin I</td>
<td>End of 5th – early 4th c. BCE</td>
<td>1. Cylindro-conical body, flat bottom; red fabric; heavily fired.</td>
<td>Parallels w/ Yaz III</td>
<td>Mortar, wall daub, between mudbricks of floor—all in corridor 1 and 9 of the Oxus Temple; citadel surface; inside a modern well 200m north of citadel.</td>
</tr>
<tr>
<td>Takht-i Sangin II</td>
<td>Second half or end of 4th c. BCE</td>
<td>1. Cylindro-conical body, flat bottom; red fabric with white or pink-white outer surface treatment; low production quality, hand polished.</td>
<td>Parallels w/ Kobadian I</td>
<td>Buildings in trench Southern City (SS 2); trench Northern City (SN 4); trench Northern Ateşgah of the Oxus Temple and adjacent unbaked brick building; pakhsa structure and pit-house in trench Northern City 4</td>
</tr>
<tr>
<td>Takht-i Sangin III</td>
<td>Early 3rd c. BCE</td>
<td>1. Bowls and dishes with rounded outer rim; heavily burnt; terracotta colored fabric with light outer surface 2. Plates with beak-shaped mouth and pointed rim; terracotta colored fabric</td>
<td>“Production of less elaborate pottery related to the ceramic of the Achaemenid period.”</td>
<td>Pit-houses in Southern City trench 2 (SS 2); Pit-house 1</td>
</tr>
<tr>
<td>Takht-i Sangin IV</td>
<td>Second and third quarters of 3rd c. BCE</td>
<td>1. Light terracotta fabric vessels; dense clay and fine 2. Yellow fabric vessels; dense clay and fine 3. Grey fabric vessels; dense clay and fine. 4. Tempered kitchen wares. 5. Large storage vessels.</td>
<td>Parallels at Ai Khanoum</td>
<td>Pit-house 1; floor of pit-house SS 2 in Southern City 2N; pits between walls in trench Northern City 1 and 4,5</td>
</tr>
<tr>
<td>Takht-i Sangin V</td>
<td>Second half of the 3rd c. BCE.</td>
<td>1. High quality tableware and storage vessels with grey core and red or grey slip.</td>
<td>C14 date 324–205 BCE in trench Southern City 2N; Analogies at Ai Khanoum</td>
<td>Floors of four rooms in House P in the northern part of trench Southern City 2N (SS 2); trench Northern City 1 and 5 (SN 1, 5); trench Southern City 2N</td>
</tr>
<tr>
<td>Takht-i Sangin VI</td>
<td>First half of the 2nd c. BCE</td>
<td>1. Table and storage wares with a variety of slip types. 2. Poor production of simple forms.</td>
<td>C14 dates; parallels from Ai Khanoum</td>
<td>Layers XV and XXI in trench 18 of Oxus Temple; upper building horizons of Northern City 1 and 5.</td>
</tr>
<tr>
<td>Takht-i Sangin VII</td>
<td>Third quarter or second half of the 2nd c. BCE.</td>
<td>1. Not described by author.</td>
<td>Parallels at Ai Khanoum</td>
<td>Layers VI-XIV in trench 18 of the Oxus Temple; floor of House A on citadel.</td>
</tr>
</tbody>
</table>

At its peak habitation in the Greco-Bactrian period, the settlement never significantly expanded beyond the fortification walls established in the early Hellenistic
period. Although a few houses did extend beyond the fortification walls at the north up to
the confluence of the Vakhsh and Panj Rivers. Simply put, the settlement remained
dispersed rather than densely inhabited. Druzhinina argues that Takht-I Sangin was an
urban site, partly on the basis of apparent city planning—the sheer size of the early
Hellenistic fortification wall demonstrates the intentionality of local rulers to steward the
installation of a Hellenistic “new foundation” here. The establishment of north and
south fortification walls at an early date, far from the citadel and encapsulating areas that
were initially left “empty” in the hopes for eventual expansion. It was only later, during
the Greco-Bactrian period that settlement expanded into these “empty” quarters with the
installation of pit-houses and above-ground homes built of local stone.

Such optimism in city planning at the outset of its foundation is often perceived as
the phenomenon of Hellenistic “New Foundations.” Notable examples of this
phenomenon are Alexandria in Egypt, but also perhaps Ai Khanoum itself. However,
little attention has been drawn between this phenomenon at Takht-i Sangin and Ai
Khanoum to a phenomenon already known to Central Asia, the kala. The origins of the
kala almost certainly point to Chorasmia as their progenitor. Yet by the Hellenistic period
the kala-type planning might have already been in practice at Afrasiab and
Padayaktepa/Uzunkyr in Sogdiana. While Takht-I Sangin need not have been a kala in
the most pure sense (i.e. not an open fortification fully surrounded by walls with no
permanent interior architecture), the functional benefits of kala sites such as the keeping
of protected animal flocks and refuge in a time of conflict would have been known to the
architects of these new foundations.

468 Druzhinina 2016: 100.
As noted above, the dwellings at Takht-i Sangin were built according to different architectural principles. Rather than engage in a tedious description I have summarized Druzhinina’s description in the following table:

**Table 4. A typology of architecture at Takht-I Sangin.**

<table>
<thead>
<tr>
<th>Architectural Typology at Takht-i Sangin by Period(^{469})</th>
<th>Period</th>
<th>Date</th>
<th>Building Type</th>
<th>Materials</th>
<th>Size</th>
<th>Brick Size</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Takht-i Sangin I</td>
<td>End of 5(^{th}) – early 4(^{th}) c. BCE</td>
<td>1. Oxus Temple</td>
<td>1. Mudbrick with mortar binding (floor and wall); daub plastering; limestone</td>
<td>N/A</td>
<td>1. 50cm x 40 cm x 14–16cm</td>
<td>1. Citadel</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>2. Citadel Enclosure</td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>3. Admin. complex</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Takht-i Sangin II</td>
<td>Second half or end of 4(^{th}) c. BCE</td>
<td>1. Pakhsa structure in Oxus Temple</td>
<td>1. Pakhsa</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. North-Atešgah of Oxus Temple</td>
<td>2. ?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Pit-house in trench North City 4</td>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Takht-i Sangin III</td>
<td>Early 3(^{rd}) c. BCE</td>
<td>1. Pit-house: Room with a yard</td>
<td>1. Plastered walls.</td>
<td>N/A</td>
<td>N/A</td>
<td>1. .</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Pit-house</td>
<td></td>
<td></td>
<td></td>
<td>2. NW in Southern City trench 1</td>
<td></td>
</tr>
<tr>
<td>Takht-i Sangin IV</td>
<td>Second and third quarters of 3(^{rd}) c. BCE</td>
<td>1. Pit-house</td>
<td>1. Pakhsa walls?</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Takht-i Sangin V</td>
<td>Second half of the 3(^{rd}) c. BCE</td>
<td>1. House P, four rooms</td>
<td>1. Pakhsa mixed with small pebbles; east wall of mudbrick joined by pakhsa</td>
<td>N/A</td>
<td>1. 40cm x 40xm</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

\(^{469}\) According to Druzhinina 2016: 91-92.
Finally, south of Takht-i Sangin is Takht-I Kuvad. This site was a fortification that oversaw river traffic and controlled a natural pathway through the mountain that somewhat weakened Takht- Sangin’s defenses. Also in this area, sector G, was a round mound (AMCAA 743) that has been interpreted as a watchtower tasked with observing river traffic. 470 This of course follows a self-evident strategy of monitoring traffic at the site. However, as I continue to point out, this is a fortification strategy that emerges in the Hellenistic period all over Bactria and Sogdiana.

Now considering the domestic architecture of residences located at Shortepa and Kampyrtepa, there is a variation of pit-house construction that approaches more of an urban fabric (Figure 33). While Kampyrtepa should not be considered a city, it certainly shares some characteristics in that the settlement is densely packed and reliant upon the rural hinterland for its survival. Excavation at the site is difficult in that up to 8m of anthropogenic deposits overlay the earliest layers. As noted above, Kampyrtepa is methodologically divided into four sections, quadrants A–D. The residential area of the city is located in the northeastern and eastern part of the town which mostly falls within sector B. While anywhere from 75-80% of the town has been excavated, this exposure mostly concerns the post-Hellenistic and Kushan periods. Residences of the Hellenistic

<table>
<thead>
<tr>
<th></th>
<th>First half of the 2nd c. BCE</th>
<th>Houses in northern city 1 and 5</th>
<th>Pakhsa walls on stone foundations</th>
<th>N/A</th>
<th>N/A</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Takht-i Sangin VI</td>
<td></td>
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<td></td>
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<td></td>
</tr>
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<td></td>
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</tbody>
</table>

470 Druzhinina 2016: 79.
period are buried far deeper under the later cultural deposits that are also primary contexts requiring careful consideration for removal. Several Hellenistic period homes were excavated at the eastern foothill of the citadel featuring varied architectural techniques ranging from full pit-houses to dugout/pit-houses that had some areas of free standing above ground architecture. On account of this I will draw on one published example of a Hellenistic period house excavated at Kampyrtepa that is representative of other contemporary structures.\footnote{Двуренческая 2011.}

From 2008–11 N. Dvurechenskaya laid a stratigraphic trench at the eastern foothill of the Kampyrtepa’s citadel.\footnote{Двуренческая 2012.} This trench was a continuation of another first opened in 2000 by K. Sheiko, who in that season completely excavated two rooms of a single Kushan house, rooms 11 and 12. Dvurechenskaya removed the walls of these rooms and made a 60m² stratigraphic trench to articulate the earlier chronology of the site. Under the Kushan building was another construction given the designation “structure 36.” This earlier structure was fixed along a main artery leading to the Kampyrtepa’s dock complex.\footnote{Ibid: 78.} This unit was three phases dating from the early Hellenistic through post-Hellenistic periods.

The Hellenistic structure turned out to be an extremely large pit-house dug 2–2.5m into sterile earth, thus being the earliest phase of at least this area outside of the citadel.\footnote{Ibid: 71-72.} The room is trapezoidal in shape with a width of 6.5–7m on one side and 10m on another. The length of the room is extraordinary—up to 32m, giving the impression of
a massive subterranean long hall. To mitigate wall collapse at such a depth, the walls of the house were angled inward so that the width of the house was at 6.5m at the surface level and 2.5–3m at the floor. A ledge was left around the lip of the walls to support a light framed structure. Niches in the walls of the house had traces of burning which indicate lamp attachments for lighting. The house was accessed through a 2m wide entryway located at the level of the ancient sterile soil surface. It is presumed that from the entrance there would have been a descending staircase, ramp, or ladder. Three distinct stratigraphic phases were observed in this earliest pit-house layer that ranged from the very early Hellenistic period (4th–3rd century BCE) through the Greco-Bactrian period (2nd century CE). At some point between the earliest and final phases human remains were buried under the first Greco-Bactrian period floor, a practice I have already noted was observed at Tamoshotepe but as we shall see below has local analogies in the late Neolithic and Achaemenid periods (as well as later in the Bukhara Oasis). It might be this same phase in which the 2m entrance is bricked up and the entrance is moved to another (unknown) area. This second phase must date to no earlier than the late 3rd century BCE since fish plates and black engobe greywares were found within the joins of the brickwork.

There is no clear interpretation of this long pit-house building. The most reasonable guess is that it was a garrison space for housing and socializing soldiers since

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475 As discussed in chapter 3, this is also an open question at Bashtepa. All but one pit-house at Bashtepa does not have a clearly defined entrance. It seems most reasonable to me that they were entered by way of ladders since some floor areas were particularly broken. The one pit-house which does have an entrance at Bashtepa (ON 29) is entered in the northeast corner through a narrow passage of 0.5m wide. There is a “step” of about 0.7m which lands on a long ramp that extends along the eastern wall façade, still requiring the use of a ladder or portable step. It is reasonable that such a system was also necessary at Kampyrtepa. 476 Двуреченская 2012: 73.
at this early phase Kampyrtepa was a station for managing river-crossings. The floor of
the building was dense with animal bones (the types were not reported) and Hellenistic
fine ware pottery such as craters, bowls, jugs with stamped acanthus ornaments, a single
coin of Eucratides (second phase of the pit-house). While the unit is large, its closest
analogy is the nearby Shortepa where pit-houses were the norm as well as at Baitudasht 2
and Takht-I Sangin. My own discovery of a large, post-Hellenistic pit-house complex at
Bashtepa measuring at least 25m in length and an unknown width overall now matches
the scale of this earlier house found at Kampyrtepa, suggesting that this practice was
more common than initially understood. However, as noted above, other residences
dating from the 3rd century BCE were excavated near structure 36 that attest to the
regularity of pit-house construction here. For example, house 33/34 already featured an
architectural principle that involved utilizing the slope of the foothill of the eastern
citadel wall as a dugout type of house within which an external courtyard and vaulted
utility shed were also carved into the face of the cliff.\textsuperscript{477} We should note that the vaulted
room has a local antecedent in the late Iron Age cultic complex at Pshaktepe in
Sherabad.\textsuperscript{478} This technique is a common intermediary form between pit-house and above
ground architecture documented at other Hellenistic sites such as Nurtepa in northeast
Sogdiana and Sariab in western Badakhshan.

During the post-Hellenistic phase pit-house 36 was still in use although at this
time was cut by very large round open firing pits that approximately measured 8–10m
and to a depth of 2.5m, disturbing some of the Hellenistic material below.

\textsuperscript{477} Двуреченская 2011.
\textsuperscript{478} Аршавская 1987: 94.
Dvurechenskaya notes that this was almost certainly a production area, but it is not clear for what. Botanical samples of wood from the pit basin revealed that grapevine, willow, sycamore, and pine were all burned as fuel as well as pieces of domestic furniture. Radiocarbon samples returned with a date ranging from 154–114 BCE, making Kampyrtepa the only other site beyond Ai Khanoum that might have fallen victim to the turmoil of Yueh-chi migrations of 145/135 BCE along the Oxus. After this phase the entire pit-house was filled in and above ground architecture was built for the later town.

One curious aspect of structure 36 is that no hearth was found within the room. In normal cases this might cause us to caution against interpreting a pit-house as an actual house. However, there are two reasons why this is not necessarily a problem. The first reason is that hearths are only occasionally found in pit-houses overall. I have not endeavored to create a statistic on this point, but generally speaking hearths are found in activity areas external to the house in pit Bactrian and Sogdian pit-houses dating from the Bronze Age through post-Hellenistic period, for example at Zamanbaba and Kyzylkyr 2 in the Bukhara Oasis. The second reason is drawn from residential areas at Kampyrtepa itself, albeit in the post-Hellenistic rather than Hellenistic phases in which cooking was done in specially outfitted communal areas in each neighborhood. I will dwell on this point for a moment since the evidence is quite clear on account of a fuller exposure of these later phases.

There are three types of apartments at Kampyrtepa dating to the post-Hellenistic and Kushan period 1st century BCE – 2nd century CE: communal apartments, small private apartments, and courtyard apartments. Communal apartments were five room,
cell-like units situated off a single corridor and sharing a common entrance. Each cell probably housed no more than two people, but likely single occupancy. While these small units could have served the poorest members of the community, one wonders if these rooms could have also served as traveler lodgings for merchants journeying across the Oxus. Small private apartments were two to three room structures of standard size. Two room apartments averaged about 40m² and three-room apartments were about 60m². Ethnographic evidence from Khorezm suggests that families of 3-4 people could live in apartments this size. Only a few apartments had courtyards. These were larger, four or more room units that were 84m². One unit in Quarter A was a four-room house situated along an L-shaped corridor. Near this L-shaped house was a larger apartment that is not well preserved. This house, located in Quarter B, was a four-room unit situated around an exterior courtyard or aivan. While the interior living space was only 80m², the addition of a courtyard set this large apartment aside from the rest and is presumably a more elite housing unit for the settlement—an idea already proposed by G.A. Pugachenkova.⁴⁸⁰ Only a single other courtyard apartment is known in the settlement, with a similar size and arrangement (assuming 4–6 people residents in houses this size).

Evidence for grain processing appears in every residential unit, yet most houses do not have kitchens.⁴⁸¹ Instead each urban block had separate buildings outfitted for cooking with two hearths, two to three tandoor ovens, and waste disposal areas (rooms 4a and 5a in Quarter A; 4b and 5b in Quarter B). The kitchens of Quarter A held two cooking hearths and two to three tandoor ovens. This building was used this way for

⁴⁸⁰ Пугаченкова 1976.
some time as there are several floor layers with a two-hearth arrangement. In a similar space in Quarter B, two tandoor ovens and a large round central hearth were flanked by grain storage pits and two querns in situ. Another smaller (8m²), isolated kitchen building was found in Quarter B which only has a single tandoor oven. There is no reason to follow Bolyelov in his suggestion that these kitchen units were just for baking bread. It seems unlikely to me that kitchens containing both tandoor ovens and open hearths only produced a single type of food. Tandoors were probably for baking bread, so what of the hearths? It is more likely that the residents at Kampyrtepa processed grain (and probably other foods) at home or in communal kitchen spaces and cooked in those same communal spaces.

3.7. The rural traditions of the Hissar Valley.

From the banks of the Amu Darya it is appropriate now to move to Bactria’s northern border at the foothills of the Hissar Mountains. This is the Hissar Valley, a region that accommodates Tajikistan’s capital city Dushanbe. While our knowledge of Central Asian life in this area from the 4th–1st century BCE is somewhat spotty, the evidence we do have helps us situate rural life in much earlier cultural traditions of Bactria. As with Dangara and Yavan, there is also some contrast between the ways that rural communities occupied the Hissar Valley and elite communities concentrated in the area of modern Dushanbe. As with the previous subchapters, I will first talk about the patterns of settlements more generally before drawing out material specific to rural

lifeways. Within this contact I suggest that rural communities inherited traditions of domestic architecture—pit-houses—from predecessors as early as the late Neolithic. While this might come as a surprise, we have to remember that this paradigm already exists in Central Asia, only in that it is generally accepted that pit-houses originated in late Neolithic Eurasia before their arrival in Central Asia through migratory diffusion with early Andronovo people. As I hope to show here, we do not need to look to this model in the Hissar Valley, and perhaps even elsewhere, as we shall see in the next chapter. Instead, there are certain aspects of late Neolithic Hissar life that persisted in the rural hinterland of Bactria into the Hellenistic period.

The Hissar Valley is a rich alluvial plain oriented on an east-west axis and irrigated by glacial melt that forms several independent riverine zones. The entire plain is well watered with an area of approximately 1,200km² given over to agriculture in the present day. The valley originates in the east at the outflow of Kafirmigan River from the Hissar Mountains (Figure 34). Around Dushanbe the same river is joined by the Varzob River which also originates in the Hissar Mountains, although more directly to the north. The Varzob is also one of the most accessible routes into the Hissar Mountains, where the river is associated with intermontane pathways which would have connected northern Bactria to Sogdiana through the Iskandardarya and Zerafshan Rivers (explored further in chapter two). This same inner route runs along significant copper, lead, tin, and iron deposits situated around Takob which were heavily exploited from the 5th–7th century CE, although it is entirely possible that they were also worked as far back as the second

millennium BCE.\textsuperscript{484} The Khonako River on the western outskirts of modern Dushanbe serves this same dual purpose. The Khonako and Kafirnigan Rivers join 25km southwest of Dushanbe at a natural gorge leading into the Rangun Mountains and ultimately the oasis of Kobadian, also fertilizing that area. It is here that some of the earliest lower Pleistocene sites of Central Asia are located buried deep within the alluvial plain and dating to 500,000 BP and attesting to the stability of this landscape for hominid settlements.\textsuperscript{485}

Roughly 25km west of a bend in the Khanako (at the modern town of Khussor) is another tributary that emerges from the Hissar range, the Karatau River. This river along with the Shirkentdarya to its west also flows from the Hissar Mountains but in a southwesterly direction which forms a micro-oasis that is independent from the Kafirnigan system. Both the Shirkent and Karatau converge at the village Novosoi on the border of Tajikistan and Uzbek, together forming the swift-flowing Surkandarya River. The Surkhandarya River gives its name to the vase oasis that opens southwest of the Hissar Valley, which will be treated independently in the next section. Thus, the Hissar Valley is comprised of two independent micro-oasis systems. One is fertilized by the Kafirnigan and its tributaries, the Varzob and Khanako. The other is fertilized by the Karatau and Shirkent Rivers which merge at the Surkhandarya. Ancient settlements therefore cluster around these two independent micro-oases, which are nonetheless culturally interrelated.

\textsuperscript{484} Sverchkov 2009, 151.  
\textsuperscript{485} Ranov, Carbonell, Rodriguez 1995: 338.
In the Hellenistic period the eastern area of the Hissar Valley around Dushanbe was interconnected with the rest of Bactria, if not also Sogdiana. Known roads through the region find their way into critical areas such as Surkhan Darya, the Kafirnigan River giving way to the Kobadian Oasis, Vakhsh, and Yavan Valleys in the south beyond the Rangun Mountains. This is because the mountainous topography of this area dictates the flow of movement branching off into a south and southwest direction approaching the Amu Darya. Around modern Dushanbe, the capital of Tajikistan, the valley narrows and restricts traffic into only a few gorges that give way to extremely rugged roads along the Varzob River through the Hissar mountains into Panjikent and Ustrashana. In the east, routes continued along the Kafirnigan as well as into northern Badakhshan and rugged mountains bordering China.

G. Lindström’s recent treatment of Hellenistic southern Tajikistan only has a brief mention about the Hissar Valley.\textsuperscript{486} Therefore, I will explore this area in greater depth although this does not imply there are more Hellenistic or post-Hellenistic sites than those discussed in her chapter. However, even the little information we have situates rural life in the Hissar Valley within a more indigenous past rooted within this same landscape. This material helps contextualize what little we do know in a way that I believe is particularly interesting when we recall that the Hissar Valley was a landscape colonized by Greeks and that rural populations bearing these more ancient traditions interacted with these newcomers. I will explore this further below.

We do not have a clear understanding of the political situation in Hissar when Alexander arrived to wrest it from local Bactrian control after the death of Bessus.

\textsuperscript{486} Lindström 2021.
Likewise, our understanding of Achaemenid control over the Hissar Valley is non-existent. Some have looked to Hissar as the lost region of Paratakeene described in Arrian, which is supposed to be situated somewhere between Bactria and Sogdiana. Yet the arguments on this point cannot be so conclusive with our current evidence. We do however have a general idea about key areas of habitation although surely more settlements existed that are now buried under the thick alluvium of the eastern Hissar region. These habitation zones tend to be situated in three places—around the modern city of Dushanbe, along the southern part of the valley along the Kafirnigan River, and in the west around the Shirkent river.

The Hissar Valley features some of the oldest known cultural remains of southern Central Asia. Because this pertains directly to the architecture of rural sites, I will consider these early traditions in the next section. Here I will only briefly cover first millennium BCE settlement patterns across the valley and their development into what emerges in the Hellenistic period. There is somewhat of a gap in our understanding of how people lived in the Hissar Valley at the end of the second millennium BCE and early first millennium BCE. This is the period roughly covered by the Yaz I and Yaz II ceramic complexes. It is only towards the end of the Yaz II period where evidence for settlements begins to reemerge. During the 8th–7th century BCE clear evidence for settlement re-emerges at Shurturkhona (AMCAA 1236), a site that is associated with a later mound complex known as the “Hissar Fortress,” located 20km southwest of modern Dushanbe. While this site later becomes the shakhristan of the Hellenistic fortification, its earliest phase is apparently a simple unfortified rural settlement which will be considered further.

487 Бобомуллоев 2015: 50-52.
below in discussing rural settlement architecture. Roughly 10km north of Dushanbe a 2ha area of scattered ceramics dating to the Yaz III, late Achaemenid period were documented on the southern slopes of the Hissar Mountains at Kiblai (AMCAA 1233). Somewhat remarkably, there are no known Iron Age sites in the western Hissar Valley between the Karatau and Shirkent Rivers, nor in fact in the northern Surkhandarya region north of the To’palang River, its next tributary to the west. H.P. Francfort has recently suggested that a single bell-shaped column capital found at Shakrinas (AMCAA ) is the remains of an Achaemenid administrative building, but as G. Lindström correctly notes all of the associated pottery is Hellenistic. This leaves only Shurturkhona and Kiblai as isolated pockets of settlement in the eastern Hissar Valley, at least as far as our current state of evidence allows.

Only a few other later Iron Age sites are often included in discussions of the Hissar Valley. These are Shurtugai 2 (AMCAA 1234), Shurtugai 3 (AMCAA 1235). Both sites are located 85km southwest of Shurturkhona and are in fact halfway between Kobadian (also referred to as Kala-i Mir in the literature) and Kalai Kafirnigan. Therefore, their inclusion by others within discussions of the Hissar Valley is somewhat perplexing only in that both Kalai Kafirnigan and Kobadian (Kalai Mir) should perhaps be discussed within the context of interconnectivity between the Hissar Valley and the wider Kafirnigan watershed. Therefore, I also include here Munchak Tepa (AMCAA 1209), an unexcavated site that has ceramic evidence for a late Iron Age / Achaemenid phase as well the Hellenistic period. No ceramics dating to after the 2nd century BCE

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488 Francfort 2018.
489 Lindström 2021: 306.
were found here, which means that a Corinthian column capital found on the mound surface associated with Hellenistic pottery indicates a Hellenistic building here like in Dangara or the Dasht-i Qala plain.\textsuperscript{491}

The cluster of sites at Shurtugai were first documented by LT. P’yankova in 1982 when exploring a group of six mounds that were all thought to be kurgans, of which most were. Shurtugai 2 is a 5ha area of scattered ceramics oriented to the northwest with a central mound. Five trial trenches were set into the mound, four of which were able to reach sterile soil. Here the remains of adobe houses were documented as well as an adobe platform set over a stabilizing foundation layer of crushed stone.\textsuperscript{492} Only Yaz III surface ceramics are known from Shurtugai 3 over a 2ha area which match those found at Shurtughai 2 and Kiblai.

Returning to the Hissar Valley there is only a moderate increase in the number of settlements in both the eastern and western areas of the oasis. It seems reasonable to me that a culturally Greco-Bactrian town might have existed under modern Dushanbe, often referred to as the “Dushanbe Settlement” (Dushanbinskoye Gorodische). This view is not generally accepted, and my view is pure speculation, although it is rare that the site is even considered. The Dushanbe Settlement (AMCAA 696) is located at the confluence of the Lushob, Varzob, and Dushanbika Rivers and at the current location of Dushanbe’s National Museum. The site was almost entirely bulldozed in the 1950’s, or otherwise presently exists under modern Dushanbe. Unfortunately, there is no technical publication of excavations. What is known about the site was published in two general works on the

\textsuperscript{491} Lindstrôm 2021: 306.
\textsuperscript{492} Атаханов 2015: 32.
city of Dushanbe. These are V.A. Ranov and V.C. Solov’ev’s *Dushanbe: Gorod Drevnii* (*Dushanbe: the Ancient City*) for general readership (1993) and M.A. Bubnova’s *Istoriya goroda Dushanbe: c drevneishikh vremen do nashikh dnei* (*History of the city of Dushanbe: from ancient times to the present day*) which focuses on the long-term development of the city (2004).

To be clear, there is only a possibility that the Dushanbe Settlement was the largest Hellenistic settlement in the area. Finds of Greco-Bactrian material culture, ceramics, and architectural fragments were found in an area radiating 20–40ha from the center of modern Dushanbe. The main features that have been securely associated with antiquity include a citadel that probably measured 150m x 150m (but substantially less after it was partly destroyed), hints of a residential area, and a necropolis. None of these areas are securely documented outside of chance finds and brief, somewhat unsuccessful excavations by A. Abdullaev in the early 1980’s. However, Greco-Bactrian materials have been periodically brought to the attention of the local museum by local residents since the early 1940’s. This led to a topographic plan of the Dushanbe citadel in 1948 before the site began to be systematically demolished for cotton cultivation beginning in 1954–56. Treating the city as essentially a large unsystematic survey and noting the concentration of elite finds within such a large radius only allows me to suggest the presence of a town here with reservations, much like what is speculated about Dangara. There is the added problem that if there was a town here, it could date to the Kushan period following the pattern of elite settlement intensification across the Hissar Valley.

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493 Ранов и Соловьев 1993.
and Surkhandarya. Only the identification of a relatively undisturbed area for excavation within the confines of the modern city will this be resolved, if ever.

There is a large increase in the concentration of settlements in the Hissar Valley during this period, most of which are rural, but surprisingly not around ancient Dushanbe if this town was a Greco-Bactrian cultural outpost of sorts. The most significant excavated context in this area outside of Dushanbe is the Hissar Fortress (Figure 34; AMCAA 702). This site is a large fortification that emerged in the 3rd century BCE and continued to grow into a large settlement in the Kushan Period. It is now a local tourist attraction. However, already in the Hellenistic period a rural settlement of pit-houses was present either before or around the same time that the fortification was built. Since some of these houses have been excavated, I will engage with them further in the following section to situate them within the wider traditions of the Hissar Valley.

Along with the expansion of the fortification other settlements emerged in the area, notably Khoki Safed (AMCAA 703). This is a small unfortified settlement that developed in the early 2nd century BCE and remained inhabited into the Kushan period like the Hissar Fortress. A later fortification emerged here that towers over the oasis at a height of 15–18m with a central area measuring 150m x 100m. This site was first explored by M.M. D’yakanov in 1946 before being revisited by T.M. Atakhanov in 1970. Excavations in 1976 clarified earlier investigations, finding that the earliest layer dates to the Greco-Bactrian period with the overlaying infill dating to the Kushan or post-Hellenistic/pre-Kushan period. This Greco-Bactrian period layer features khums dating

495 Атаханов 2015: 133.
from the 3rd–2nd century BCE. The only architecture documented at Khoki Safed was an unplastered wall, dating to the Kushan, pre-Kushan, or Hellenistic period was also explored in another area but is dated only generally by pottery in the infilling of this structure. 497

The Hissar Fortress and its associated sites are strategically situated in a narrow micro-oasis that controls access to southerly routes into the Rangun Mountains along the Kafirnigan River. They were certainly in communication with other important sites to the south near the Amu Darya like Kobadian (AMCAA 760) and Kalai Kafirnigan in the far south. The emergence of Khoki Safed probably had to do with supporting a trade and interregional infrastructure linking these two regions together.

In the western part of the Hissar Valley only one site is possibly Hellenistic. This is Akkurgan (AMCAA 714)—a site which was only subject to brief examination by E.A. Davidovich in 1955. 498 Akkurgan is a medium sized fortification with sloping walls that measure 100m x 70m at its base but narrows to 40m x 25m. It is currently preserved to a height of 12m. At this site a terracotta plate with a bas-relief warrior was found that resembles a figure carved into an astragalus from Kalai Mir, which is securely dated to the 3rd–2nd century BCE. 499 It is on this basis that an early date for the entire fortification was given, even though there is no stratified evidence.

Moving now to the Kushan period there is a significant increase in fortified and unfortified settlements across the entire Hissar Valley. In the eastern zone this is especially evident along the Khonako River. This probably was also the case for the

498 Давидович 1956; Атаханов 2016: 75.
499 Давидович 1956: 85-86.
Dushanbe watershed but our evidence is limited on account of the modern city. The largest settlement to emerge was Langar (AMCAA 700). This is a round unexcavated tepa with an area of 9.6ha with ceramics dating from the middle of the first century BCE through the Medieval period. Other sites such as Mavlondjar (AMCAA 698), AMCAA 795, and Tupkhona-Niegon (AMCAA 706) appear to be situated along a single northwesterly axis and might indicate the presence of an ancient road. Tupkhona is a graveyard that was probably used by the inhabitants of nearby Niegon. This graveyard at Tupkhona continues to be used without interruption beyond the Kushan period (AMCAA 704), which is supported by a long tradition of archaeological excavations at this site.\footnote{Атаханов 2015: 99-100; Бобомуллоев 2015: 66-67.}

Two unfortified sites also emerged along the right bank of the Khonako River in this same general area, Karamkul’ (AMCAA 699) and Mogil’nik Ittifok (AMCAA 701) although this latter site comes and goes in the late Kushan period.

The greatest increase of Kushan period sites is in the western part of the Hissar Valley. I need not dwell on these here other than to point them out. First, it is possible that a Greco-Bactrian period village or town comparable to those suggested around Dangara existed at Chimkurgan (AMCAA 695) on the left bank of the Karatau River. I do not have the confidence of others that this site is anything other than Kushan,\footnote{Атаханов 2015.} but it deserves consideration alongside other Greco-Bactrian sites. The site is situated along an important old route leading from Dushanbe into the Surkhandarya region (now the path of the connector train for both regions). While this is purely speculation, a town here would have likely developed towards the end of the Greco-Bactrian period. Excavations
of the site yielded much Kushan period architecture but did not reach sterile soil.\textsuperscript{502} However the appearance of elaborate antefixes, tiles with human faces carved in a Hellenistic style, and terracotta figurines. Yet very little has been published about the stratification of these objects and the only “Greco-Bactrian” coin mentioned in the context of a pre-Kushan date is an imitation coin of Heliocles. At Shakhrinau (AMCAA 719) a large, fortified site seems to emerge in the 1\textsuperscript{st} century CE only to play a far more significant role in the micro-oasis much later.\textsuperscript{503} Smaller unfortified sites do not seem to follow any particular pattern (ancient roads, rivers, etc.) and might just be an artifact of modern documentation. These are AMCAA 721, 722, 723, Nuratepa (AMCAA 716), Durbenttepa I (AMCAA 717), Durbenttepa II (AMCAA 718).

Similar to the tenuous dating of Akkurgan is Kutantepa (AMCAA 697; also known as Jaltepa). This site was explored by E.A. Davidovich in the same 1955 season before being explored again by E.A. Zeimal’ from 1974-75.\textsuperscript{504} Whereas Davidovich suggested a Hellenistic date, Zeimal’ was able to resolve that this site dates to the post-Hellenistic period (i.e. after the mid. 2\textsuperscript{nd} century BCE).\textsuperscript{505} Here a stratigraphic trench was set into the top of the mound measuring 4m x 10m. The lowest layers featured an early Kushan mudbrick building made of square format bricks measuring 30–31cm x 30–31cm. This building was three rooms with well-preserved floors that featured red engobe goblets, a thin black engobe bowl, clay weights, spindle whorls, a terracotta figurine of a headless cloaked man which was said to be uncharacteristic of Central Asian art.

\textsuperscript{502} Е.В. Зеймаль 1983; 1984: 143-44; 1986; Зеймаль и Зеймаль 1988: 288.
\textsuperscript{503} Е.В. Зеймаль 1986.
\textsuperscript{504} Давидович 1956; Зеймаль 1979: 144; 1980: 158-163.
\textsuperscript{505} Зеймаль 1980: 158-163.
Our evidence for settlements within the Rangun Mountains to the south is very limited. Only a single site is known that dates to the Hellenistic period. This Kuz Kainar (AMCAA 731) is located 1.5km north of the village of Obi Shifo between Tamoshotepa and Dushanbe along a natural pathway through the mountains. Only surface ceramics were observed by A.A. Abdullaev who surveyed the region in 1979 and did not publish his results. What is published in secondary literature indicates a very brief occupation from the early to mid. 2nd century BCE. There are no fortifications here, nor is the area particularly amenable to intensive agriculture, which indicates this was likely one several intermontane settlements structured around pastoralism and maybe dry farming.

Kuz Kainar is located along an adyr ridge, 100m above the Kainarsu mountain stream. The site is three low mounds abutting a modern farm and separated by saddles that are 50m and 200m respectively. Each mound has a diameter of 100m each indicating a somewhat substantial occupation. Surface finds are strictly 26 handmade vessels such as khums that are painted, khumchiks, jugs, cauldrons, and a cube shaped bowl which Abdullaev determines to be from the 2nd century BCE. Kuz Kainar is unexcavated, so the site’s true form and dating is unclear, but the surface ceramics suggest that this was a mountain settlement whose inhabitants were not interested in adopting elite ideas about pottery production. Finally, after the mid. 1st century CE two small unfortified sites

506 Lindström 2021: 288, Figure 12.1 places Kuz Kainar in the location of Tamoshotepa. From the description of Filimoniva, et. al. (see next footnote), this site is more appropriately situated within the mountains. I have only medium confidence in locating this site here, but it is not in the Yavan Valley. However, G. Lindström certainly has access to information that I do not, so I only challenge her location with reservations.
507 Филимонова, Юсупов, и Абдуллаев 2016: 175.
508 Ibid.
emerged along a mountain route connecting Dushanbe to Yavan at Gorbulek-2 (AMCAA 728) and Chaman Bulak-1 (AMCAA 727), both unexcavated.

3.7.a. The indigenous origins of rural domestic architecture in the Hissar Valley.

It seems likely that the rural settlements of 4th–1st century BCE were part of deep-rooted local traditions that were practiced for thousands of years. Unfortunately, there is not an in-depth treatment of excavated rural settlement architecture for me to draw on, so what I aim to do here is connect what has been published about rural Hellenistic architecture and consider it within a deeper local tradition of house construction. I only need to briefly consider the broad development of human habitation in the Hissar Valley to make this point. The first human occupation of the Hissar valley dates to the Upper Paleolithic, between 200–70kya, with the archaeological isolate Karatau Culture. Settlements of the Upper Palaeolithic are mostly known from within the Hissar mountains, such as Kharkush located along the Shirkent River.\textsuperscript{509} However, it is the development of a succession of archaeological cultures referred to by the catch-all term “Hissar Culture” where early traditions emerge that would resonate for indigenous Bactrians across the Holocene. Neolithic stone tool technology seemed to continue traditions of the Paleolithic Karatau period.\textsuperscript{510} As early as the late seventh to early sixth millennium BCE a unique aceramic culture emerged across the Hissar Valley with the region’s first communities forming along riverbanks, alluvial cones, and along adyr strips within mountains and valleys.\textsuperscript{511} Most of what is known about this Neolithic culture dates

\textsuperscript{509} Бобомуллоев 2015: 38.  
\textsuperscript{510} Бобомуллоев 2015: 38.  
\textsuperscript{511} Ранов и Соловьёв 1993: 18-19.
to much later, from the forth through third millennium BCE and by then ceramic production had emerged in the Hissar Valley. Settlements at this time remained within the earlier areas but increased in number—along the main rivers and tributaries and on piedmont terraces overlooking the oasis. As noted in my discussion of the early origins of human habitation in Badakhshan (where Hissar traditions continued much later than the Hissar Valley itself), this late Hissar Culture is found in the Alai Valley of Osh and Lake Issyk Kul in Kyrgyzstan, in Ferghana, around Tashkent, and in Baysun west of Surkhundarya. However, in most areas Neolithic remains are buried under two meters of alluvium and cultural materials.

There is only marginal evidence that dry and rainfed agriculture had emerged, mostly with the appearance of stone mortars and pestles but also the development of large storage vessels found in early layers around the vicinity of the Hissar Fortress. Pastoralism and wild game hunting were certainly practiced by the end of the Neolithic period. Campsites found at Turtkauł were regularly revisited and were probably utilized by pastoralists and/or hunters. Bronze Age settlements have now been documented at Kangurtut, Teguzak, Dakhana, and Sary-Dzhar which indicate a society built on a mix between farming and cattle-breeding. Our evidence also comes from the same site, Turtkaul, where two main late Neolithic houses of the Hissar Valley followed two different but closely related construction principals: 1) circular stone-lined semi-subterranean pit houses, best known from the village of Tutkauł and 2) circular huts built

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512 Бобомуллоев 2015: 40.
513 Ранов и Коробкова 1971: 133.
514 Кутимов 2017: 118.
on stone platforms also known from Tutkaul. These are published in N.M. Vinogradova’s 2004 *Yugo-Zapadnyi Tadzhikistan v epokhu pozdnei bronzy* and may indicate continuity of these housing practices but unfortunately this volume was unavailable to me.

Turtkaul is located near Nurek in the Khatlon Region of Tajikistan in alluvial fan of Dasht-I Mazar where the Vakhsh River exits the Pul-i-sang Gorge. Here a crude Neolithic pit-house was excavated V.A. Ranov and G.F. Korobkova. The residence was oval in shape and up to 1m deep with earthen walls and a stone lined floor. The entire installation was 12m in diameter. Materials for the superstructure and roofing did not survive but stone tools specifically for wood processing suggest that both were made of wood. Hearths were found on the structure’s interior. No post holes were documented so it is difficult to fully establish roof construction and ventilation placement. The house was built into alluvial sediment above an earlier Neolithic grave pit in which the remains of an elderly woman and three children were documented. What remains unclear is whether the grave was in any way associated with the later pit-house, a burial practice known at Sarazm in the Bronze Age, in the Iron Age at Kyzyltepa in Surkhandarya (discussed below), and Tamoshotepa in the Hellenistic period (discussed above). The assemblages of the domestic and grave horizons were typologically indistinctive enough for the excavators to suggest that these were contemporary with the house.

515 Ранов и Коробкова 1971; Бобомуллоев 2015: 43.
516 Ранов и Коробкова 1971: 134-139. It should be noted that the stratigraphy described in the French summary of this *Sovetskaya Arkeologiya* article contradicts the description of the same stratigraphy in the Russian. The French summary refers to the burials as at the bottom of the third horizon layer, below 2m of sterile accumulations under the pit-house. This is not how the burials are described in the Russian text, which identifies the burials as part of the second cultural horizon, under a thin layer of deposits below the pit-house - but 2.5m under the modern surface (or from the site’s datum. It seems clear that the author of the French summary had misinterpreted the Russian description.
Regarding the second house type we enter some mysterious circumstances. At Turtkaul several surface layers of crushed pebbles and cut limestone were densely packed together like the pit-house at the same site. However, these other platforms featured layers of stones interspersed with hearths suggesting that they continued to be returned to and maintained with the laying of a new layer of stone. A lack of artifacts between all layers except for the floor of the final phase suggests that the site was cleaned and prepared for the next layer of stone. Ranov and Korobkova suggested that this type of floor was to prevent dampness from seeping into the house (perhaps the floor would have also been covered by textiles). Stone wood-crafting chisels found in the assemblages do suggest the possibility that there was a wooden superstructure even if no postholes were found (and could be easily missed). The largest platform has an area of 40m².

It is unclear how these platforms functioned but as discussed above they seem to be the origin of a tradition that lasts into the late Achaemenid period at Baitudasht 2, where they appear again after a long hiatus only to be built of rammed earth or pakhsa and sometimes with a pit-house set directly in the center. Even the large dimensions return intact. While their domestic function is not clear (at least not so much for the Neolithic house, it does seem clear for Baitudasht 2), this seems to be the most reasonable explanation since there is no direct evidence for cultic or other functions (spaces for social gatherings among pastoralists?). There are really three possibilities that account for this apparent continuity of traditions. The first is that this is an oddly specific coincidence over several thousands of years, a possibility that I am inclined to reject.

These structures are too geographically close and formally anomalous (not being found anywhere else in Central Asia, to my knowledge) for this to be a chance reinvention.

The other two options are far more attractive. One option is that there is a direct genealogy of this structural type from the Neolithic through late Iron Age. I believe this is already clear for a local continuity of pit-house building, and why not? We would not be so surprised about such continuity if these were above ground houses. Nor is anyone surprised when the argument is made that pit-houses arrive in southern Central Asia through a slow process of long-term diffusion from the Eurasian steppe (discussed further in chapter four). In this case the lack of Bronze Age houses within the Hissar Valley is a problem, however we should also note that there is some influence of the Hissar Culture on Bronze Age material culture in the plains of Samarkand and Panjikent, as I will touch upon in the next chapter. Some of those northern houses are also pit-houses. Another option is that Neolithic stone platforms were rediscovered in the Iron Age. In this case, earlier stone platforms and large pit-houses with stone-lined floors emerge as places of memory or folk tradition in which their discovery by later populations results in their recontextualization within an Achaemenid present. Unlike direct continuity, this process is one in which a tradition is invented for late Iron Age communities that actively places themselves within a more rooted past. It is during the Achaemenid period that foreign, Iranian architecture does emerge in Bactria at a greater rate and therefore the contrast between a house at Baitudasht against a backdrop of those I will describe at a place like Kyzylcha, not too distant in Surkhandarya, would in fact be quite striking.

While we do not have any Bronze Age settlements, a Bronze Age culture did emerge in the mid-2nd millennium in the Hissar and northern Vakhsh valleys (Yavan) that
is identical to that of the Molali-Sapalli strain of BMAC culture, but only in specialized ceramic traditions.\textsuperscript{518} There is scant evidence for at least copper (and probably tin) mining at Takob along the Varzob River north of Dushanbe, which were nonetheless heavily exploited from the 5\textsuperscript{th}–7\textsuperscript{th} century CE.\textsuperscript{519} Bronze does appear for the first time, but only among the many burial grounds that comprise most of the evidence for Bronze Age habitation in this landscape. The largest of these grave sites are located at Tandyryul and Kumsay.\textsuperscript{520} Yet in this formative second millennium period, traditions associated with Bronze Age cultures of Northern Afghanistan’s BMAC were crossing the Amu Darya into the southern Vakhsh and Kafirnigan areas. Further, some influence from the earlier Zamanbaba culture of the Bukhara Oasis (see next chapter) arrived in the area around Parkhor around the early second millennium BCE. Given the temporal depth of material traditions in the Hissar valley, Ranov and Solov’eva were able to push against a popular narrative that stressed the migrations of Andronovo tribes from the Eurasian steppe and argue that the Hissar Culture represented traditions of the indigenous populations of southern Tajikistan.\textsuperscript{521} Teufer has suggested that there is no compelling evidence for the arrival of Andronovo traditions in southern Tajikistan. I admit this aspect of the argument is out of my depth, but I maintain my point that the use of pit-houses and platforms persists as an indigenous tradition rather than as the result of these outside influences. This is significant here because the movement of Andronovo people and their offshoots is often seen as the origin of pit-house traditions that form the basis of rural

\textsuperscript{519} Сверчков 2009, 151.
\textsuperscript{520} Кутимов 2017 with a lengthy bibliography of archaeological research at Tandyryul.
\textsuperscript{521} Ранов и Соловьев 1993, although I should be clear that their book is not an academic work, but a popular history of Dushanbe.
lifeways in the first millennium BCE in Sogdiana and with the movement of new ceramic
traditions more generally at the end of the second millennium BCE. At present the only
concrete analogies to Andronovo material culture seems to be a single pair of bronze
earrings from one of 34 burials at Tandyryul which dates to the second half of the second
millennium BCE. Even if we accept P’yankova’s argument about the use of kurgans
alongside the appearance of some very specific technical aspects of ceramic technology,
this cannot account for the whole of Bronze Age traditions in southern Tajikistan. For
one the middle of the second millennium was a period where many traditions converged,
of which Tazabagyab (and Andronovo) influence would only be a small part, even if
evidence for these contacts is now growing. Therefore, it seems more plausible to find
the origins of Achaemenid and Hellenistic period rural traditions within the deep history
of the landscape they inhabited.

Evidence for settlement reemerges in the early Iron Age at Shuturkhona (more
accurately “Ushurtkhona” meaning “the camel stable”) southwest of Dushanbe and part
of a complex of sites associated with the Hissar Fortress (AMCAA 702). Early dwellings
excavated at Shuturkhona are pit-houses dating from the 8th–7th century BCE,
characterized by white slipped goblets with cylindrical bodies. Arguably this
reemergence of pit-house installations in our own record is one of continuity within the
Hissar Valley. Contemporary to this early phase at Shuturkhona, and only a short
distance to the east, are catacomb burials found at Khoki Safed (AMCAA 703).

Settlement continued at Shuturkhona throughout the 6th–4th centuries BCE. This is

522 Бобомуллоев 2015: 45-46.
524 Кутимов 2016.
based on a high number of cylindro-conical vessels found in excavation area 1. Presumably communities during this time, which corresponds to the Yaz III period, continued to live in pit houses as others had in earlier periods at this site. Since the Hissar Fortress citadel only seems to emerge in the 3rd century BCE it seems most likely that Shuturkhona was an early unfortified settlement of pit-houses that was strategically located along the main communication route from the southern Kafirnigan oasis in the south and the wider Hissar Valley to the north. Recognizing the usefulness of this location from a strategic standpoint, a fortification was likely installed as a colonial instrument to take control over this pre-existing network.

As stated, it is generally accepted that the citadel now known as the Hissar Fortress emerged in the 3rd century BCE although there is evidence for Bronze Age activity within this area. However, most of what we know about the 17ha area is as recent as the pre-modern 19th century when the site was indeed a massive fortification for the Hissar bek (ruler). The later citadel was first explored by M.M. D’yakonov in 1946, which was followed by five years of excavations by T.M. Atakhanov from 1969–74. Broad trenches measuring 120m² were opened at the Hissar Fortress from 1980–81 by T.I. Zeimal’ and E.B. Zeimal’ who established that the fortification was first built in the 3rd century BCE. Ceramics from a closed context in the earliest layer of the site beak-shaped rim bowls present in early phases at Ai Khanoum appearing contemporaneously with wheel and handmade Yaz III cylindro-conical vessels now

525 Бобомуллоев 2015: 49-50.
526 Е.В. Зеймаль 1987.
529 Зеймаль и Зеймаль 1988: 280.
known to gradually disappear over the course of the 3rd century BCE.\textsuperscript{530} The earliest settlement within the Hissar Fortress citadel is later and is represented by a heavily ruined “pre-Kushan” building associated with Greco-Bactrian ceramics (such as phiale type bowls and what seems to be fish plates, although they are not described as this in the original report) and Yaz III cylindro-conical vessels. Additionally, one small sondage was set into an area immediately west of the 17\textsuperscript{th} century Kukhna Madrasah and 340m south of the Hissar Fortress citadel which in its earliest layers featured some early Hellenistic forms dating from the 3\textsuperscript{rd} century BCE (AMCAA 1237).\textsuperscript{531}

In the \textit{rabad} of the Hissar Fortress, to the immediate northwest of the citadel, we find pit-houses dated to the Hellenistic period installed into sterile soil. This rabad is called Kurgoni Kulobi (AMCAA 1238) and was excavated between 1980–81 by T.I. Zeimal’ and E.V. Zeimal’.\textsuperscript{532} One pit-house was described as dug directly into sterile soil and having a rammed earth floor at its base. The dimensions of the house were not published. The floor of this house was covered by a 20cm thick layer of burnt grain (the type of grain was not described), which certainly suggests that this was not a house, but a massive silo. However, this grain was intermixed with dense ceramics which were not storage vessels, which one might expect if this were not a silo, but Yaz III cylindro-conical vessels and early Hellenistic bowls comparable to Ai Khanoum. The Yaz III shapes are mostly wheelmade cauldrons, but local handmade variants were also noted in the assemblage. The convergence of these two traditions is typical of the early transitional period of the late 4\textsuperscript{th}–early 3\textsuperscript{rd} century BCE, although both excavators

\textsuperscript{530} Зеймаль и Зеймаль 1988: 280, 284.
\textsuperscript{531} Самойлик 1993.
\textsuperscript{532} Зеймаль и Зеймаль 1988: 277.
suggested they could be slightly later since Yaz III cauldrons were also found in later Kobadian type assemblages (which are not so geographically distant from these). A date of 3rd–2nd century BCE has otherwise been assumed for Kurgoni Kulobi in the secondary literature.\footnote{Зеймаль и Зеймаль 1988.} In another trench a Kushan period wall was also noted suggesting a later change to above ground architecture, but there is not much else to say here. In this context I should note that whereas pit-houses were the norm at the Hissar Fortress from the 8th–3rd centuries BCE there are indications that above ground adobe buildings were built in the wider Kafirnigan watershed by the 4th century BCE, which as described above, are the remains of adobe houses at Shurturgai 2.\footnote{Атаханов 2015: 32.} However since this site is located between Kalai Kafirnigan and Kobadian it is possible that there were local variations associated with the southern Kafirnigan oasis.

We do have some relevant evidence from Kobadian in the Kafirnigan oasis. As noted above, a late Iron Age building was excavated from 1950–51 by D’yakanov. This site is of course also related to other sites within the southern Kafirnigan Oasis. The earliest architecture within the wider river-adjacent oases on the right bank of the Amu Darya comes from Kalai Mir. The earliest layers of Kobadian date between the 7th–5th centuries BCE. These were already documented by the early expedition of D’yakanov in 1950–51 who noted an above ground building consisting of several rooms constructed on sterile soil.\footnote{Дьяконов 1953.} During the Hellenistic period there was also an expansion of activities at
Kalai Mir. Here an industrial area for bronzeworking was established alongside possible evidence for viticulture in the form of a wine cellar.\textsuperscript{536}

3.8. The rural hinterland of Surkhandarya.

Now taking the discussion southwest of the Hissar Valley, I will consider the rich archaeological heritage of the Surkhandarya oasis. Surkhandarya is the westernmost oasis of Bactria north of the Amudarya. This vast plain roughly encompasses 6,000km\textsuperscript{2} of mostly fertile alluvial soil and steppe that has been amenable to an agricultural and pastoral based economy for thousands of years. Cotton, wheat, barley, and melon are the most common crops grown in the region today, although cotton would not have been grown here in antiquity. The northern border of the oasis is conceptually artificial; it is only the modern boundary of Tajikistan and Uzbekistan that divides the western Hissar oasis from the northern Surkhandarya. It is likely that the modern national boundaries and the differences in archaeological research therewithin have created somewhat of a false separation between the areas of the previous and current sections, which I have preserved here for organizational convenience. The same can be said for the riverine sites along the banks of the Amu Darya discussed in subchapter II.5, which are excluded here since I wished to emphasize the reliance of those sites on the Amu Darya.

There are two general ecological zones within the oasis itself that are defined by the difference in orientation of natural flowing rivers between the western and eastern half of the oasis. Both zones are sheltered by the high peaks of the Hissar from periodic incursions of colder air from the north and jet-stream westerly winds which makes this

\textsuperscript{536} Дьяконов 1953; Забелина 1953.
area particularly hot in the summer compared to other regions of southern Central Asia. Since the 1950’s Surkhandarya has been an area particularly impacted by a gradual decrease in the amount of mountain rainfall and glaciation, which combined with human induced global warming, has caused a decline in the volume and rate of all of Surkhandarya’s tributary rivers; a pattern that is otherwise shared among all tributary rivers of the Amu Darya more generally.537

Formed by the merger of the Shirkent and Karatag rivers of the western Hissar Valley, the Surkhandarya river is central to one ecological zone in the eastern half of the oasis along a north-south axis. This river is. Both rivers are primarily fed by glacial melt originating in the high peaks of the Hissar Mountains dividing Bactria and Sogdiana. The Surkhandarya flows for approximately 175km along the western foothill of the Aktau Mountain range before discharging into the Amu Darya at modern Termez. The ecology of the western half of Surkhandarya is more complicated. No major river runs parallel to the Surkhandarya in that area. Instead, settlement is made possible by large tributary rivers of the Surkhandarya that originate in the Baysun Mountains, which itself is the southwestern extension of the Hissar Range. Five major rivers flow from these mountains in the northwest and bisect the western steppe of the region, forming multiple micro-oases that are each slightly varied in terms of agricultural viability. From north to south these rivers are the To’palang, the Qizilsu-Kiyasu system, the Khalkhadzhar, the Kunkurmas, and the Sherabad Darya. Each river system features minor distributary rivers and springs that facilitate crop growth as much as they also provide water for grazing animals. Both wider zones of “east” and “west” Surkhandarya are bisected in the lower

reaches by the steppe-desert hills of the Kattakum desert and Babatag plateau, which is generally uninhabited and occupies an area of approximately 500km$^2$. Nonetheless this desert zone is utilized for sheep and goat pasturage like the other deserts of Central Asia.

Given the micro-regional complexity of this area and the accessibility of good scholarship on ancient settlement patterning across the entire oasis I will only summarize the growth of each micro-region, all of which were dependent upon some degree of agriculture but certainly cattle-based pastoralism in antiquity. The most significant problem with accurately characterizing ancient sites in Surkhandarya is a purely ecological one. Alluvial sedimentation in the wider area is rapid and phases that are pre-Kushan (i.e. pre-1st century CE) are buried under at least several meters of alluvium and/or later phase depositions. While we will never know for certain, this is probably the main reason why, as I will show (following many others who came to the same conclusion), that there is a substantive underrepresentation of Achaemenid, Hellenistic, and post-Hellenistic sites. This contrasts with the number of Kushan sites (1st–4th c. CE) where the number of settlements increases to such a degree that the comparative numbers are shocking. Just to get a general sense, the overall number of sites restricted to the lower plain of Uzbek Surkhandarya are summarized in Table 5. Sites that occur in multiple periods are repeated in each respective count.

538 Stride 2005.
Table 5. Overall site periodization and count for the Surkhandarya Oasis.

<table>
<thead>
<tr>
<th>Period</th>
<th>Number of sites</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>5th-4th c. BCE Achaemenid</td>
<td>25</td>
<td>7.58%</td>
</tr>
<tr>
<td>Late 4th- early 3rd c. BCE (transitional phase)</td>
<td>19</td>
<td>5.76%</td>
</tr>
<tr>
<td>3rd-mid 2nd c. BCE; Hellenistic (generalized)</td>
<td>17</td>
<td>5.15%</td>
</tr>
<tr>
<td>mid 2nd c. BCE – 1st c. CE post-Hellenistic</td>
<td>28</td>
<td>8.48%</td>
</tr>
<tr>
<td>1st-2nd c. CE early Kushan</td>
<td>155</td>
<td>46.97%</td>
</tr>
<tr>
<td>2nd-3rd c. CE late Kushan</td>
<td>86</td>
<td>26.06%</td>
</tr>
<tr>
<td></td>
<td>330</td>
<td>100%</td>
</tr>
</tbody>
</table>

To pick up again on a point raised in my methodology section of chapter one, I am reluctant to do more with this data than I could with the granularity provided in the AMCAA database. In particular, whereas others have attempted to use settlement size for developing a general picture of site hierarchies, I do not feel that this can be done for the wider Surkhandarya region given such a skewed dataset that will only imply erroneously that the largest Kushan sites are also the largest Hellenistic sites. I think the reason is evident just looking at the overall percentage of Kushan sites in comparison to everything earlier.

There is indeed a real increase in settlements beginning in the post-Hellenistic and early Kushan periods, as was already observed in my analyses of Badakhshan and the Hissar Valley. As I show in the next chapter, this is also true for all of Sogdiana with a rise of fortified sites associated with major interregional road networks. Stančo and

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539 Havlík 2018; Stančo and Tušlová 2019. The work of at least the latter of these cited projects had a methodology for dealing with this problem, which cannot be replicated here using only a legacy dataset.
Tušlova also confirmed this phenomenon for the Sherabad Oasis with more secure field data than is available from the legacy datasets that I have relied upon.540 If Sherabad is representative of all of Surkhandarya, then there is indeed a direct, state-level investment in an increase in irrigation agriculture, security, the control of trade, and administration across the wider region as those authors suggest. This of course has major implications for an institutionalization of rural life after the 1st century CE, something we do not have any evidence for during the Hellenistic period. X. Wu has suggested that there was already a heavy administrative hand over rural life during the Achaemenid period in Surkhandarya in which the pastoral, animal economy was under the direct authority of Persepolis.541 While this interpretation is drawn from good archaeobotanical and faunal data carefully excavated from recent excavations at Kyzyltepa (a methodology that is still emerging in Central Asian archaeology, but nonetheless lacks enough specialists), I see no reason to assume a priori that the Achaemenid state had any interest in the local animal and produce economy of northern Bactria other than to collect tax revenue off of its trade. This strategy was probably employed across the whole empire as a means of mundane bureaucracy that had little real-world effect on rural populations in Bactria. The problem in this case is that unlike Stančo and Tušlova’s observation for the Kushan period, there is no infrastructure at Kyzyltepa that implies any bureaucratic role in crop production or animal rearing (for example, to my knowledge there is no firm data about an intensification of Achaemenid canal projects, no storehouses of grain, etc.). This

541 Wu, Miller, Crabtree 2015.
assumption is based only on the archaeological detection of grain in a semi-urban context.

What then does our state of evidence say about the rural economy of Surkhandarya before the Kushans? We are at a real disadvantage in understanding the settlement dynamics of the region during the Hellenistic and post-Hellenistic periods. As I discuss in greater detail below, only the related Achaemenid period sites of Kyzyltepa (a town) and Kyzylcha (rural, extramural farmsteads) hint at what might have been continued practice in the Hellenistic period. Both Mandel’shtam and F. Holt understood this lack of Hellenistic sites in historical terms, rather than ecological as I have. For these authors there was a real depopulation of Surkhandarya due to reprisals of Alexander against the local populations that not only involved violence, but also a disruption of the “balanced” agricultural and pastoral economy. As Stride notes, there is not the scale of abandonment of Achaemenid period sites outside of Kyzyltepa that would justify this explanation. S. Stride also pushed against the idea that natural sedimentation hides a true Hellenistic landscape, seeing different ecological factors as the cause, albeit ones that were anthropogenically induced. For Stride there was Greek administration over the region only as a frontier zone. He suggested two consequences, 1) that certain areas experienced an increase in landscape exploitation which caused a local collapse of more ecologically sensitive areas (such as Kyzyltepa in the Mirshade Oasis) and 2) that there was a reorientation in settlement away from the foothills of the Baysun and Kugitang mountains which caused a marginalization of other areas (Kyzyltepa again). While the

542 Stride 2005: 312-313.
abandonment of Achaemenid sites in the Mirshade Oasis is an observable fact, the data does not seem to me to support Stride’s scheme either since we actually do not have a clear enough idea about where Hellenistic sites were actually located outside of a few significant, well researched areas—Javlandattepa, Talitagora, Kampyrtepa (which is unique as a riverine site anyhow), and Khalchayan.

As I will also show, the only evidence we have of a rural household for the entire Hellenistic period in this region is a barely published pit-house from Dal’verzin. This is hardly representative of a reorientation of settlements. If I can speculate for a moment, I expect that this single pit-house was the norm for rural settlements and that we were just lucky enough to identify an otherwise difficult to observe type of site. While I am on better grounds to demonstrate this empirically in my chapter on Sogdiana, I would be unsurprised if we eventually had better data that supports the same for northern Bactria. I am therefore in an awkward position, since whereas Surkhandarya is one of the best studied regions of southern Central Asia, the dataset for rural life here is almost non-existent in my period of interest. This much was also observed by S. Stride in his own dissertation, which remains the authoritative work for all Surkhandarya.

Our inadequate knowledge of a representative number of rural sites in Surkhandarya is particularly severe compared to the evidence presented in other regions, such as Dasht-i Qala, Kashkadarya, or the Bukhara Oasis. In these three regions we have a far better understanding of the distribution of Hellenistic and post-Hellenistic rural sites than we could possibly expect to achieve in Surkhandarya given these circumstances. This issue was considered in two sentences by S. Stride in addressing the biases of his own dissertation database, who in describing “temporary habitats” noted:
Un problème particulièrement épique concerne les habitations temporaires de populations semi-sédentaires dont les traces subsistent très rarement. Nous n’avons que très peu de chances de pouvoir les repérer au cours d’une prospection comme la nôtre.  

Stride does not necessarily identify what types of sites he means by “habitations temporaires” but my suspicion is that he would follow others in identifying pit-houses and dugouts as precisely these types of seasonal, ephemeral sites. However, their recognition in this context at least implies an agreement that our representative dataset is quite poor for this region.

Surkhandarya is one of the only regions in Bactria to have been subject to decades of archaeological surveys covering the same general area. In 1969, somewhat systematic explorations of Surkhandarya’s archaeological heritage were initiated by a detachment of the Uzbekistan Art Historical Expedition to explore the most ancient sites of the region with a particular emphasis on the Hellenistic through Kushan periods. Prior to this scientific archaeological work was mostly restricted to the excavation of large settlements. This latter work, led by E.V. Rtveladze developed the first typology of sites for the oasis (86 were documented) based on a combination of site morphology and size, which importantly included a first consideration of the distribution of rural sites although only a few seemed to fall within his categorization (and none from the period of interest in this dissertation). Mountainous sites in the district of Sherabad were also considered briefly. A particularly important project led by Z.A. Arshavskaya, also

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545 Stride 2005: 64.
546 Rtveladze 1974.
547 М.Е. Массон 1945; Альбаум 1960. Пугаченкова 1966. The only exceptions seem to be brief explorations of settlement distributions around Angor in southern Surkhandarya from 1948-54 by L.I. Albaum (1955a, 1955b) and an expedition exploring the wider hinterland around Termez under the direction of M.E. Masson (1940).
548 Rtveladze 1974: 84.
documented settlement patterns across Surkhandarya and parts of the Baysuntai Mountains to the west, the results of which were published in *Srednevekovoye pamiatniki Surkhandar’i* (1982). This work focused primarily on the distribution of Medieval sites, but like most Soviet survey projects documented much information about earlier periods. Their work really formed the basis from which subsequent projects were able to refine our knowledge of sites and site chronologies across the entire oasis.549

S. Stride’s dissertation *Geographie archéologique de la province du Surkhan Darya* remains the authoritative landscape study for most of Surkhandarya and is one of my core datasets in producing the AMCAA for this area. His work is only now superseded in the southwestern region of the oasis around the Sherabad River. This is L. Stančo and P. Tušlova’s *Sherabad Oasis: tracing historical landscape in southern Uzbekistan* (2019), which is the culmination of a survey and remote sensing project under the auspices of the Czech-Uzbek archaeological mission. Their impetus was to document observed sites in the Sherabad Oasis within a wider context of the surrounding landscape as well as to map sites that are now threatened by rapid agricultural development. Their work corrects the work of prior survey expeditions in the Sherabad Oasis. There is no need or interest here in retracing the steps of this project through the AMCAA since it is their data that I entered into the database. Therefore, I refer the reader to that volume.

In addition to a long tradition of archaeological research by Uzbek and international scholars, Surkhandarya is one of the few regions where we have some data about the types of domesticated animals exploited in the Iron Age. In a study on the topic in the 1980’s H.M. Ermolova noted that cow, sheep, horse, goat, pig, and Bactrian camel

549 Аршавская, Ртвеладзе, Хакимов 1982.
were commonly exploited species, although the dataset was quite small. This is now superseded by excellent data that came out of L. Sverchkov and X. Wu’s excavations at Kyzyltepa, which can perhaps be considered representative of at least similar alluvial micro-oases across the wider valley. Their work included both faunal and archaeobotanical remains which were analyzed by the expertise of N. Miller and P. Crabtree. I summarize their data in Table 6 and Table 7 although I omit most of the forty varieties of wild and weedy plants identified in the assemblage.

Table 6. Agricultural exploitation in the Mirshade Oasis from the 5th–4th c. BCE.

<table>
<thead>
<tr>
<th>Cultivated plants</th>
<th>Species</th>
<th>Season (if applicable)</th>
<th>Primary use</th>
<th>Secondary use (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Six-row barley</td>
<td>Hordeum vulgare var. vulgare</td>
<td>Winter</td>
<td>Food</td>
<td>Fodder</td>
</tr>
<tr>
<td>Bread wheat</td>
<td>Triticum aestivum (most likely)</td>
<td>Winter</td>
<td>Food</td>
<td>N/A</td>
</tr>
<tr>
<td>Broomcorn millet</td>
<td>Panicum miliaceum</td>
<td>Spring, Summer, early Autumn</td>
<td>Food</td>
<td>N/A</td>
</tr>
<tr>
<td>Foxtail millet</td>
<td>Setatia italica</td>
<td>Spring, Summer, early Autumn</td>
<td>Food</td>
<td>N/A</td>
</tr>
<tr>
<td>Lentil</td>
<td>Lens variety unclear</td>
<td>Autumn, Winter</td>
<td>Food</td>
<td>N/A</td>
</tr>
<tr>
<td>Common grape</td>
<td>Vitis vinifera</td>
<td>Summer</td>
<td>Wine</td>
<td>Food</td>
</tr>
<tr>
<td>Pistachio</td>
<td>Pistacia</td>
<td></td>
<td>Food</td>
<td>N/A</td>
</tr>
<tr>
<td>Flax</td>
<td>Linum cf. usitatissimum</td>
<td>variety unclear</td>
<td>N/A</td>
<td>Food</td>
</tr>
<tr>
<td>Nuts</td>
<td>variety unclear</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Stone fruit</td>
<td>Prunus variety unclear</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Table 7. Animal exploitation in the Mirshade Oasis from the 5th–4th c. BCE.

<table>
<thead>
<tr>
<th>Domesticated animals</th>
<th>Species</th>
<th>Percentage (approx.)</th>
<th>Primary use</th>
<th>Secondary uses (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheep/goat</td>
<td></td>
<td>77%</td>
<td>Food</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Ovis aries</td>
<td></td>
<td>Food</td>
<td>Wool</td>
</tr>
</tbody>
</table>

551 Xin, Miller, Crabtree 2015.
552 Xin, Miller, Crabtree 2015: 103.
<table>
<thead>
<tr>
<th>Animal</th>
<th>Scientific Name</th>
<th>Food/Use</th>
<th>Milk/Feathers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goat</td>
<td><em>Capra hircus</em></td>
<td>Food</td>
<td>Milk</td>
</tr>
<tr>
<td>Cattle</td>
<td><em>Bos taurus</em></td>
<td>20% Food</td>
<td>Milk; burden</td>
</tr>
<tr>
<td>Pig</td>
<td><em>Sus scrofa</em></td>
<td>3% Food</td>
<td>20% Food</td>
</tr>
<tr>
<td>Chicken</td>
<td><em>Gallus gallus</em></td>
<td>Food</td>
<td>Feathers</td>
</tr>
<tr>
<td>Horse</td>
<td><em>Equus caballus</em></td>
<td>1% Travel</td>
<td>Burden; Food</td>
</tr>
<tr>
<td>Donkey</td>
<td><em>Equus asinus</em></td>
<td>1% Burden</td>
<td>Travel</td>
</tr>
<tr>
<td>Camel</td>
<td><em>Camelus</em> (likely Bactrian)</td>
<td>-</td>
<td>Travel</td>
</tr>
<tr>
<td>Dog</td>
<td><em>Canis familiaris</em></td>
<td>-</td>
<td>Herding</td>
</tr>
<tr>
<td>Cat</td>
<td><em>Felis catus</em></td>
<td>- Unknown</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Wild Animals</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gazelle</td>
<td><em>Gazella subgutterosa</em></td>
<td>-</td>
<td>Food (hunted)</td>
</tr>
<tr>
<td>Wild sheep</td>
<td><em>Ovis sp.</em></td>
<td>- Food (hunted)</td>
<td>N/A</td>
</tr>
<tr>
<td>Wild boar</td>
<td><em>Sus scrofa</em></td>
<td>- Food (hunted)</td>
<td>N/A</td>
</tr>
<tr>
<td>Onager</td>
<td><em>Equus hemionus</em></td>
<td>- Food (hunted)</td>
<td>N/A</td>
</tr>
<tr>
<td>Wolf</td>
<td><em>Canis lupus</em></td>
<td>- Pelt</td>
<td>Companionship?</td>
</tr>
<tr>
<td>Corsac fox</td>
<td><em>Vulpes corsac</em></td>
<td>- Pelt</td>
<td>N/A</td>
</tr>
<tr>
<td>Hare</td>
<td><em>Lepus sp.</em></td>
<td>- Food (hunted)</td>
<td>Pelt</td>
</tr>
<tr>
<td>Goose</td>
<td><em>Anser sp.</em></td>
<td>- Food (hunted)</td>
<td>N/A</td>
</tr>
<tr>
<td>Duck</td>
<td><em>Anas sp.</em></td>
<td>- Food (hunted)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

In addition to cultivated and wild crops, N. Miller also identified a variety of tree species local to Kyzyltepa by way of wood charcoal samples. Samples of juniper and pine confirmed the exploitation of local mountainous regions, whereas ash, willow, and poplar samples likely reflect the immediate environs of the Kyzyltepa-Kyzylcha system of sites.553

The Kyzyltepa dataset gives us a fairly detailed understanding of the complexity of the rural economy in Late Iron Age Surkhandarya. Both Tables 6 and 7 are ordered

553 Xin, Miller, Crabtree 2015: 99.
roughly according to their representative sample size. For domesticated and wild animals, a blank column means that the sample size was statistically insignificant but present. From this data we see that there was heavy year-round agricultural exploitation in the immediate environs of Kyzyltepa and Kyzylcha with an emphasis on barley, wheat, and two types of millet. The exploitation of animal domesticates is overwhelmingly weighted towards sheep and goat. While these animals were of course fundamental to ancient cuisine, sheep provided wool for clothing and goats provided milk as a fresh source of hydration. The same can be said of cattle, which took a secondary role in the animal economy—a break from ancient traditions of “cattle breeding” pastoral economies. Pig and chicken were also consumed, albeit at a much lower rate. There is also clear evidence for hunting with a wide variety of species, some of which could also be utilized for pelts such as wolf, fox, and hare. Finally, the range of beasts of burden is exemplified by Bactrian camel, horse, and donkey, which I note in the next chapter were likely valued differently depending on the expected range of transport. Interestingly there is a striking correspondence between the samples drawn from Kyzyltepa and the list of provisions provided to the Achaemenid usurper Bessus in the *Aramaic Documents from Ancient Bactria*. In document Khalili IA 21 we find the following relevant provisions: 1 horse, 2 cows for grazing, 1 cow for milk, 1 donkey, 33 non-grazing sheep, 100 grazing sheep, 33 lambs, 5 geese, 30 chickens, fine flour, white flour, barley meal, cheese, sour milk, wine of Chistkana (perhaps a brand), wine from Arachosia, and fodder.\(^\text{554}\)

Moving from evidence for the rural economy of Surkhandarya, I will now briefly consider settlement patterns in Surkhandarya. As noted at the start of this section,\(^\text{554}\) Naveh and Shaked 2012: 177-178.
settlements in Surkhandarya generally cluster around several micro-oases (Figure 35, Figure 36, Figure 37). Since this material is already covered in great depth by several recent and authoritative expeditions, which were incorporated into the AMCAA database, I will only summarize these patterns here as they are now reflected in the palimpsest dataset I have assembled. Since this dataset for Surkhandarya is very large (330 sites), I will not endeavor to highlight even some key elite settlements as I do in other areas of this dissertation. Instead, here I highlight the main settlement areas and continue to draw attention to the significant gap in our knowledge of Hellenistic and post-Hellenistic rural sites. This analysis moves geographically from north to south. Once this brief overview concludes, I then consider our actual evidence for rural domestic architecture in the next section.

The northernmost suite of sites is located just to the west of the confluence of the To’palang River with the Surkhandarya. A paleochannel must have existed to the west of the Surkhandarya in antiquity. No less than sixteen sites are aligned parallel to the modern flow of the Surkhandarya for approximately 6km along a northeast-southwest axis. As is long known, Khalchayan (AMCAA 451, 452, 453, 454) is the largest site here with an urban area of 40ha overall. This large area was first excavated under the direction of G. Pugachenkova from 1959–63.555 Excavations mostly focused on a massive palatial complex dating from the 1st century BCE throughout the Kushan era that was rich in elite material culture which was up until then unparalleled, especially in terms of sculpture that drew heavily on Hellenistic and Indian artistic techniques and motifs. Based on the ceramic complex from excavation of the site’s earliest levels, Pugachenkova suggested a

555 Пугаченкова 1966.
foundation of the site in the 4th–3rd century BCE although, with great prejudice, Litvinsky and Sedov revised this dating to the 3rd–2nd century BCE. The site is assigned such an early date based on the absence of goblets that appear in the 1st century BCE levels as well as slant bottomed vessels. Unfortunately, the trench for this period was quite small and little could be said of the site’s early significance. Was the site rural? Was it already palatial? Only the mere fact of a Greco-Bactrian occupation can be confirmed here.

Table 8. The micro-oasis of the To’palang river and Surkhandarya confluence (Figure 35, Figure 36, Figure 37)

<table>
<thead>
<tr>
<th>Period</th>
<th>Number</th>
<th>Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>5th-4th c. BCE</td>
<td>3</td>
<td>Khalchayan (AMCAA 451, 454), Koi Turabek Tepe (AMCAA 578), AMCAA 575-576</td>
</tr>
<tr>
<td>3rd-mid 2nd c. BCE</td>
<td>2</td>
<td>Khalchayan (AMCAA 451, 452, 453, 454), Mayda Tepe (AMCAA 577)</td>
</tr>
<tr>
<td>mid 2nd c. BCE – 1st c. CE</td>
<td>5</td>
<td>AMCAA 579, Khuson Tepa (AMCAA 582), Khalchayan (AMCAA 451, 452, 453, 454), Dhalpak Tepe (AMCAA 571), Mayda Tepe (AMCAA 577)</td>
</tr>
<tr>
<td>1st-2nd c. CE:</td>
<td>15</td>
<td>Anzhir Tepe (AMCAA 580), Kutarkon Tepe (AMCAA 581), Malashkat Tepe (AMCAA 573), Karabag Tepe (AMCAA 572), Khalchayan (AMCAA 451), AMCAA 565, AMCAA 569, Tulka Tepa (AMCAA 570), Dhalpak Tepe (AMCAA 571), Gharov Tepa (AMCAA 405), Mavlon Tepe (AMCAA 407), Kamish Tepe (AMCAA 568), Junus Tepe (AMCAA 413), Sarkharakat (AMCAA 514), AMCAA 574</td>
</tr>
<tr>
<td>2nd-3rd c. CE</td>
<td>8</td>
<td>Khalchayan (AMCAA 451), Haraut Tepe (AMCAA 583), Abdurahmat Tepe (AMCAA 411), Mavlon Tepe (AMCAA 407), Kamish Tepe (AMCAA 568), Junus Tepe (AMCAA 413), AMCAA 565, AMCAA 574</td>
</tr>
</tbody>
</table>

West of the To’palang system is the alluvial plain of the Kiyasu-Qizilsu system situated around the modern city of Denov. Most sites in this micro-oasis are situated along the upper reaches of the Qizilsu River as it exits the Baysun mountains. Only two sites are known along the Kiyasu River at the foothills of the Baysuntau. One is the unfortified Hellenistic settlement at Surpa Tepe II (3rd – mid 2nd century BCE; AMCAA

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566), which after abandonment for approximately two hundred years resumed occupation
500m to the northwest at Surpa Tepe I (mid 1st – mid 2nd century CE; AMCAA 567).

Table 9. The micro-oasis of the inner Kiyasu-Kyzylsu riverine system (Figure 35, 36).

<table>
<thead>
<tr>
<th>Period</th>
<th>Number</th>
<th>Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>5th-4th c. BCE</td>
<td>3</td>
<td>Chigatay Tepe (AMCAA 561), AMCAA 591, Navruz Tepe (AMCAA 588)</td>
</tr>
<tr>
<td>3rd - mid. 2nd c. BCE</td>
<td>2</td>
<td>Kurgan Tepe (AMCAA 512), Surpa Tepe II (AMCAA 566)</td>
</tr>
<tr>
<td>mid 2nd c. BCE – mid 1st c. CE</td>
<td>5</td>
<td>Kosh Tepe 1 (AMCAA 584), Kara Jasaul Tepe (AMCAA 563), AMCAA 590, Kurgan Tepe (AMCAA 512), Budrach (AMCAA 406)</td>
</tr>
<tr>
<td>mid 1st-2nd c. CE</td>
<td>14</td>
<td>Chigatay Tepe (AMCAA 561), Parda Baba Tepe (AMCAA 562), AMCAA 560, AMCAA 589, Bekovkii Kala (AMCAA 558), Kallja Minor (AMCAA 513), Kurgan Tepe (AMCAA 512), Qizil Xoldiq Tepe (AMCAA 557), Kattabang Tepe (AMCAA 559), Khasan Tepe (AMCAA 412), Karaul Tepe (AMCAA 408), Budrach (AMCAA 406), Kuljal Tepe (AMCAA 587), Surpa Tepe I (AMCAA 567)</td>
</tr>
<tr>
<td>2nd-3rd c. CE</td>
<td>7</td>
<td>O’rta Tepe, AMCAA 560, Kallja Minor (AMCAA 513), Kattabang Tepe (AMCAA 559), Namazga Depe (AMCAA 410), Khasan Tepe (AMCAA 412), Budrach (AMCAA 406), Surpa Tepe I (AMCAA 567)</td>
</tr>
</tbody>
</table>

Moving roughly 15km to the southwest of the Kiyasu-Qizilsu system to that of
the modern Kalkhadzhar, there is a high concentration of sites not along that latter river
but between the flows of these two modern rivers. Dal’verzin developed into the largest
and most significant elite settlement in this zone during the 1st century BCE, which was
excavated by G.A. Pugachenkova and the Uzbekistan Art Historical Expedition from
1959–1967. It is clear from the settlement patterning that the Kalkhadazhar flowed
several kilometers to the east in antiquity or there was another tributary river of the
Surkhandarya that flowed through here in antiquity. The former is most likely given the
fact that of these settlements only the following ten are situated along the current flow of

557 Пугаченкова 1978.
the Kalkhadzhar: Munchak Tepe 2, Taragaj, Kabriston Kata Tepe, Maslakhat Tepe, Dzhal’ Tepe, AMCAA 436, Boj Bobo Kabriston Tepe, Sapol Tepe, Kul’tepe Dzhoi’ma, and Iloni Tepe. Every one of these sites dates from the early Kushan period, so roughly the early 1st–mid 2nd century CE, before all except Dzhal’ Tepe disappeared in the later Kushan period. The few earlier sites, as well as many that otherwise do date to the Kushan period all follow this now defunct channel.

Table 10. The micro-oasis of the Kiyasu-Kyzylsu and Kalkhadzhar riverine system (Figure 35, Figure 36).

<table>
<thead>
<tr>
<th>Period</th>
<th>Number</th>
<th>Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>5th–4th c. BCE</td>
<td>3</td>
<td>AMCAA 604, Qira Qira (AMCAA 605, 609), Dunjo Tepe (AMCAA 607, 608)</td>
</tr>
<tr>
<td>Mid 3rd–mid 2nd c. BCE</td>
<td>2</td>
<td>Dal’verzin Tepe (AMCAA 438), Dzhurabay Tepe (AMCAA 601)</td>
</tr>
<tr>
<td>Mid 2nd c. BCE – 1st c. CE</td>
<td>4</td>
<td>AMCAA 602, Azlar Tepe 2 (AMCAA 437), Dal’verzin Tepe (AMCAA 438), Changal Bobo Kabriston (AMCAA 603)</td>
</tr>
<tr>
<td>1st–2nd c. CE</td>
<td>30</td>
<td>Munchak Tepe 2 (AMCAA 592), Uch Tepe (AMCAA 593), Degriz Tepe (AMCAA 439), AMCAA 606, AMCAA 595, Gul’Ata Kabriston (AMCAA 435), Katta Tepe (AMCAA 443), Rustam (AMCAA 586), AMCAA 585, AMCAA 527, AMCAA 528, Azlar Tepe 2 (AMCAA 437), Dal’verzin Tepe (AMCAA 438), Dushman Bobo Tepe (AMCAA 600), Sufi Baba Kabriston (AMCAA 511), AMCAA 529, AMCAA 510, Kul’Tepe Kabriston (AMCAA 444, 445, 446), Iskander Tepe (AMCAA 441), Kul’tepe (AMCAA 476), Abdul Aziz Shait Bobo Tepe (AMCAA 599), Kosha Shait Bobo Tepe (AMCAA 598), Taragaj (AMCAA 493), Kabriston Kata Tepe (AMCAA 594), Dzhal’ Tepe (AMCAA 597), Boj Bobo Kabriston Tepe (AMCAA 474), Savrizdzhon Tepe (AMCAA 447), Sapol Tepe (AMCAA 448), Kul’tepe Dzhoi’ma (AMCAA 473), Iloni Tepe (AMCAA 472)</td>
</tr>
<tr>
<td>2nd–3rd c. CE</td>
<td>14</td>
<td>AMCAA 595, Katta Tepe (AMCAA 443), AMCAA 528, Azlar Tepe 2 (AMCAA 437), Dal’verzin Tepe (AMCAA 438), Dushman Bobo Tepe (AMCAA 600), Sufi Baba Kabriston (AMCAA 511), AMCAA 529, AMCAA 510, Iskander Tepe (AMCAA 441), Abdul Aziz Shait Bobo Tepe (AMCAA 599), Kosha Shait Bobo Tepe (AMCAA 598), Dzhal’ Tepe (AMCAA 597), AMCAA 436</td>
</tr>
</tbody>
</table>

Just one kilometer west of the Khalkhadzhar at the eastern foothill of the Baysun Mountains is a small micro-oasis that is independent of the previous river system and features one of the most important Achaemenid period sites of the wider region. This is
the Mirshade Oasis and its sites Kyzyltepa (AMCAA 479) and Kyzylcha 1–10 (AMCAA 480-490). The Mirshade Oasis valley is very narrow, only about 1.5km wide east-west, and was watered by three main rivers—the Kyzyldzharsai, Kyzyl-su, and the Dzhoilmasai (Figure 39). To the west the valley is bound by the Kugitantau-Baysun mountains and the city of Shurchi 8km to the east. Kyzyltepa is the largest known fortified Achaemenid settlement in southern Bactria at 16ha, although it is small in comparison to the scale of later settlements. Important for our focus on rural life is the series of elite and non-elite farmsteads that encircle the Kyzyltepa, which are sites Kyzylcha 1–11. These sites are well excavated and serve as our best evidence for rural housing in antiquity. While they are not Hellenistic they are discussed at length in the following section for lack of excavated rural Hellenistic contexts in all of Surkhandarya and because they occupy an important space for our understanding of rural southern Central Asia as a whole.

The region southwest of the Mirshade Oasis is a vast, hilly steppe-desert extension of the Kattakum desert. There is no evidence for settlements for up to 50km southwest of the Kalkadzhar River. This is until one reaches the next major river, the Kunkurmas. In the plain watered by this river there are several very important Iron Age sites—Kindyk Tepe and Bandykhan. Like Kyzyltepa these sites were likely in some administrative relationship with the wider oasis. Kindyktepa was likely the main cultic center of southwest Surkhandarya during the Achaemenid period.558 The site was completely excavated from 2005–10 by a joint Uzbek-German mission led by B. L. Sverchkov and N. Boroffka, with much of the site’s phasing only recently published by

558 Rapin 2018: 443-444.
V.V. Mokroborodov. The cultic site is a small building subdivided into three rooms. An eastern entryway gave access to two corridors, one on an east-west axis and another on a north-south axis, both of which gave way to an interior room that was the center of cult activity (8m x 13m). A small central platform covered in ash, possibly indicating fire cult. This platform was located at the center of the room and flanked by four mudbrick columns, one of which is asymmetrically set. Storage pits for cult implements or offerings were located in the corridor entryway. The entire building is an anomaly in its plan for Achaemenid Central Asia, although C. Rapin sees analogies with the first late Iron Age cult building at Sangirtepa in Kashkadarya, but only in the fact that the building was covered. In fact, the only real parallel is the cult complex now known from the citadel at Kyzyltepa which remains unpublished.

Table 11. Iron Age and a post-Hellenistic site along the Kunkurmas (Figure 35, Figure 36)

<table>
<thead>
<tr>
<th>Period</th>
<th>Number</th>
<th>Sites, with AMCAA designations included</th>
</tr>
</thead>
<tbody>
<tr>
<td>5th-4th c. BCE</td>
<td>4</td>
<td>AMCAA 499, Kindyk Tepe (AMCAA 501), Bandykhan Tepe (AMCAA 500), Gazimulla (AMCAA 502)</td>
</tr>
<tr>
<td>280-mid 3rd c. BCE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Mid 3rd-early 2nd c. BCE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Early 2nd c.-mid 2nd c. BCE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>mid 2nd c. BCE – 1st c. CE</td>
<td>1</td>
<td>Sar-i Band (AMCAA 504)</td>
</tr>
<tr>
<td>1st-2nd c. CE</td>
<td>3</td>
<td>Sar-i Band (AMCAA 504), Jalangtush (AMCAA 503), AMCAA 508</td>
</tr>
<tr>
<td>2nd-3rd c. CE</td>
<td>1</td>
<td>Sar-i Band (AMCAA 504)</td>
</tr>
</tbody>
</table>

The eastern half of the Surkhandarya oasis is watered by the river of the same name which flows south into the Amu Darya from the Hissar Mountains in the north.

559 Mokorborodov 2018.
560 Rapin 2018: 443..
This river is far more reliable than those of other micro-regions in Surkhandarya, which perhaps explains the longevity of some important sites like Khaitabad Tepe and Talitagora. At the southern reaches, the river enters the plain of Termez. As described in my subchapter on riverine sites, this situates this area and the Sherabad Oasis in a unique settlement context on account of a higher degree of trade and traffic through river crossings but also following the flow of the Amu Darya. As with other areas, there are far more Kushan period settlements than what is known of earlier periods.

Table 12. The eastern Surkhandarya micro-oasis (Figure 35, Figure 36).

<table>
<thead>
<tr>
<th>Period</th>
<th>Number</th>
<th>Sites, with AMCAA designations included.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5th-4th c. BCE</td>
<td>4</td>
<td>Bandykhansai (AMCAA 509), Khajtabad Tepe (AMCAA 403), Talitagora (AMCAA 428), Termez University (AMCAA 530),</td>
</tr>
<tr>
<td>280-mid 3rd c. BCE</td>
<td>2</td>
<td>Khajtabad Tepe (AMCAA 403), Talitagora (AMCAA 428)</td>
</tr>
<tr>
<td>Mid 3rd-early 2nd c. BCE</td>
<td>3</td>
<td>Khajtabad Tepe (AMCAA 403), Talitagora (AMCAA 428), AMCAA 463</td>
</tr>
<tr>
<td>Early 2nd c.-mid 2nd c. BCE</td>
<td>3</td>
<td>Khajtabad Tepe (AMCAA 403), Talitagora (AMCAA 428), AMCAA 463</td>
</tr>
<tr>
<td>Mid 2nd c. BCE – 1st c. CE</td>
<td>4</td>
<td>Dzhar Tepe (AMCAA 542), Ismail Tepe (AMCAA 465), Talitagora (AMCAA 428), Mirzakul’ Tepe (AMCAA 519)</td>
</tr>
<tr>
<td>1st-2nd c. CE</td>
<td>36</td>
<td>Dul’ta Tepe (AMCAA 440), Karaul Tepe (AMCAA 442), Shakhri-Gul’gul (AMCAA 505), Jakhshibaj (AMCAA 449),</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Karvan Tushtu (AMCAA 471), Arpapaja Tepe (AMCAA 401), Barat Tepe (AMCAA 468), Sherali Tepe (AMCAA 469),</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AMCAA 470, Khajtabad Tepe (AMCAA 403), Dzhar Tepe (AMCAA 542), Katta Tepe (AMCAA 402), Rasul Tepe</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(AMCAA 492), Ismail Tepe (AMCAA 465), Jalpak Tepe (AMCAA 404), Birauz (AMCAA 466), Kori Shakh Tepe</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(AMCAA 467), Ak Kurgan (AMCAA 400), AMCAA 524, Khodza Kamal (AMCAA 431), AMCAA 523, AMCAA 522,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tillakan Tepe (AMCAA 521), Dzheiran Tepe (AMCAA 464), Ak Tepe (AMCAA 416), Talitagora (AMCAA 428), AMCAA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>550, Qarakhon Tepe (AMCAA 541), Shakhri Gul’gul (AMCAA 518), Mamakhol (AMCAA 534), Mirzakul’ Tepe (AMCAA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>519), AMCAA 494, Aza Tepe (AMCAA 533), Manguzar (AMCAA 520), Ismail Tepe (AMCAA 507), Maslakhat Tepe</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(AMCAA 545)</td>
</tr>
</tbody>
</table>
The lower southwestern region of the Surkhandarya is the Sherabad Oasis. This micro-region of Surkhandarya is watered by the Sherabad River which originates in the Kugitang-Baysuntau mountains immediately to the west of the valley. The area controls the main entry point towards the Iron Gates where the modern city of Kalamazar is located. The Amu Darya forms Sherabad’s southern border and in the east it is bound by the Babatag Mountains around the modern city of Angor. The Sherabad Darya is the main river watering the piedmont and plain, now as it was in antiquity, which originates in the Baysuntau. Changes in settlement distribution over several thousand years indicate the presence of many other rivers and tributaries of the Sherabad Darya that have long since dried up. What is more, unlike other areas of Surkhandarya, this region is less amenable to irrigation.

From 1973-75 V.M. Masson lead the Bactrian expedition into the Sherabad Oasis that resulted in test trenches being laid at Ak-Kurgan, Khoja-Kiya, Chopon-Ata, Challa Tepe, Ikkizak Tepe, and Kush Tepe.\textsuperscript{561} All sites were valued for their cumulative data about Kushan period settlements in this region. The Sherabad Oasis was the focus of the Czech-Uzbek archaeological mission from 2002–2006 with the excavation of the Hellenistic and Kushan site Javlandattepa directed by L. Stančo and K. Abdullaev,\textsuperscript{562} then again with a systematic survey from 2008–11 (and again in 2014).\textsuperscript{563} During this

\begin{table}
\centering
\begin{tabular}{|c|c|}
\hline
2nd-3rd c. CE & 6 \\
\hline
& AMCAA 522, Talitagora (AMCAA 428), Mamakhol (AMCAA 534), Uzun Kuchi (AMCAA 532), Mirzakul’ Tepe (AMCAA 519), AMCAA 532 \\
\hline
\end{tabular}
\end{table}

\textsuperscript{561} Массон, В.М. 1976: 4; Пидаев 1976.
\textsuperscript{562} Abdullaev and Stančo 2011.
\textsuperscript{563} Stančo, and Tušlová 2019; Stančo 2018.
mission 125 sites were documented, some of which for the first time, and many of which corrected misleading or inaccurate information from earlier expeditions in this same region. As noted above, there is no need to reconsider the data for the Sherabad Oasis since this is now the most successful, systematic field survey undertaken in southern Central Asia. I will only present the results of that work here, which is found in L. Stančo and P. Tušlova’s *Sherabad Oasis: tracing historical landscape in southern Uzbekistan* (2019), which I incorporated into the AMCAA but only sites dating from the 4th c. BCE – 4th c. CE.

In the Bronze Age, Sapalli culture sites were concentrated around the Bustansai, a dried riverbed 10-20km west of the Sherabad Darya. The main sites are the clusters of Bustan 1-5 west of the say, and the cluster of Dzharkutan sites and necropolises to the east. Some small Sapalli sites (Tilla Bulaq, Ara Bulaq, and Goz) are also known in the Kugintang piedmont.\(^{564}\) During the Early Iron Age (Yaz) period settlements move dramatically away from the Baysuntau and to the banks of the Sherabad Darya (Stančo postulates the existence of another dried river to the west of the right bank site cluster).\(^{565}\) Ten sites are known to date to this period that seem to orient themselves towards Javlandattepa which emerges as the center of settled life.

\(^{564}\) Stančo 2019: 356 for bibliography of these sites.

\(^{565}\) Although despite this shift in settlement, occupation remained at Dharkutan for the Yaz I period (Bendezu-Sarmiento and Mustafakulov 2013.)
Table 13. Site periodization of the Sherabad Oasis.

<table>
<thead>
<tr>
<th>Period</th>
<th>Number</th>
<th>Sites, with AMCAA designations included</th>
</tr>
</thead>
<tbody>
<tr>
<td>5th-4th c. BCE</td>
<td>8</td>
<td>Pachmaktepa (AMCAA 391), Yalangoyoq ota (AMCAA 360), Talashkantepe 1 (AMCAA 376), AMCAA 495, Kuchuktepa (AMCAA 540), Kuchuktepa (AMCAA 496), Pshaktepa (AMCAA 497), Beshkutan Tepe (AMCAA 549)</td>
</tr>
<tr>
<td>280-mid 3rd c. BCE</td>
<td>5</td>
<td>Pastaktepa (AMCAA 390), AMCAA 363, Yalangoyoq ota (AMCAA 360), AMCAA 395, Aysaritepa (AMCAA 366)</td>
</tr>
<tr>
<td>Mid 3rd-early 2nd c. BCE</td>
<td>7</td>
<td>Pastaktepa (AMCAA 390), AMCAA 363, Chopon Ata (AMCAA 459), Yalangoyoq ota (AMCAA 360), AMCAA 395, Aysaritepa (AMCAA 366), Shor Tepe (AMCAA 457)</td>
</tr>
<tr>
<td>Early 2nd c.-mid 2nd c. BCE</td>
<td>8</td>
<td>Pastaktepa (AMCAA 390), AMCAA 363, Mozoroti baba (AMCAA 358), Chopon Ata (AMCAA 459), Yalangoyoq ota (AMCAA 360), AMCAA 395, Aysaritepa (AMCAA 366), Shor Tepe (AMCAA 457)</td>
</tr>
<tr>
<td>Mid 2nd c. BCE – 1st c. CE</td>
<td>9</td>
<td>Babatepa (AMCAA 361), AMCAA 363, Mozoroti baba (AMCAA 358), Chopon Ata (AMCAA 459), Yalangoyoq ota (AMCAA 360), Talashkantepa 2 (AMCAA 362), AMCAA 395, Khajrabad Tepe (AMCAA 429), Zar Tepe (AMCAA 455)</td>
</tr>
<tr>
<td>1st-2nd c. CE</td>
<td>57</td>
<td>AMCAA 373, AMCAA 375, Gorintepa (AMCAA 353), Gilyambobtepa (AMCAA 352), Ayritepa (AMCAA 364), Shishtepa (AMCAA 351), AMCAA 388, Shortepa (AMCAA 350), AMCAA 389, AMCAA 363, Kattatepe north (AMCAA 348), Kattatepe (AMCAA 347), Batyrabadtepa (AMCAA 346), AMCAA 385, AMCAA 349, Shortepa (AMCAA 365), AMCAA 462, Boshtepa (AMCAA 342), Koshtepa (AMCAA 345), AMCAA 380, Kurgan (AMCAA 382), AMCAA 383, AMCAA 384, Anjirstepa (AMCAA 372), Talagantepa (AMCAA 359), Kampyr Tepa (AMCAA 460), Anjirstepa (AMCAA 370), Akkuragan (AMCAA 369), Gummmaz (AMCAA 396), Chalakuragan (AMCAA 375), Chopon Ata (AMCAA 459), Tashlakantepe (AMCAA 357), Yalangoyoq ota (AMCAA 360), Khosijat (AMCAA 433), Kulushhatpea (AMCAA 343), AMCAA 386, Aktepa (AMCAA 344), Taushkantepe (AMCAA 356), Khalinchaktepea (AMCAA 371), Talashkantepea 3 (AMCAA 387), Talashkantepea 2 (AMCAA 362), Aysaritepa (AMCAA 366), AMCAA 395, Shor Tepe (AMCAA 457), AMCAA 537, AMCAA 538, Ordalyk (AMCAA 539), AMCAA 427, Khajrabad Tepe (AMCAA 429), Zang Tepe (AMCAA 417), Katlama Tepe (AMCAA 456), Zar Tepe (AMCAA 455), Shortepa (AMCAA 498)</td>
</tr>
<tr>
<td>2nd-3rd c. CE</td>
<td>50</td>
<td>AMCAA 373, AMCAA 375, Gorintepa (AMCAA 353), Gilyambobtepa (AMCAA 352), Ayritepa (AMCAA 364), Shishtepa (AMCAA 351), AMCAA 388, Shortepa (AMCAA 350), AMCAA 389, AMCAA 363, Kattatepe north (AMCAA 348), Kattatepe (AMCAA 347), Batyrabadtepa (AMCAA 346), AMCAA 385, AMCAA 349, Shortepa (AMCAA 365), AMCAA 462, Koshtepa (AMCAA 345), AMCAA 380, Kurgan (AMCAA 382), AMCAA 383, AMCAA 384, Anjirstepa (AMCAA 372), Talagantepa (AMCAA 359), Mozoroti baba (AMCAA 358), Anjirstepa (AMCAA 370), Akkuragan (AMCAA 369), Gummmaz (AMCAA 396), Chalakuragan (AMCAA 375), Chopon Ata (AMCAA 459), Tashlakantepe (AMCAA 357), Yalangoyoq ota (AMCAA 360), Khosijat (AMCAA 433), Kulushhatpea (AMCAA 343), AMCAA 386, Aktepa (AMCAA 344), Taushkantepe (AMCAA 356), Khalinchaktepea (AMCAA 371), Talashkantepea 3 (AMCAA 387), Talashkantepea 2 (AMCAA 362), Aysaritepa (AMCAA 366), AMCAA 395, Teshiktepa (AMCAA 368), Shor Tepe (AMCAA 457), Khajrabad Tepe (AMCAA 429), Zang Tepe (AMCAA 417), Katlama Tepe (AMCAA 456), Zar Tepe (AMCAA 455)</td>
</tr>
</tbody>
</table>
3.8.a. Indigenous rural architecture above the earth.

As noted above, Surkhandarya is one of the most well researched micro-regions of southern Central Asia both in terms of systematic coverage of surveyed sites as well as excavated sites. Most excavations have exposed substantial layers of Kushan period settlement expansion with remarkable results at small urban sites Dal’verzin (AMCAA 438) and Khalchayan (AMCAA 451). As with the previous section, it would be excessive to attempt to cover each site here. Therefore, I have selected only a few key representative areas that demonstrate the variety of rural sites in the wider oasis. Some sites were already covered in my subchapter that drew together riverine sites; Shortepa (AMCAA 535), Kampyrtepa (AMCAA 438), Old Termez, (AMCAA 418, 419) and Talitagora (AMCAA 428) by the Amu Darya are as much a part of Surkhandarya as any other site, albeit with a slightly different settlement context. The types of domestic housing found within those settlements are very much related to those of Surkhandarya’s rural hinterland, which are predominantly pit-houses from the 6th–1st century BCE.

In the late Bronze through Early Iron Age sites in the Mirshade Oasis were concentrated around the foothills of the Baysun Mountains—Mullaitepa, Kyzyl-jartepa, and Kyzylsutepa being the most ancient. Each of these rivers are distributaries of the Khalkhadzh River which is fed by rain and some glacial melt in the Baysun Mountains. At the end of the bronze Age smaller sites began to develop 2–2.5km south of these earlier sites along the lower reaches of the Kzyylzharsai, Kzyyl-su, and the Dzhoilmasai Rivers. Among these satellite sites the largest is Buyrachitepa 1 (10ha). It was during this

period that irrigation agriculture began in the Kyzyl plain with the installation of canals feeding off from the main rivers of the Mirshade oasis.\textsuperscript{567} It is likely that other farmsteads were located along the canal banks. Thus, it is within this context of patterning that Kyzyltepa emerged in the early Iron Age, at the turn of the first millennium BCE.

The Mirshade micro-oasis is a good case study for understanding the dynamics of rural life in Surkhandarya. In winter of 1970–71 the Uzbekistan Art Historical Expedition began excavations at the early and late Iron Age and early Hellenistic site Kyzyltepa (AMCAA 479).\textsuperscript{568} Their work established that by the late Achaemenid period Kyzyltepa emerged as a major fortified political center of northern Bactria, which would have been one of the sites seized by Alexander of Macedon in 329 BCE. From 1974–78 the extramural hinterland of Kyzyltepa was explored by A.S. Sagdulaev which led to the exposure of eleven rural farmsteads that encircled the site, designated Kyzylcha 1–11.\textsuperscript{569} This work was particularly remarkable in that up until then only one other rural farmstead had been excavated anywhere in southern Central Asia—Dingildzhe in Chorasmia. It is now known that Kyzyltepa was also a regional cultic center thanks to the renewed explorations of L. Sverchkov and X. Wu from 2011–16. In the most recent season of excavations a large temple complex was cleared from a structure that previously was thought to be a platform, although this feature to my knowledge has not yet been published. For this section I focus mostly on the excavations of the rural farmstead at Kyzylcha, which were published by A.S. Sagdullaev in the synthetic work *Usad'by Drevnei Baktrii* (Manor houses of Ancient Bactria).

\begin{document}

\textsuperscript{567} Ibid: 8.
\textsuperscript{568} Ibid.
\textsuperscript{569} Ibid.

\end{document}
From 1970–71 Kyzyltepa was excavated by A.S. Sagdullaev as part of his dissertation research.\textsuperscript{570} In his work, Sagdullaev was the first to establish a ceramic typology and chronology for Kyzyltepa which would later serve as a bit of an anchor for the rest of Surkhandarya suggesting dates from the 10\textsuperscript{th}–5\textsuperscript{th} century BCE.\textsuperscript{571} During this expedition the basic topography and area of the site was also discerned for the first time amounting to a total fortified area of approximately 22 hectares. A new topographic map of Kyzyltepa was produced by me in 2016 on commission for the Uzbek-American Expedition headed by L. Sverchkov and X. Wu (Figure 40). This new map was based on plans of the site produced by earlier expeditions but updated to include recent total station data and information about renewed excavations. The 2011–16 seasons primarily focused on the earliest phase of the site, finding that the 10\textsuperscript{th} century BCE date was incorrect and that the earliest feature was Kyzyltepa’s citadel. The site is now known to date to no earlier than the 6\textsuperscript{th} century BCE and no later than the late 4\textsuperscript{th} or early 3\textsuperscript{rd} century BCE “transitional” phase between the Achaemenid and Hellenistic periods. This new dating schema also now applies to Kyzylcha.

Sagdullaev estimated that up to 240 hectares of the wider plain around Kyzyltepa was irrigated during the Iron Age with irrigation ditches appearing by early first millennium BCE around the western and southern areas of the site.\textsuperscript{572} These waters originated from the Kyzylsi and Dzhomolsai. Beyond this zone Sagdullaev noted that steppe areas and foothills of the Baysun mountains would have likely been utilized as seasonal pasturage, although I would suggest that local pasturage supporting the

\textsuperscript{570} Сагдуддаев 1978.
\textsuperscript{571} Сагдуддаев 1987: 8.
agricultural settlements is just as likely as the former. The botanical and faunal remains representative of the rural economy were presented in the previous section.

The houses of Kyzylcha are somewhat varied in size but standard in plan. The Russian word for these types of structures, “usab’ba,” translates into English as “manor house,” however this seems to draw the wrong connotations since in English a manor house draws very specific, elite connotations. There are also specific economic connotations between manor houses that fall in the vicinity of a large town or city. As indicated in my discussion of the suburbs of Ai Khanoum and is also known in the oasis of Panjikent during late Antiquity, elite manor houses are particularly interwoven into the urban economy and in some ways are extensions of particular urban authority or class. These examples are more in line with the English understanding of a manor. Instead, the Russian “usad’bu” encapsulates both small farmsteads as much as larger elite rural properties with agricultural holdings. The rural houses of Kyzylcha are large compared to rural pit-houses, but they are quite varied in size and somewhat small when considering that at least part of these dimensions included an exterior courtyard. It seems more appropriate to think of the Kyzylcha houses as farmsteads rather than manor houses, which might have somewhat of a different economic relationship with the town center (i.e. the possibility of more autonomy). With that said, farmstead sizes across Kyzylcha 1–11 range from 45m x 25m, 35m x 24m, 36m x 15m and were preserved to a height of 1–3m.

Among the eleven farmsteads, four main settlement areas were identified: 1) 500m west of the Kyzyltepa citadel (Kyzylcha 6 - AMCAA, 7, 8); 2) 250m east of Kyzyltepa (Kyzylcha 1, 2, 3, 4); 3) 300m further east of Kyzyltepa (Kyzylcha 9, 10, 11);
4) one site on the left bank of the Kyzyljar (Kyzylcha 5). Other possible locations were suggested based on surface finds from the areas between and around these clusters. The sites that comprise Kyzylcha were the rural agricultural hinterland of Kyzyltepa through the Iron Age. The success of all of the Kyzylcha sites was tied directly with the main urban center, as was their failure. Most sites were abandoned by the 4th century although there is evidence for light continuity through the Hellenistic and Kushan periods. In the late Medieval period Sagdullaev notes that pit-houses were set into the derelict mounds of some Kyzylcha manor house ruins but provides no information about these later installations.

Kyzylcha 6 was the best-preserved estate and thus became the focus of Sagdullaev’s excavations. Therefore it was used as a type-site to represent all other Kyzylcha farmhouses. This house is located 500m west of Kyzyltepa. Before excavation the mound was 50x32m with a maximum height of 3m. The manor house of Kyzylcha 6 is square and features a series of nine oblong, rectangular rooms circumambulating a central courtyard. The spatial form of this house is drawn from Bronze Age residences and palaces excavated at Kelleli 4 in Murghab, Sapalli in the Sherabad Oasis, and Dashly in northern Afghanistan. The later, post-Hellenistic site Kyzylkyr in the Bukhara Oasis in Sogdiana also draws on a similar plan as Kyzylcha. This point is particularly interesting in light of my argument that non-elite pit-house architecture is also a continuation of earlier local traditions.

573 Сагдуллаев 1987а.
574 Сагдуллаев 1987а: 45.
All rooms only communicated with the central courtyard, which therefore centered life in this house. In all phases the house was accessed by way of a corridor in the southeastern corner of the building. The plan varied little throughout its four reconstruction phases. In its earliest phase the house measured 30m x 30m although by the last phase the footprint had expanded. The outer wall of the house is 3m thick. The courtyard is 16.5m x 16.5m although it was previously slightly smaller. Four building phases were detected during excavations. All walls are made of rectangular format mud bricks in all phases, ranging from 32x24x10cm (latest) to 41x24x12cm. During the second phase of Kyzylcha 6 the building was part of a large conflagration that seems to have taken out the entire settlement. Ceramics of the final phase were somewhat unclear but probably date to the late 4th or early 3rd century BCE. It was during this last phase that the site was finally destroyed by fire.

Sagdullaev was able to provide much information about the economy of the household over time, noting room functions and changes in household spatial needs. I summarize his description in Table 14 with reference to the plans of each phase in Figure 41.

**Table 14. Rooms and room functions over four phases of occupation at Kyzylcha 6.**

<table>
<thead>
<tr>
<th>Horizon 1. Room # and location</th>
<th>Size</th>
<th>Function</th>
<th>Characteristics and assemblage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. NW corner</td>
<td>N/A</td>
<td>Sickles, querns, cooking wares</td>
<td></td>
</tr>
<tr>
<td>1. North</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>1. Northeast</td>
<td>Closet</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>1. NE corner</td>
<td>Cooking, food processing</td>
<td>Pakhsa lined hearth in western wall; Significant ash deposits and animal bones; heavily fired cooking wares;</td>
<td></td>
</tr>
</tbody>
</table>

walls covered with 8-10cm of plaster indicating a long lifespan.

1. **West**
   - **Size**: 11.2m x 2.3m
   - **Function**: Living room
   - **Characteristics and assemblage**: Sufa; stone tools; decayed reed mats; fragment of a wooden ceiling beam; open floor hearth for heating; single edge bronze sickle; bronze arrow heads

1. **SW corner**
   - **Function**: Storage and processing
   - **Characteristics and assemblage**: Large pakhsa block; burnt grains

1. **South**
   - **Size**: N/A
   - **Function**: N/A

8. **East**
   - **Function**: Food consumption
   - **Characteristics and assemblage**: Greenish color floor sedimentation from organic decomposition; animal bones trampled into the floor; tablewares.

9. **Southeast corner**
   - **Function**: Entrance corridor

**Horizon 2. Room # and location**

<table>
<thead>
<tr>
<th>Room # and location</th>
<th>Size</th>
<th>Function</th>
<th>Characteristics and assemblage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. NW corner</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>1. North</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>1. Northeast</td>
<td>Closet</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>1. NE corner</td>
<td>Cooking, food processing</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>1. West</td>
<td>Living room</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>1. SW corner</td>
<td>Storage and processing</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>1. South</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>1. East</td>
<td>Food consumption</td>
<td>Now entered through room 4.</td>
<td></td>
</tr>
<tr>
<td>1. Southeast corner</td>
<td>Entrance corridor</td>
<td>Extended to the south into the external fenced courtyard.</td>
<td></td>
</tr>
<tr>
<td>Outer courtyard</td>
<td>Animals pen?</td>
<td>Outer courtyard added with a partition wall creating two spaces.</td>
<td></td>
</tr>
</tbody>
</table>

**Horizon 3. Room # and location**

<table>
<thead>
<tr>
<th>Room # and location</th>
<th>Size</th>
<th>Function</th>
<th>Characteristics and assemblage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. NW corner</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>1. North</td>
<td>10.2m x 2.5m</td>
<td>Consumption; living.</td>
<td>Ventilation ducts in walls; two hearths; greenish organic layers.</td>
</tr>
<tr>
<td>1. Northeast</td>
<td>living</td>
<td>Door hinge; open hearth; blanks for ceramic spindle whorls</td>
<td></td>
</tr>
<tr>
<td>1. NE corner</td>
<td>8.2m x 2.8m</td>
<td>Cooking; Consumption</td>
<td>Hearth, dense animal bones trampled; kitchen and tablewares; exhaust duct</td>
</tr>
<tr>
<td>1. West</td>
<td>Food processing; stone tool</td>
<td>Divided into two rooms; blanks and flakes for stone tools; grain processing; khum</td>
<td></td>
</tr>
<tr>
<td>Room # and location</td>
<td>Size</td>
<td>Function</td>
<td>Characteristics and assemblage</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------</td>
<td>---------------------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>1. West</td>
<td>5m x 2.4m</td>
<td>Food consumption or tableware</td>
<td>2-3 half of room 5; tablewares</td>
</tr>
<tr>
<td></td>
<td></td>
<td>storage</td>
<td></td>
</tr>
<tr>
<td>1. SW corner</td>
<td>7.1m x 2.5-</td>
<td>Grain storage and processing</td>
<td>Large block; 6 khums with charred wheat grains; greenish deposits on floor; mortars; querns.</td>
</tr>
<tr>
<td></td>
<td>3.4m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. South</td>
<td>7.25m x 2.5m</td>
<td>N/A</td>
<td>Open hearth with coals; bronze objects such as pins and rivets.</td>
</tr>
<tr>
<td>1. Southeast</td>
<td>N/A</td>
<td>N/A</td>
<td>Open hearth with coals</td>
</tr>
<tr>
<td>1. East</td>
<td>5.5m x 3m</td>
<td>N/A</td>
<td>Formerly 8. Now divided into two rooms with 11. Entered through interior courtyard; trampled animal bones; cooking wares.</td>
</tr>
<tr>
<td>1. East</td>
<td>3.3m x 3m</td>
<td>Living quarters.</td>
<td>Entered through 10; Sufa lined walls; tableware.</td>
</tr>
<tr>
<td>1. Southeast corner</td>
<td>Entrance; storage</td>
<td>2 khums; stone tools.</td>
<td></td>
</tr>
<tr>
<td>Outer courtyard</td>
<td></td>
<td></td>
<td>Reduced in size to first partition wall.</td>
</tr>
<tr>
<td>Inner courtyard</td>
<td>Outdooour cooking; storage</td>
<td>Cooking hearth; tanoor; stone tools; 13 khums</td>
<td></td>
</tr>
<tr>
<td>Horizon 4.</td>
<td>Size</td>
<td>Function</td>
<td>Characteristics and assemblage</td>
</tr>
<tr>
<td>Room # and location</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. NW corner</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>1. North</td>
<td></td>
<td>Consumption; living.</td>
<td>No change</td>
</tr>
<tr>
<td>1. Northeast</td>
<td></td>
<td>living</td>
<td>No change</td>
</tr>
<tr>
<td>1. NE corner</td>
<td>4.5m x 2.8m</td>
<td>Cooking; Consumption</td>
<td>No change</td>
</tr>
<tr>
<td>1. West</td>
<td></td>
<td>Food processing; stone tool</td>
<td>No change</td>
</tr>
<tr>
<td></td>
<td></td>
<td>production; storage</td>
<td></td>
</tr>
<tr>
<td>1. West</td>
<td></td>
<td>Food consumption or tableware</td>
<td>No change</td>
</tr>
<tr>
<td></td>
<td></td>
<td>storage</td>
<td></td>
</tr>
<tr>
<td>1. SW corner</td>
<td>7.1m x 2.5-</td>
<td>Grain storage and processing</td>
<td>Stone pestles; khums</td>
</tr>
<tr>
<td></td>
<td>3.4m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. South</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>1. Southeast</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>1. Northeast</td>
<td>3.2m x 2.3m</td>
<td>N/A</td>
<td>Now a subdivision of room 4.</td>
</tr>
<tr>
<td>Location</td>
<td>Dimensions</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
<td>-----------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>East</td>
<td>5.5m x 2.9m</td>
<td>Storage; processing Khums; querns; sickles</td>
<td></td>
</tr>
<tr>
<td>East</td>
<td>3m x 2.5m</td>
<td>Living quarters. Greenish layer over rammed earth floor; open hearths; sufas; cooking and tableware</td>
<td></td>
</tr>
<tr>
<td>Southeast corner</td>
<td></td>
<td>Entrance Formerly room 12.</td>
<td></td>
</tr>
<tr>
<td>Outer courtyard</td>
<td></td>
<td>Destroyed</td>
<td></td>
</tr>
<tr>
<td>Inner courtyard</td>
<td></td>
<td>Aiwan added to the west wall.</td>
<td></td>
</tr>
</tbody>
</table>

It is quite clear from this summary that the house was a residential farmstead centered around agricultural production. While numbers are not provided for the amount of animal bones, the heavy consumption and discard indicated by bones trampled into floors indicates that this household also kept animals for food. In fact, we do not need to assume because this is precisely what the faunal remains from 2010–11 excavations at Kyzyltepa presented in Table 7 confirm that this was central to the local economy. There is also an indication that at least in the third phase large scale storage was necessary, perhaps because some goods were traded to the town or dispersed among the local community. In addition to agricultural management, there is also evidence for the household production of stone tools. Unfortunately, the type is not indicated. Bronze sickles for threshing are also present but there is no evidence for metallurgy here, which suggests some exchange with tool producing neighbors or with the main town.

To conclude, I introduce only one more rural settlement into the equation, the only one that dates to the Hellenistic period. This is a single pit-house excavated in the lowest phase of Dal’verzin Tepa. It barely received a mention in the final report of excavations at the site by G.A. Pugachenkova and E.V. Rtveladze, who were indeed occupied with publishing what would become the wealthiest Kushan site in southern
Bactria.\textsuperscript{576} It is located just a few kilometers northeast of the modern city of Shurchi and the ancient Iron Age fortified settlement at Kyzyltepa. The site was systematically excavated under the co-direction of G.A. Pugachenkova and E.V. Rtveladze from 1969–73. In their excavation of area DT-7 a small oval-shaped pit-house emerged with a stepped entryway that descends into the living quarters. The pit-house dates from the mid 3\textsuperscript{rd}-mid 2\textsuperscript{nd} century BCE. Unfortunately, this is all we know.

3.9. Mountain life at the frontiers of Bactria and Sogdiana.

From the oases of northern Bactria I now turn to the Baysun-Kugitang mountain range, the southwestern extent of the Hissar Mountains. It is here that ancient travelers seeking egress into Sogdiana would travel along the Sherabad river through the Baysun oasis in the mountain range of the same name, before being funneled into a corridor leading to the “Iron Gates” at Derbent which was likely the main conceptual crossing point between Bactria and Sogdiana in antiquity. This corridor follows the Sherabad River, which originates further to the north in the Hissar Mountains where it is formed by several intermontane tributary rivers (Figure 38) and discharges into the Amu Darya at the south. In the extreme southwest of this stretch of mountains is the Kugitang mountains. This stretch of mountains was a major source of iron and other raw materials in the Medieval period.\textsuperscript{577} While there is no evidence these mines were exploited in the Hellenistic and post-Hellenistic period it is very likely that further study will reveal that it was.

\textsuperscript{576} Пугаченкова и Ртвеладзе 1978.
\textsuperscript{577} Рузанов и Буряков 1997.
There is more evidence for activity in the Baysun corridor in the Hellenistic period than in Surkhandarya which is surely because of the strategic importance of this route between Bactria and Sogdiana. Even within the Hellenistic period our evidence seems heavily favored towards the remains of fortifications that emerged as early as around 280 BCE. This network of fortifications are found along the Sherabad-Derbent corridor in the mountains and in intermontane valleys and gorges. The main fortification in the area is Uzunadara (AMCAA 613) situated on a mountain terrace of the Gor-i Syztag. From these heights there is a commanding view of traffic in the valley below, although the situation of Uzundara at such a height meant that it would have had an auxiliary role in monitoring traffic. More likely is that the fortress administered other smaller fortifications in the valley. One of these is Munchak Tepe (AMCAA 836) which dates from the early 3rd-mid. 2nd century BCE. Only a single unfortified site is known in the valley, Daganajam (AMCAA 837), which nonetheless would have benefited economically from traffic in the region. Further north, the Iron Gates (AMCAA 546) were heavily monitored and reasonably a source of tax revenue. Two other small rural settlements are known in the vicinity of the gates. These are the recently discovered sites of Katman Chapy (AMCA 838) and Kapchigay (AMCAA 833). Both sites seem to be exclusively Hellenistic. A small Hellenistic site is also located just west of the gates at Dara-i Buzgala (AMCAA 618). It is no coincidence that this site is situated on the main route into the Baysuan Mountains and eventually Kashkadarya. Thus, what likely happened in the valley is that there was both kingdom level and local economic interest in this route – for the rulers was tax revenue and for local residents was the ability to tap into a travel economy. Perhaps a similar system existed to the east along the
Khonearonsai tributary of the Kunkurmas river. It is there that two major fortifications also commanded the inner Baysun. The first is the well-known mountain fortress of Kurganzol, which is possibly the only actual excavated foundation of Alexander of Macedon in all of Asia.\textsuperscript{578} The second is Payon Kurgon, a fortress that emerged only slightly later.

While there is very good data here about Hellenistic fortification networks and architecture, for this topic I only want to stress their situation along major trade routes. This is a phenomenon already seen in my earlier discussions but will become very clear in the next chapter on Sogdiana. That is why from here I now briefly link this network to the next string of evidence for settlements, which are already in Sogdiana. I will raise this point again in the next chapter for continuity.

Exiting the main road through the Baysuntau after passing through the Iron Gates, one continues through a mountainous zone that is not well explored. Once arriving at the terminus of this road travelers would have arrived at the shallow valley of Dekhanabad along the Kichik Or’adaryo tributary of the Guzar river. This is the last inner montane valley before entering the Kashkadarya watershed and thus one of the most important zones of Sogdiana’s Iron Age. In a survey of the area R.Kh. Suleimanov documented six settlements corresponding to the period of the 4\textsuperscript{th}-1\textsuperscript{st} century BCE, but among these few there is a complete occupation gap in the early 3\textsuperscript{rd} century BCE. None of these sites have been subject to systematic excavation, only field survey nor have they been mapped. The sites of Dun’etepa, Baikurgan, and Shashtepa each date from the 5\textsuperscript{th}-4\textsuperscript{th} centuries BCE but were apparently abandoned sometime in the 4\textsuperscript{th} century. There is a resumption of

\textsuperscript{578} Sverchkov 2008.
occupation in the region with the establishment of Tashkalak in the 2nd century BCE, and then Bazartepa and Kizlarkhononatepa in the 1st century BCE. Tashkalak is abandoned around the time these 1st century sites are established. Occupation is continued only at Kizlarkhononatepa (which remained healthy until the 8th century CE), Bazartepa (abandoned in the 2nd century CE), and a reoccupation of Dun’etepa (which lasted until the 7th century CE). Baikurgan and Shashtepa were reoccupied in the 3rd century CE and survived into the early Medieval period. As with most other regions of Sogdiana, it is not until the Medieval period that Dekhanabad became densely settled.

It is difficult to accept that there is no occupation of Dekhanabad in the 3rd century BCE, especially given the pattern of new settlements established around Guzar and Karshi at this time, as discussed below in my treatment of Kashkadarya. The suspicion is that the current state of evidence is an artifact of excavation and/or interpretation. The strategic significance of this pass from Derbent to Kashkadarya would have been obvious to individuals living in these areas. At the least one must always assume that if there was the opportunity for good pasturage, shepherds would have exploited that landscape.

3.10. Conclusion.

Bringing this chapter on Bactria to a close, I will only summarize some of the key issues. For each case study there is a slightly different theme. In the plain of Ai Khanoum our evidence is indicative of an economic relationship between the rural hinterland, the suburbs, and the city that is not present anywhere else as far as we know. In that area, grain is produced at a distance but processed at one of several suburban locations before
being distributed in markets in and around the city. In terms of settlement architecture, H.P. Francfort has stressed the influence of Greek house types on rural farmsteads. I take a different view that sees similarities in plan with Chorasmia. In the Pamir mountains I pushed our current evidence to suggest evidence for pastoral populations living according to very traditional material standards. Some of these groups were active in the Wakhan corridor and would have seen a gradual increase in the fortification of routes connecting Bactria with the Tarim Basin possible as early as the Hellenistic period. For the Kushan period this is certain. In Parkhar-Kulob I drew attention to our only excavated domestic structures at Saksanokhur and Tepa-i Diniston, neither of which I think are representative of rural life in any way.

The situation is much different in Dangara and Yavan which are representative of two totally different rural systems despite in such close proximity. In Dangara there is a real chance that elite Hellenistic settlements were situated across the plateau. Yet at Tamoshotepa to the west there was no interest in Dangara’s participation in Hellenism, with the exception of using locally adapted fish plates. It is at Tamoshotepa that we have our best excavated rural non-elite context in Bactria. Given general confusion over the site’s stratigraphy I offered my own description based on all of the available publications.

In the Hissar valley I presented some information about Hellenistic rural architecture but did so to situate pit-house architecture within thousands of years of local tradition. In doing so I challenge current ideas that see the spread of pit-house use as coming from the north. In the spirit of challenging current opinions, I then discussed riverine sites located along the Amu Darya to talk about the variety of settlement contexts in which pit-house use is actually evident. In this case we have evidence for full towns
that were reliant upon this type of architecture. Finally, I concluded with a brief overview of the associated micro-oases in Surkhandarya and Baysun. While I only summarized the overall settlement patterns, I did explore the late Iron Age site Kyzylcha to talk about other types of rural settlement that existed beyond the pit-house.
Chapter 4. Rural life in Sogdiana from the 4th c. BCE – 1st c. CE.

4.1. Introduction.

Ancient Sogdiana was a vast region in southern Central Asia situated along two major river valleys and their distributaries along the Zerafshan and Kashkadarya Rivers. These oasis zones are rich in alluvial soils enriched by mineral deposits originating in the Turkestan, Zerafshan, and Hissar ranges to the east. In some places alluvium is quite thick, burying early sites under several meters of loess that has had a significant impact on our understanding of developments in the Neolithic, Bronze, and Iron Ages. In this respect, Sogdiana is similar to Bactria in its ecological diversity. The far east of Sogdiana is a mountainous zone with the Turkestan and Zerafshan mountains at the north and the vast Hissar Range running along an east-west axis in the south. At the far west is the Bukhara Oasis, a vast, flat agricultural zone now surrounded by the Kyzyl-Kum desert, which in antiquity was more variable as a mix of desert, steppe, and agricultural zones. Between these zones are the long alluvial plains of Samarkand, Kattakurgan, and Navoi—zones that are well suited for intensive agriculture on the right and left banks of the river, and excellent for pasturage in areas beyond the oases. To the north of this long alluvial plain is the Nuratau mountain range, itself rich in resources and excellent pasturage although sites in this area are not well documented. South of at least part of the Hissar Mountains is the Kashkadarya region, also a rich alluvial plain with excellent
pasturage that facilitated the emergence of one of Sogdiana’s earliest and most significant cities at the site of Er Kurgan near modern Karshi.

The diversity of Sogdiana’s geography allowed for a wide range of subsistence and productive activities in antiquity. The mountains were a centripetal force for Central Asia’s mineral industry as a source of raw materials. This included wood fuel for smelting ores of various metals that are found in the Hissar and Pamir Mountain ranges, such as copper, tin, gold, lead, silver, and later, iron.\textsuperscript{579} Settlements formed to support metal ore mining and mining infrastructure are known from as early as the Bronze Age, such as at Tugai in the eastern Samarkand Oasis.\textsuperscript{580} Turquoise and flint were common stones mined in multiple mountain ranges such as the Bukuntau, Kuldjchuktau, and Muruntau mountains in the Kyzylkum although issues remain with our understanding of when.\textsuperscript{581} The western reaches of Nuratau was a source of flint for populations living in western, central, and eastern Sogdiana during the Neolithic and Bronze Age.\textsuperscript{582} Turquoise is also to be found in Chach and northeastern Ustrushana. Lapis lazuli is regularly found in graves across Sogdiana from the 4\textsuperscript{th} millennium BCE and used as a pigment at Sarazm during the late 3\textsuperscript{rd} millennium BCE.\textsuperscript{583} This nonetheless attests to the (unsurprising) interconnectivity of communities in Badakhshan and northeastern Bactria with Sogdiana in this early period.

The lowlands of Sogdiana’s steppe and oases are fundamentally characterized by two interconnected modes of subsistence—farming and pastoralism/animal breeding.

\textsuperscript{579} Garner 2021.
\textsuperscript{580} Avanesova 2021: 674-676.
\textsuperscript{581} Виноградов, Лапотин, и Мамедов 1965.
\textsuperscript{582} Касымов 1964.
\textsuperscript{583} Besenval and Isakov 1989: 11.
These subsistence economies are often perceived as dichotomous because of substantial differences in labor requirements, materialities, and the types of domestic living that comes with these modes of production. As a result, there is often a temptation to understand these differences in ethnic terms, where material kits necessary for production and aesthetics drawn from variable lifeways are perceived as markers of ethnic or tribal populations in competition for territory. This is likely a simplification of reality. Considering the variable ecology of Sogdiana, populations must have readily innovated and adapted in order to maximize production and ultimately take advantage of various modes of living. With agricultural production comes land ownership and territorial rights that are not available to all individuals living in oasis communities. Cattle, sheep, and goat herding provided an excellent opportunity for profitable living in steppe, desert, and mountain zones where any mode of agriculture is unavailable. This is a vast amount of real estate for the region.

Hellenistic and post-Hellenistic Bactria and Sogdiana were ecologically dynamic territories in which rural populations were able to embrace environmental diversity in forming an identity structured in conversation with their landscape. Rural populations living outside of the centers of elite Hellenism lived drastically different lives than their urban counterparts. As noted in the previous chapter, agricultural production and pastoralism were central to the rural economy. More importantly, these activities fundamentally structured the ways in which rural populations perceived themselves within their landscapes, determined where and how they built their homes, and structured the ways in which time was perceived in the form of agriculturally based calendars. Urban life in places like Ai Khanoum was fundamentally dependent upon the stability of
its rural hinterland for its survival, an issue that would play a critical role in that city’s ultimate demise.\textsuperscript{584}

As is argued over the course of this study, the Hellenistic period in Central Asia is a period in which there are the beginnings of a fundamental shift in the relationship between people and their environment. This shift does not reach its apex until the first centuries of the 1\textsuperscript{st} millennium CE, which is a testament to non-political factors such as imperial administrative interventions shifting the sensibilities of rural populations over the long durée. Again, I reiterate that it is by the 3\textsuperscript{rd} c. BCE that sees the emergence of rural initiatives in which populations began terraformational processes that were particularly centered around changing the nature of irrigation from rainfed systems to the construction of canals, collectors, and feeder channels. Rather than topography dictating the viability of settlement, rural landscapes developed in which the human element was the motivating factor in determining new opportunities for production. Craft centers emerged to support shifting rural settlements, whereas other previously important sites ceased to function. As is particularly apparent from evidence in this chapter, the siting of fortifications seems to have been a part of this wider process—shifting from purely strategic locations (Koktepa) or otherwise already densely settled areas (Afrasiab, Er Kurgan) to strings of small, fortified sites emerging along road networks. What is most striking, however, is that rural populations began planning for the long-term development of their surroundings. This will become especially evident later when I discuss emergent irrigation technologies in Hellenistic Panjikent. Seeing themselves as able to terraform landscapes for an increase in agricultural and raw material supplies reflects a cultural

\textsuperscript{584} Martinez-Sève 2018.
shift from seeing oneself as beholden to the environment to becoming an agent in altering that environment’s future.

Despite the general similarities in economy and landscape, rural Bactria and Sogdiana were not the same. The elite manor houses with strong Hellenic architectural components known at Saksanokhur and in the Dasht-i Qala are not found anywhere in Sogdiana—a testament to the fact that Sogdiana was only superficially incorporated into the cultural and political dramas underway south of the Hissar Mountains. In fact, there is very little direct evidence for Hellenistic influence in art, language, or architecture. For example, only two Greek inscriptions insecurely dating to the Hellenistic period have been found anywhere in Sogdiana and both come from Afrasiab. These are a ceramic goblet bearing the name ΝΙΚΙΑΣ and name ΚΤΕΗ carved into an astragal. As Naymark has noted, this is hardly the evidence for sophisticated Greek governance over Sogdiana that we find in Bactria and in the Western Hellenistic world.

However, there is nonetheless cultural exchange between Bactria and Sogdiana that seeped into rural life and restructured some social aspects of production, consumption, and belief. For one, we find the slow emergence of figurative art in terracotta votives which would become an important aspect of Sogdian belief and cult practice by the 1st century BCE. There is also evidence for the consumption of Hellenized Bactrian goods, especially in the sphere of Sogdian viticulture. However, it is at the level of quotidian life where we find significant commonalities, for example shared traditions in the localized production of handmade pottery between Sogdian Kashkadarya and

585 Naymark 2001: 44.
586 Ibid.
northern Bactria. Continuing with my avenue of analysis from the preceding chapter, I will explore this interconnectivity of rural life and its substantive differences in the medium of rural domestic architecture.

With that said, there is one particularly potent thread of ancient cultural conservatism that I continue to emphasize in this chapter. This is the fact that rural populations in Sogdiana were more likely to live in pit-houses than in Bactria, a fact that is only now emerging as significant within the study of Hellenistic Central Asia.\textsuperscript{587} In fact, residing in pit-houses was an essential feature of rural life, especially during the Hellenistic period when our evidence for above-ground farmsteads seems to temporarily disappear. The fact that pit-house dwelling was paramount in Sogdiana’s Hellenistic period has already been recognized.\textsuperscript{588} However there is a strong tendency in Western approaches to Hellenistic Sogdiana to see pit-houses as reflecting evidence for mobile groups.\textsuperscript{589} As I will show, if we accept this view then every rural house in Hellenistic Sogdiana would be built by a nomad and there would be no sedentary agricultural populations. I will continue to criticize this one-to-one correlation with pit-houses and mobility in depth in chapter five. This supports a view that is already emerging from excavations of other pit-house settlements in southern Kazakhstan,\textsuperscript{590} and has already been proposed in the by M. Khasanov in his excavation of late Achaemenid and early Hellenistic pit-houses in southern Sogdiana.\textsuperscript{591}

\textsuperscript{587} Омельченко 2003.
\textsuperscript{588} Lyonnet 2021: 313.
\textsuperscript{589} For example Итина 1963; Lhullier and Mashkour 2017: 668; Lyonnet 2021; Villinga, Oliver, Bridge 2007: 45.
\textsuperscript{590} Chang 2019.
\textsuperscript{591} Хасанов 1990b.
This chapter asks for Sogdian rural life the same basic questions posed in the previous chapter on rural Hellenistic Bactria. Where were rural populations located in Sogdiana? How did they build their settlements? How did they situate themselves within their landscapes and how might this have affected how they saw themselves within the world? How did these populations transform their landscapes through terraforming? Particular attention is also paid to the relationship of rural settlements with regards to production areas, cultic spaces, and when possible, cities and/or large settlements in micro-regional contexts. Methodologically I follow the same arrangement as in the previous chapter, moving geographically across major settlement areas while keeping disparate landscapes and ecological zones at the forefront of my analysis. Sites are described first in relation to their patterning within the landscape before they are followed with specific case studies that help us understand how people built up the rural environment, a body of evidence that is largely restricted to domestic architecture. I continue my method of referring to sites by their new designations within the Archaeological Map of Central Asian Antiquity so the reader can access more data about each site in the appendix or view the site on Google Earth if interested. More importantly, this new classification system brings order to data that is easy to conflate with other micro-regions but needs to be empirically distinguished.

With this said, I will proceed in the following order. First, I will take us out of Baysun and the Iron Gates and into the Kashkadarya region, as this is the first entry point from Bactria. Kashkadarya serves as a good case study that establishes issues facing those working to understand rural populations in other areas of Sogdiana. In particular I will revisit the role of Sogdiana’s first large settlements, Xenippa/Nikshapaya (Er
Kurgan) and Nautaka (Padayaktepa-Uzunkir), as they relate to the wide rural hinterland of Kashkadarya. Following this discussion, I explore the published evidence for rural life with a particular emphasis on micro-regional settlement patterns. From there I explore house types and the chronological development of domestic architecture within this micro-oasis. I also consider the evidence for Hellenistic fortifications in Kashkadarya not only as a means of defense, but as a means for monitoring trade routes through the rural countryside.

From Kashkadarya I will consider the Oasis of Panjikent and its intermontane tributaries, where there exists some overlooked data that serves as an excellent example of rural ingenuity and technological innovation for optimistic terraforming projects that had a profound impact on the future of settlement here. I also consider the role communities living in the Zerafshan and Hissar mountains played in facilitating interactions between northern Bactria, Kashkadarya, and the Panjikent Oasis as an alternative route from Baysun.

From Panjikent I move to the Oasis of Samarkand—a region where we have more evidence for Hellenistic settlements in the hinterlands than in the urban center of ancient Maracanda at Afrasiab. It is here that evidence from Koktepa has served as a proxy for the Hellenistic period and where some unfortunate assumptions about the use of rural architecture and nomadism are often repeated. Nonetheless, I endeavor to consider some overlooked data about production centers and irrigation at Afrasiab and its environs before addressing issues similar to those in Kashkadarya. I highlight the structure of rural housing, the location of settlements within the landscape and along significant trade routes, and again the location of Hellenistic fortifications within the oasis.
After Samarkand I briefly consider Ustrashana, which at least ancient Mediterranean authors considered as part of Sogdiana in the Hellenistic period. Rather than provide a lengthy discussion about settlement patterning in Ustrashana, I focus on a few key examples of rural settlement planning to challenge assumptions made about the role of Hellenism in this region, emphasizing the general indigeneity of these very places. However, the overall complexity and interrelationship of Ustrashana, Chach, and Ferghana has caused me to drastically scale back my attempt at this region, which would require another dissertation to dissect. At stake is the fact that rural settlement patterning here, still fundamentally structured by the use of agglomerated villages of pit-houses, seems to be in part structured in relation to mining centers and trade routes as much as to viable landscapes for pastoralism and agriculture. The dataset for these three interconnected regions is enormous during the second half of the first millennium BCE.

Moving to the western half of Sogdiana my discussion culminates in an overview of the interrelated oases of Navoi and Bukhara as well as evidence from areas within the inner Kyzylkum Desert that are nonetheless related to these oases. I follow the established regimen of describing what evidence we have for settlements with some granular evidence, which here are entirely rural, as there is yet to be a confirmed Hellenistic urban core for all of Western Sogdiana. Fortifications throughout the two oases are considered in relation to the rural landscape as much as their established relationship to overseeing trade networks between Sogdiana, Merv, and Chorasmia. I pay particular attention to the western zone of the Bukhara, presenting largely overlooked data for rural lifeways in the region among the Kzylkyr-Setalak group of sites. However, the crux of this section is the presentation of results of my own excavation of a post-
Hellenistic farmstead complex of interconnected pit-houses at Bashtepa. I believe this evidence from Bashtepa sheds new light on the role of pit-houses as the principal form of rural architecture for non-elite pastoralists and farmers who were primarily sedentary in nature. Other sites in the vicinity of Bashtepa dating to the Hellenistic and post-Hellenistic periods are also considered in light of new excavations at Bashtepa—in particular revisiting minor excavations undertaken in the early 1950’s of a rural manor house at Ayak Tepa 2, only a few kilometers from Bashtepa and contemporary to the pit-house complex.

One final assurance to the reader is a note about the state of the archaeological evidence. The evidence for Hellenistic and post-Hellenistic Sogdiana is almost entirely published in Russian outside of specialist studies on ceramic typologies. This Russian language material is very descriptive, disjointed, and often incomplete—even in the main archaeological reports. I say this only in part to plead for forgiveness in the likely event there is a mistake, but also to reiterate that the problems of incomplete published legacy data encountered when studying northern Bactria are only exacerbated in Sogdiana. It is all too easy to miss a brief report that revises a chronology, or to find contradictory information even within the same report. As with my study of Bactria, this is just a fact of life that I had to accept and account for when issues arose.

4.2. Rural Kashkadarya in the southern reaches of Sogdiana.

Exiting the Hissar mountains from Surkhandarya through Baysun, one passes through Dekhanabad to arrive in the Kashkadarya, a deltaic oasis in the modern Uzbek province of Qashqadaryo. It is also the southernmost region that is unquestionably
Sogdian in antiquity. It is no coincidence that Sogdiana’s earliest city is here — Er Kurgan, as well as other locations known in ancient Mediterranean texts, such as Nautaka. Two major Uzbek cities are located in present day Qashqadaryo—Karshi in the west and Shakhrisabz in the east.

The Qashqadaryo region takes its name from the main west-flowing river that has sustained life for millennia—the great Kashkadarya. The Kashkadarya river originates to the east of the valley in the long intermontane zone of Farob, nestled between the slopes of the Zerafshan and the Hissar Ranges. Its point of origin is approximately 7km east of the town of Farob, Tajikistan, where it is fed by glacial melt and rainwater, with its outflow reaching its peak during the spring.592 Water and alluvial minerals flow in a westerly direction for about 378km, irrigating a deltaic oasis of about 8800km² before arms of the main endorheic river discharge into the Karshi steppe and Sundukli micro-desert. Near Shakhrisabz, the Kashkadarya receives some water from the Zerafshan river by way of the Eskianhor canal and Chinkurgan reservoir to the north, although this was not the case in antiquity. Other natural rivers have always fed the Kashkadarya since antiquity, such as the Oqdarya, Tapkhozdarya, and Yakkabagdarya. The main arm of the Kashkadarya veers northwest just west of Er Kurgan and Karshi. At these furthest reaches the river passes through occasional tugai marshes, many takyr flats, and sand dunes.

The Kashkadarya oasis is a vast agricultural zone with rich alluvial soils and a long tradition of agriculture—since at least the 12th century BCE. This region is extremely flat and geographically bounded in the northeast by spurs of the Zerafshan

mountains: the Kungurtau, Kasantau, Maimanaktau. In the southeast, spurs of the Hissar range join the ecological life of the oasis, notably the long massif of the Yakkabag range.

In archaeological studies of the region, the oasis is typically subdivided into three distinct micro-regions: Shakhrisabz, Guzar, and Karshi. This is not an arbitrary decision. These regions are culturally distinct. In the late Achaemenid and early Hellenistic period they might have even been politically distinct with the political centers of Xenippa (Er Kurgan) in the west and Nautaka (Shakhrisabz) in the east recognized in the works of Quintus Curtius Rufus and Arrian. Therefore, I continue the organizational strategy of my predecessors and maintain this arrangement in treating Kashkadarya.

The easiest route from Bactria into Sogdiana would have been through Baysun in the Hissar Mountains. It is there that the famous Iron Gates monitored traffic between the two cultural zones, as discussed in the previous chapter. After some rugged travel through the mountains, one joins the path of the Guzardarya and exits the Hissar through a gradually widening micro-oasis called Dekhanabad. Dekhanabad gives way to the Guzar Oasis, a vast alluvial zone which fans out to the northwest, north, and northeast with routes leading to the ancient cities of Xenippa (Er Kurgan) and Nautaka (Shakhrisabz).

When arriving at the oasis from Dekhanabad, one enters through the Guzar micro-oasis. From there the oasis opens into Karshi to the northwest and Shakhrisabz to the east, the great valley of the Kashkadarya river, the modern Uzbek province of Qashqadaryo. This broad oasis is connected to the Sherabad Oasis in the Surkhandaryo province by the well-known road through the so-called Iron Gates at Derbent (AMCAA 546). As discussed in the previous chapter, one arrives at Derbent through the Baysun
valley, which was heavily fortified from the inception of the Hellenistic period. Traveling from Derbent, one passes through a series of steep mountain valleys before the road joins Dekhanabad and its mountain valley. I will return to rural settlements in Dekhanabad below in my discussion of the Guzar Oasis.

Approximately 6km northwest of the modern Karshi is Er Kurgan, the first city to develop in Sogdiana. The city is better known by its Medieval name, Nakhshab, although in antiquity the city was almost certainly known by ancient Mediterranean scholars as Xenippa. Additionally, there is a reference to a certain Nikshapaya in the “Aramaic Documents of Bactria,” which has a clear etymological relationship to Nakhshab and possibly to the Classical reference to a Xenippa. An administrative district or city, Nikshapaya features prominently in documents dated to the reign of the Achaemenid king Artaxerxes III.  

For practical purposes I will consider settlements along the Kashkadarya in four segments, of which only three are discussed in this subchapter—sites around Shakhrisabz, Guzar, and Karshi. This section focuses on the three remaining micro-oases that together form the larger whole of the vast alluvial plain. These are Guzar, Shakhrisabz, and Karshi. The open oasis fertilized by the Kashkadarya river and situated between the Guzar Oasis and the Zerafshan-Hissar range will be referred to as the Middle Kashkadarya valley. In the west is the densely populated zone between Guzar and the Sundukli desert, which is home to the modern city of Karshi. Now it is the archaeological site known as Er Kurgan. I will refer to this zone as the upper Kashkadarya watershed. However first I will consider the Guzar micro-oasis, which connects the two larger areas.

593 Naveh and Shakeh 2012, Khalili IA 1.
This region is a reasonable starting point as the main point of egress from Baysun and the Iron Gates. I emphasize that all of these regions are interconnected. This descriptive arrangement is purely artificial and for the purpose of organization.

4.2.a. Archaeological research in Hellenistic and post-Hellenistic Kashkadarya.

R.Kh. Suleimanov’s 2000 book *Drevnii Nakhshab (Ancient Nakhshab)* remains the most significant survey of Kashkadarya region to date, which includes a comprehensive analysis of the chronological development of settlement and irrigation in the Karshi and Guzar Oases, but excludes the valley around Kesh/Shahrisabz. In his synthesis, Suleimanov is able to draw all known (as of 2000) ancient and medieval settlements around Karshi and Guzar into a single map for the first time. Suleimanov’s work forms the foundation of my discussion on the rural zone around Guzar and especially Er Kurgan as much as it has for my own mapping of Hellenistic and post-Hellenistic sites in the gazetteer.

Excavations at Nakhshab are the subject of a great number of articles, book chapters, and conference proceedings, which have been synthesized into several important volumes. Two works appeared in the 1970’s that dealt with questions of the topography and stratigraphy of Er Kurgan. These are M.E. Masson’s 1973 *Stolichnye Goroda v Oblasti Nizov’rv Kashkadar’y s Drevneishikh Vremen (Capital Cities in the

Lower Kashkadarya Region from Ancient Times) and S.K. Kabanov’s 1977 Nakhshob na Rubezhe Drevnosti I Srednevekoba, III-VII vv. (Nakhshob at the Turn of Antiquity and the Middle Ages, 3rd-7th c.). Masson’s book did much to initiate debate about the origins of cities in Kashkadarya based on archaeological explorations conducted from 1963–1967, and to propose a solution to historical questions about which of Shakhrisabz and Karshi were the ancient cities of Xenippa/Nakhshab and Nautaka/Kesh. S.K. Kabanov was focused on resolving these same questions based on intensive excavation at Er Kurgan. Only a few years later than these volumes, a serious attempt to grapple with the city’s broad ceramic complex was presented by M.X. Islamiddov and R.X. Suleimanov in their 1984 Еркурган: Стратиграфия и Периодизация.

For my study I drew heavily from Suleimanov. His work is the main synthesis of decades of excavations on the city’s central temple, another minor temple, palatial complex, dakhma, residential quarter, potter’s quarter, and metallurgical production center, as well as monumental art and wall paintings. Suleimanov also revisits the site’s chronology in light of each of these excavated areas—most of which date to the city’s latest phases. Yet, quite prescient is also Suleimanov’s lengthy synthesis of surveyed material around Kashkadarya, specifically the oasis of Karshi. In this long chapter with accompanying maps, Suleimanov established his book as the single most important resource for understanding the long-term development of settlements in the oasis from the Late Bronze Age through Islamic periods. In doing so, Suleimanov situated Er Kurgan within its landscape context for the first time, allowing others to consider the city in relation to its rural hinterland.

595 See Rtveladze’s introduction to Сулейманов 2000.
Kabanov’s *Nakhshab at the Turn of Antiquity* was only able to deal with excavated materials from Late Antiquity and slightly later at Er Kurgan, emphasizing small sites such as Neguztepa, Dagaitepa, Pirmat-Babatepa, and Aitugdytepa. The Hellenistic and post-Hellenistic periods are dealt with superficially because of the limited state of knowledge at Kabanov’s time although he was able to demonstrate the presence of Hellenistic period ceramics in settlements beyond Er Kurgan, such as at Mudintepa. Quite significant, however, is that Kabanov was also able to supply in this volume the first archaeological map of known sites in the Kashkadarya region based on survey work conducted from 1946–48 and 1952–54. Suleimanov later wove Kabanov’s archaeological map into *Drevnii Nakhshab*. However, Islamiddinov and Suleimanov’s 1984 work appears to be the most widely distributed beyond the Russophone sphere and is the best known book on the topic, appearing in many university libraries across Europe and North America.

To these works we can also add Myrzaly Turebekov on the fortifications of Er Kurgan and Kalai-Zahoki-Moron as they compare to those of Afrasiab and Bukhara—first in his 1982 dissertation *Oboronitelnye Sooruzheyniya Drevnikh Poselenii i Gorodov Sogda (VII-6 vv. do n.e. – VII v. n.e.)*, much of which had already appeared as short articles by the same author, before being synthesized again for the book *Obortonitel’nye Sooruzhrniya Drevnikh Gorodov i Poselenii Sogda (The Defensive Structures of Ancient Cities and Settlements of Sogd)*.

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596 Кабанов 1977: 370
I do not believe that the significance of Suleimanov’s work has been fully appreciated within Central Asian archaeology as practiced by American and European scholars, especially for its contribution to understanding Hellenistic urban development outside of a colonial context such as at Ai Khanoum. Suleimanov's work excavating at Er Kurgan but also his attempt at a comprehensive archaeological map of the Karshi, Guzar, and Dekhanabad oases has cemented his status as the most knowledgeable scholar on the topic of settlements in the region. Of particular note is that Suleimanov’s diachronic approach allowed the author to make critical observations about the role of rural settlements in relation to Er Kurgan. Therefore, I am quite comfortable drawing heavily on *Drevnii Nakhshab*, especially since much of this material has not been published in English anywhere else.

In chapter two I noted a single predecessor to my present study. This is Mutalib Khasanov’s 1990 dissertation *Antichnie Sel’skie Poseleniya Yuzhnogo Sogda* (*Rural Antique Settlements of Ancient Sogd*). His work complements that of Suleimanov in that Khasanov attempted a typology of rural settlements restricted to this period and supplemented by intensive excavations of rural households. These are topics that Suleimanov deliberately left out of *Drevnii Nakhshab* in 1990 because of Khasanov’s promise to publish the results of his dissertation.\(^{598}\) Khasanov’s dissertation focuses on three different sites located in Guzar near Er Kurgan to establish a general typology of rural settlements dating from the 4\(^{th}\) century BCE—8\(^{th}\) century CE, with specific emphasis on the Hellenistic and post-Hellenistic periods. Unfortunately, like Suleimanov,

only the avtoreferat\textsuperscript{599} of Khasanov’s dissertation was accessible for my own study, as the full work is under permanent embargo at the request of the author within the archives of the Institute of Archaeology at the Academy of Sciences in Uzbekistan.\textsuperscript{600} While I engage heavily with Khasanov’s ideas about rural settlements in Kashkadarya it should be noted that I was restricted to interpreting only a summary of his ideas.

There has of course been much additional work in the region focusing on later periods. Aside from the aforementioned expeditions at Er Kurgan, I should note the excavation of three Medieval rural houses at Kinduktepa by C.B. Lunina with the Kashkadarya Expedition of Tashkent University.\textsuperscript{601} It is unclear if any of these houses were considered in the dissertation of Mutalib Khasanov, who utilizes materials from an earlier rural manor house at Kindiktepa to draw a connection to earlier rural settlement practices. The first house excavated by Lunina was quite small, only 7m x 6.5m and consisting of three rooms and a central corridor. This corridor gave access to two rooms on one side, and a larger room on the other (cardinal directions are not provided, nor is there a plan), which sounds like a familiar spatial arrangement developed at Dingildzhe and utilized again in the Hellenistic rural houses in the Dasht-I Kala plain of Afghanistan that were highlighted in the previous chapter. This house was dated firmly to the 11\textsuperscript{th} century CE with evidence for repairs on interior walls. A second 9m x 9m house excavated by Lunina was similar in arrangement and date but of poorer construction quality. A final contemporary house was also explored, which consisted of three parallel

\textsuperscript{599} A detailed dissertation summary required of doctoral students in the Soviet Union and now Central Asian republics that is typically 15–20 pages in length but sometimes longer.
\textsuperscript{600} A personal appeal was made to Mutalib Khasanov through a mutual colleague for access to the complete dissertation but was readily denied.
\textsuperscript{601} Лунина 1983: 476.
rooms connected by inner doors but no corridor. Hearths concentrated in a single room indicate a room with the dual function of cooking and living.

For Shakhrisabz, the best resource for understanding rural settlements of the Hellenistic and post-Hellenistic period is the dissertation of A. Omel’chenko’s 2003 *Kyl’tura Vosstochnyk Rainov Yuzhnogo Sogda Epoxi Antichnosti: konets 4 v. do n.e. – 4 v. n.e. (Culture of the Eastern Region of Southern Sogd in the Antique Period: end of the 4th c. B.C.E. – 4th c. C.E.)*. Omel’chenko’s main focus was to publish results of excavations of a pit-house during the Hellenistic phase of Padayaktepa in Shakhrisabz, focusing on the developments of settlements in eastern Kashkadarya and the mountain tributaries of that same river. His dissertation is as valuable a resource for eastern Kashkadarya as Suleimanov’s *Drevnii Nakhshab* for the western and southern half of the oasis. My own analysis of the eastern Kashkadarya is primarily based on Omel’chenko’s dissertation but with additional input from several authors who have published architectural elements of rural sites within this zone.

Shakhrisabz and its immediate environs was of antiquarian interest first before it became a subject of academic archaeology. Particular attention to the site’s chronological development was given by M.E. Masson and G.A. Pugachenkova in 1942, who found no indication of a pre-Islamic occupation at the site. Systematic archaeological investigations around Shahr-i Sabz began in the 1950’s under the direction of S.K. Kabanov, which radically changed the course of our understanding of the early urbanization, as this same scholar's work would do for western Kashkadarya. As a result

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602 For an in-depth overview of all research and antiquarianism in eastern Kashkadarya see Омельченко 2004: 13-19.
603 Массон и Пугаченкова 1953.
of Kabanov’s findings, the Kashkadarya Archaeological Topographic Expedition was established in 1963 and subsequently undertook the first major archaeological survey of the middle Kashkadarya region to study issues related to the emergence of agriculture and urbanization in this area.

Particular focus was on the development of Medieval Kesh (Shakhrisabz) in an expedition led by N.I. Krashenikova targeting phases dating to the 12th–13th century CE. The Krashenikova expedition quickly expanded into exploring the development of the same region in antiquity and developing a general typology of settlements. The result of her work was the recognition of settlements at Uzunkir, Sangirtepa, and Podayaktepa and rural settlements and pottery production areas in their immediate environs along the Shurobsay tributary of the Kashkadarya river. This led to the initial identification of the cluster of sites as the most densely populated area of eastern Kashkadarya in the second half of the first millennium BCE.

Since the 1970’s, work in the eastern Kashkadarya also sought to understand the earliest development phases of dispersed Iron Age and Hellenistic settlements that would later coalesce into Medieval Kesh. This involved several survey expeditions of varied intensity in the southeastern oasis and intermontane valleys of the Akdarya, Yakkabag, Talhkazdarya, and Langar rivers, each of which found substantive evidence for settlement intensification beginning in the 4th century BCE. This mission undertook an intensive survey and GPS mapping of archaeological sites north of the Kashkadarya in the northeastern-most area of the oasis. Particular attention was paid to the evidence for

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605 Крашенинникова 1985.  
606 Дрессянская, Пругер, Усманова 1977.
higher elevation sites in the mountains as much as in the lowland areas of the oasis to
glean a more accurate assessment of wider landscape use in relation to urbanization. This
work was conducted in a single season as a joint collaboration led by M. Khasanov and
D. Stronach.\textsuperscript{607} Unfortunately this archaeological map has not been published, which
greatly restricts my own coverage of this region in the Archaeological Map of Central
Asian Antiquity.

4.2.b. Leaving Baysun: southern Kashkadarya in Dekhanabad and the Guzar Oasis.

The Guzar oasis consists of two microregions at the northwestern extent of the
Hissar mountain range, the Dekhkanabad district and the Guzar district. Dekhkanabad is
particularly rugged, dry, and less than ideal for agriculture. In contrast the Guzar district
is watered by the Rashkadarya, which originates at the village of Khanabad, supplying a
number of distributaries and canals that bleed into the southern zone of the Karshi Oasis.
Both regions nonetheless relied on water supplied by the Guzardarya, which was
distributed into both the rugged and alluvial zones of the oases alike. The most ancient
settlements developed along the right bank of the Guzardarya in the Guzar district at sites
such as Kurgancha.\textsuperscript{608}

The narrow valley of Dekhanabad was settled as early as the 5\textsuperscript{th}–4\textsuperscript{th} century BCE.
The area was explored during a single season by R.Kh. Suleimanov but has not been
published with a map.\textsuperscript{609} Only a brief summary of settlement in this region was given in

\textsuperscript{607} Хасанов, Сулейманов, Стронах, Мендали 2001.
\textsuperscript{608} Сулейманов 2000: 14.
\textsuperscript{609} Сулейманов 1988.
Suleimanov’s *Drevnii Nakhshab*, noting six mostly unfortified settlements corresponding to the period of the 5th–1st century BCE which were dispersed along the banks of the Guzardarya and its tributaries. Among all of these sites there is a clear gap in occupation during the 3rd century BCE although none of these sites have been excavated. The earliest sites are Dun’etepa, Baikurgan, and Shashtepa – each dating from the 5th–4th centuries BCE before their abandonment.\(^{610}\) There was only a resumption of occupation in the region with the establishment of Tashkalak in the 2nd century BCE, and then Bazartepa and Kizlarkhkononatepa in the 1st century BCE. Tashkalak was abandoned around the time these 1st century sites were established. Occupation continued only at Kizlarkhkononatepa (which remained healthy until the 8th century CE), Bazartepa (abandoned in the 2nd century CE), and a reoccupation of Dun’etepa (which lasted until the 7th century CE). Baikurgan and Shashtepa were reoccupied in the 3rd century CE and survived into the early Medieval period. In the 1st century BCE–1st century CE Dekhanabad and its tributaries became of particular significance for nomadic groups as the locus of kurgans and as a site of ritual significance with the installation of a stone circle at Tashkalak.\(^{611}\) As with most other regions of Sogdiana, it was not until the Medieval period that Dekhanabad became densely settled.

Twenty-nine sites have been identified dating to the Hellenistic and post-Hellenistic period in the Guzar Oasis. Half of these sites did not appear until the 2nd or 1st centuries BCE and thus are subject to other historical factors in the development of the oasis, such as the influence of the founders of the fortified settlement Kalai Zahoki

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\(^{610}\) Сулейманов 2000: 59.
\(^{611}\) Сулейманов 2000: 59.
Maron (discussed below). Only three sites date to the late Achaemenid period. Two are unnamed tepas (AMCAA 809, 1093) that date from the 5th–4th century BCE. In Suleimanov’s typology these fall under the category of unwalled settlements that now exist as low tepas. The third site is Kurgancha, one of the most important type-sites for rural Kashkadarya (AMCAA 1092) dating from the 4th–1st century BCE. This site will be explored in great detail below.

There was rapid development of settlements in the 3rd century BCE throughout the entire Guzar Oasis, which parallels the pattern of settlement expansion already seen in the Karshi oasis. Most sites on the left bank of the Guzardarya are situated along a key route connecting Guzar to Er Kurgan (Figure 44, Figure 45). These are unfortified settlements that are for the most part less than 0.5ha – AMCAA 1061, 1062, 1066. One site, AMCAA 1067, is much larger than the others with an area of 2.295ha and dating from the 3rd–mid-2nd century BCE. This site is also the closest to modern Guzar among left bank sites. This string of unfortified settlements seems to have been capped at the north by a medium-sized fortification at Yalkpaktepa (AMCAA 791). This site is located almost exactly halfway between Guzar and Er Kurgan. Yalkpaktepa has a medium sized fortification with an outer and inner wall. Overall, the entire area is 6ha. The outer wall measures 250m x 250m and the inner wall is 70m x 70m. Within the inner wall is a small citadel or tower that is 15m x 15m in size, which is all that now remains of the site. It is reasonable that this fortification was installed to monitor traffic arriving from both the Karshi Oasis and Bactria.

Сулейманов 2000: Figure 28.
In the northern zone of Guzar a number of sites emerge in the 3rd century BCE that seem to be larger than those situated on the Guzar-Er Kurgan road. They are also clustered rather than in a linear arrangement (Figure 44) and are represented by Kabristontepa (AMCAA 1081), AMCAA 809, 1069, 1071, 1081. Of note is the large fortification of Saubagtepa (AMCAA 1077), an unexcavated round site with a 330m diameter and area of approximately 8.55ha. Only two Hellenistic sites are located on the right bank of the Guzar. These are Kurgancha (AMCAA 1092) and an unnamed square tepa (AMCAA 1079) with an area of 1.32ha. Both sites are situated at the immediate foothills of the Ankul’tau spur of the Hissar Mountains.

4.2.c. The architecture of rural settlements in the Guzar Oasis.

Kurgancha warrants special consideration because it is the only Hellenistic period rural settlement that has been excavated to date in the Guzar and Karshi Oases (AMCAA 1092). It is also the subject of the only dissertation on rural Hellenistic Central Asia before the present study. Originally the site was a 50m x 50m tepa until it was leveled in 1981 for the expansion of a modern farm. This unfortunate situation destroyed most of the site’s archaeology but left exposed the earliest phases. The site is a small village consisting of pit-houses in its earliest phase and a farmstead towards the end of the village lifespan. The site is fed by a distributary branch of the Guzardarya situated at the western base of a series of steppe terraces of the Ankul’tau spur of the Hissar Mountains.

613 Хасанов 1990.
Early exploration of the site was undertaken by A.S. Sagdullaev and Z.I. Usmanova in 1977. During that season, two sondages exposed part of a single pit-house measuring 1.5m x 2m. These limited excavations led Sagdullaev and Usmanova to develop a typology of ceramics restricted only to the 4th–3rd century BCE. The site was revisited a few years later with a brief excavation by R.Kh. Suleimanov and Nefedov in 1979, the results of which were not published. It is the excavations of M. Khasanov that have really shaped our understanding of rural settlements in Kashkadarya in the early Hellenistic period. From 1986–1987 Khasanov exposed the entire settlement at Kurgancha and was able to establish a reliable ceramic typology and chronological development of house types from the 4th–1st century BCE at the site, which was then taken as a proxy for rural sites of the Hellenistic and post-Hellenistic periods across the Karshi and Guzar Oases.

The settlement at Kurgancha changed in important ways over the three phase lifespan of the site. While we have a plan of the settlement (Figure 49), no detailed description of the site’s architecture exists outside of Khasanov’s dissertation with the exception of very fragmentary references in general overviews of Kashkadarya, or specialist studies on pottery from the settlement. Important characteristics such as pit-house construction and architectonics, size, and depth have not been published, which vastly limits our understanding of construction labor and material sourcing from the wider landscape, let alone comparable traditions with other regions.

614 Сагдуллаев и Усманова 1978: 537-538.
615 Curiously, the work of Sagdullaev and Usmanova was not recognized by Khasanov in subsequent publications, who otherwise credits only Suleimanov and Nefedov as the first excavators.
616 Lyonnet 2021.
Three pit-houses dating to the earliest phases were detected, which are clearly related to those first identified by Sagdullaev and Usmanova. These date from the 4th–early 3rd century BCE. These are pit-houses 1, 4, and 8 on the plan (Figure 49), which have only been described as long, deep, and accessed by an entrance ramp.\textsuperscript{618} These houses were associated with three additional economic storage pits. Only the dimensions of pit-house 8 have been published: 6.8m x 2.05m and 1.9m deep.\textsuperscript{619} Two additional pit-houses were discovered that are considered a second phase. Pit-houses of the second phase are marked by the appearance of red fabric pottery, notably bowls with L and T-shaped rims. Wheelmade cauldrons also appeared for the first time during this phase. There is a gradual reduction in pit-house depth towards the end of the site’s life.\textsuperscript{620} In the final phase of the site the village architecture changed drastically with the construction of three additional, shallower pit-houses (4, 7, 10), followed by the construction of an above ground farmstead. During the third phase, new shapes were found in pit-houses 4, 7, and 10. The farmstead of the final phase is a multi-room house built of square mudbrick. The burial of a child was set into the floor of this later farmstead.

The economic basis of houses at Kurgancha was rainfed agriculture supplemented with cattle rearing and wild game hunting. Khasanov reports a faunal assemblage of 12% full grown cattle and another 32% of calves.\textsuperscript{621} Presumably the rest of the assemblage is mixed between wild game (statistics not given) and sheep/goat (not reported) if subsistence at Kurgancha was similar to other sites where we have better data, such as

\textsuperscript{618} Хасанов 1990b: 4.
\textsuperscript{619} Хасанов 1996: 29.
\textsuperscript{620} Хасанов 1990b: 5.
\textsuperscript{621} Ibid.
Unfortunately, Khasanov does not report which types of wild game were found in household assemblages because this information would help us understand landscape use outside of the immediate vicinity of the settlement. However, given Kurgancha’s proximity to the Hissar Mountains hunting reasonably occurred in these uplands with the wild game assemblage probably reflecting animals found therewithin. Palaeobotanical remains found at the site indicate grape and wheat cultivation. On this evidence, nobody would infer mobile lifeways if these same materials were found in above ground structures.

Khasanov attributes the tradition of pit-house construction to mobile Iron Age Burguluk and Chust cultures of Ustrushana and Tashkent. However, as will be demonstrated in chapter five, Central Asia already had a long-standing tradition of pit-house construction related as much to the Eurasian steppe as to the pre-Hissar Culture Neolithic of Northern Tajikistan. Despite the assumed origins of these traditions among Burguluk culture societies, Khasanov is against the idea that Kurgancha pit-houses were the winter dwellings of a nomadic or semi-nomadic population. The first reason is that a house depth less than 140cm would make winter living difficult – presumably because of the poor retention of heat if one assumes a post and reed superstructure. The second is that there are no hearths found in any of Kurgancha’s houses. Structures like these also appear in the earliest layers of Tamoshotepa, Dalverzin, Nurtepa, Zartepa, Khantepa and in many other places, which Khasanov suggests cannot be attributed to mere summer

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622 Xin, Miller, Crabtree 2015.
623 Хасанов 1990: 5.
624 Ibid.
residences of a mobile population. This idea is still not favored in scholarship, which sees pit-houses as fundamental indicators of mobility. Recent excavations of pit-houses at Bashtepa seem to confirm Khasanov’s inclinations, discussed below in great depth in chapter five.

Only the pottery from the earliest phase has been published from pit-houses 1, 3, and 8, which Khasanov refers to as a culturally uniform assemblage. However this is not the case. Only the material from pit-house 8 was a truly closed stratigraphic context. Material from pit-house 1 was disturbed in antiquity. Material from pit-house 4 contained materials that were the same as those observed on the surface, i.e. a mix of materials comparable to pit-house 8 and pottery dating to the later life of the site. Khasanov argues that he was able to distinguish earlier and later material based on the presence of iron oxidation observed in the deposits of pit-house 8 and on fragments of disturbed pottery that had the same encrustations. In my opinion, we should perhaps be somewhat cautious about aspects of the site’s dating, although do I use Khasanov’s description at face value.

The overwhelming majority of the first phase pottery was wheelmade. Only 13.8% of the pottery was handmade, indicating that the community had strong ties with specialist potters who likely resided in or around Er Kurgan. However, Khasanov’s observations about the first phase of handmade pottery are worth emphasizing.

625 Хасанов 1996: 32.
626 Lyonnet 2021.
627 Хасанов 1990b: 5.
629 Ibid: 30.
630 Ibid.
Handmade pottery is more likely made locally (although not always, as is now known from the Hellenistic workshop at Saratepa 2 near Afrasiab). Khasanov sees a complete unity with the handmade pottery of northern Bactria in the form of thin-walled hand-made cauldrons with concave rims and thick-walled containers and khums (large storage vessels), which he does not see as comparable to those found in Margiana, Chorasmia, Parthia, Chach, or Ferghana. Khasanov attributes this phenomenon at least partly to exogamy between the two regions, with knowledge of specific forms passed generationally.

There are also suggestions of trade and local production and consumption of elite identities connected with Achaemenid and early Iron Age Iran. Particularly important are several wheelmade phiale with an S-shaped profile (colloquially termed “tulip bowls” in Western literature) based on Achaemenid metalworking and bridge-spouted vessels, of which both types are found in the first phase. One phiale is in a red fabric and highly polished. Another type features an almond-shaped decoration which was made by applying pressure on the interior of the vessel with a thumb or middle finger before firing. Other phiale are of lesser quality albeit in the same red fabric but without the burnished finish. Some vessels without S-shape in the assemblage also feature the same treatment of imitation metalwork. These are only known from the feet of what appear to be large vases, some of which are in red fabric and others with red fabric on the interior and grey fabric on the exterior, indicating a differential in oxidation and firing during

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633 Khasanov and Isamiddinov 2011: 42.
634 Ibid.
production. One final shape received the same treatment. Two fragments of a large bowl with an inward turned rim of up to 33cm in diameter were found in secondary infillings. As with the S-turned bowl, a single example of the same form but without burnishing was also found.

There is also evidence for earlier traditions drawn from the Iranian Iron Age. This comes in the form of a single fragment of bridge-spouted vessel found in the infilling of a child’s burial cut into the final phase of the site (the farmstead phase). The fragment is the bridge and spout part of the vessel with its connection to the rim. Khasanov noted similarities between this bridge-spouted vessels, to other jug forms found at Tamoshotepa and the Hissar Fortress in Northern Bactria – both in phases dating to the 3rd century BCE. These vessels were a mainstay of the early Iron Age cultural assemblage of Iran in greyware form at sites like Sialk Cemetery B beginning in the 14th century BCE, before becoming a leitfossil for the Iranian Iron Age II period of northwestern Iran and an important indicator for the Arabian Iron Age II from 900-600 BCE. These late bridge-spouted vessels from northern Bactria and Southern Sogdiana are quite different from their counterparts in Iron Age Iran and southeast Arabia. The spouts of these types are stout and truncated (Kurgancha) and some that are described as bridge-spouted vessels do not seem to have bridges or spouts (Hissar Fortress, Tamoshotepa). Further, what is considered the antecedent of these vessels in Central Asia is a vessel without a provenance from the Pendjikent Museum dating from the 10th–9th centuries BCE in

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635 Khasanov and Isamiddinov 2011: Figure 11; Хасанов 1995: Figure 1.
636 Khasanov and Isamiddinov 2011: 43.
637 Ghirshman 1939.
638 Magee 2005: 93, 98.
639 Хасанов 1995: Figure 2, nos. 1, 2.
which the spout, while long like Iranian types, is detached from the rim by at least 5cm. The more complete late examples from Central Asia are tall and thin walled, whereas all examples from Iron II Iran are short and squat in profile.

Khasanov takes these vessels as an assemblage that represents local efforts to imitate elite Achaemenid and generally Western Iranian vessels in a rural, non-elite setting. Their presence in such a vernacular setting as Kurgancha illustrates the mobility of elite ideas about consumption and value, a phenomenon that is perhaps comparable to the appearance of haphazard local imitations of Hellenistic Megarian bowls found in places like Tepai Diniston in northern Bactria. Somewhat problematic is the dating of the first phase in light of the presence of these vessels. Khasanov is inclined to date the pottery of Kurgancha’s first phase to the second half of the 4th or early 3rd century BCE because no other Hellenistic vessels are found among what appears to be an Achaemenid Bactrian-Iranian assemblage. However, bowls with S-shaped rims, highly desired and recognized elite wares of the Achaemenid empire, are only stratigraphically attested in Bactria and Sogdiana after the arrival of the Seleucids. While it is certainly possible that these vessels are earlier examples than any other found in Central Asia, we must bear in mind that Khasanov’s pit-houses were partly disturbed by later activities.

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640 Хасанов 1995: Figure 2, no. 9.
4.2.d. Ancient Nikshapaya/ Xenippa: Er Kurgan and the oasis of Karshi.

The gentle westward slope of the Karshi Oasis allowed for unique ecological conditions that were amenable to the historical development of irrigation agriculture that did not require advanced hydraulic engineering. The Kashkadarya and its main supplementary canal, the Rudukai, did not facilitate a major flow of water, which was often periodic and dependent only on glacial melt in the Hissar mountains. This is in contrast to the Zerafshan river oases, notably by Samarkand, Panjikent, and Bukhara, or especially in Khorezm that all required the development of massive hydrological infrastructure to grow crops and provide water to towns and cities. In the Karshi Oasis, hundreds of modern functional canals and adjacent feeder canals developed directly out of natural distributaries of the Kashkadarya that were manipulated into hydrological infrastructure around the Hellenistic period (discussed below). Yet even these natural river channels and canals did not require significant human intervention like in other regions. As Suleimenov has described in great detail, the ancient canal keepers of the Karshi Oasis were masters in understanding the dynamics of irrigation management. However it was not until the early Middle Ages, roughly the 5th–6th century CE, that irrigation in the oasis approached its modern intensity, when there was more investment in complex hydrological infrastructure. Notably, in the 5th–6th century the Kashkadarya was supported by outflows of the Dargom Canal with the connection of the long Eskiangar connector canal through the hills north of Shakhrisabz. This infrastructure drastically increased the amount of water that still flows into the

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642 Сулейманов 2000: 12.
643 Ibid.
644 Ibid. 13.
Kashkadarya oasis, prompting a rapid intensification of agriculture that persists into the present day. If settlements existed in this northeastern area of the oasis prior to the 5th–6th centuries CE they would have relied upon rainfed dry farming and pastoralism.

The Kashkadarya Oasis became settled in the early Neolithic by populations firmly related to Kelteiminar cultures of the Kyzylkum, particularly in the now endorheic zone in which the oasis loses itself in the Sundukli desert. Naturally these Neolithic settlements are located in close relation to rivers. Stone tools of the region have direct parallels to those found at Darbazakyr I along the Makhandarya west of Bukhara and both Janbas 4 and Kunyak I in Khorezm. All indications for Neolithic life along the Kashkadarya point towards communities relying on hunting and fishing as the basis of their subsistence. By the middle of the 3rd millennium BCE these traditions seem to disappear completely.

Sedentism in the Kashkadarya watershed emerged possibly as early as the 12th century BCE but likely a little later. These early settled communities were engaged in grain crop cultivation as well as cattle breeding. At Chirakchi on the southern bank of the Chimkurgan reservoir 15km west of Shakhrisabz we find the earliest evidence for this phenomenon. The settlement was excavated in a single season from May–April 1972 by Kh. Duke under the direction of S.K. Kabanov as a detachment of the Institute of Archaeology expedition underway at Er Kurgan. As with most work by Kh. Duke, there is no published plan of the site, which was already threatened by erosion from the reservoir when it was excavated.

All pottery excavated at the site demonstrated a strong relationship with Tazabag’yab traditions, a genetic branch of Andronovo culture common around the Kyzylkum desert, but with particular reference to the Gudzhili complex of the western Karakul oasis but also sites in the Tashkent Oasis and the Mirshade Oasis of Surkhandarya all ranging from the 12th–8th century BCE. Thus, the pottery of this early settlement in Kashkadarya draws influences from all over Southern Central Asia, reflecting the interconnectivity of communities and the spread of traditions across this wide geography in the early Iron Age. What was excavated of the site is a series of twelve economic storage pits that were clearly associated with a small permanent settlement, likely to the south of Duke’s trenches. All pits were quite large and deep, some as large as 2m x 1.6m wide and 1.6m deep. All were oval or circular in shape and one pit was actually divided into two storage areas by a central pakhsa partition. All pits were filled with pottery and substantial amounts of animal bones. The bones were not analyzed. There were twenty fragments of querns and five pestles. Among the ceramic bowls, storage vessels, and khums were favored. The assemblage indicates a community that was engaged with agricultural production and stock-rearing, almost certainly cattle and goat.

Settlements of the first half of the 1st millennium BCE are also known, strongly indicating the widespread reliance on cattle-breeding and grape and wheat cultivation across the eastern Kashkadarya as early as the 7th century BCE. Seventeen sites of this period were the subject of an expedition under the direction of A.S. Sagdullaev from 1976–1979 in the northern foothills of the Yakkabag spur of the Hissar mountains

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647 Ibid.
roughly 20–25km south of Shakhrisabz. Three of these nine sites provide critical information about the structure of rural settlements in the middle to late Iron Age, likely the 8th or 7th century BCE. These are Daratepa and Kurgancha, each representative of two different site types which were otherwise part of the same wider settlement zone of 10ha. These sites are described below in the section pertaining to Kesh.

By the 8th century BCE there was already a settlement of at least twenty hectares at Er Kurgan in the Karshi Oasis. Er Kurgan is located between the main channel of the Kashkadarya and a northward tributary called the Ruduksai. At that time this channel was a natural outflow of the Kashkadarya but is now a canal. Until the Hellenistic period the Ruduksai discharged into a now defunct lake at the present site of the Shorsai salt flat to the northwest of the Kashkadarya Oasis. In this early phase Er Kurgan was a large unwalled zone of farmsteads irrigated by channels dug from the Ruduksay. It would be no surprise if an earlier Iron Age phase was eventually found here given the massive size of the town already in the 8th century.

In the 7th century BCE, the entire settlement was surrounded by a 5m thick mudbrick fortification wall, 8m in height, and reinforced by towers at intervals of 10–12m. This wall system is 20 degrees off meridian in orientation. The city’s citadel was built on a large mudbrick platform along the northern wall which is also where a palace was sited nearby. In the northeastern sector of the city’s eastern wall was one of the city’s two gates. A second gate with defensive installation was located in the southern wall. The

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649 Сулейманов 2000: 44.
650 Сулейманов 2000: 25. The number of towers cannot be estimated without determining the true shape and perimeter of the early settlement.
eastern sector of the city would soon develop into a center of craft production, such as pottery and metallurgical activities. The siting of this quarter at the east could have been to deflect the prevailing winds, which coming from the west would spare the entire city interior from fumes of kilns and furnaces. B. Lyonnet has suggested that the city was laid on a Hippodamian grid plan, but there is no indication of this given the state of the evidence.

Quite important for the social life of the settlement is the institutionalization of cult with the construction of a temple complex in the heart of the city. This cultic complex would last up to just before Arab conquest and having undergone only five major renovations in over one thousand years of existence. The temple complex was a full sanctuary with cult building (13.7m x 7.5m), aivan (portico) (18.5m x 7m), and large temenos courtyard with a plastered floor (80m x 50m). The temple as we have it dates from the 3rd century CE until after the Islamic conquest, although sondages made to probe the earliest layers showed that the 3rd century temple was built on a mudbrick platform dating to at least the 6th century BCE. Debris used for leveling the platform for constructing the sacred precinct for the 3rd century CE temple had pottery dating to the Hellenistic period and slightly later, but also a few interesting finds; notably a figurine depicting Silenus (the Greek companion to Dionysos), a miniature agate frog, and an iron knife with a partially preserved wooden sheath. The later temple also used spolia from an earlier structure. The building was entered by ascending three steps from the southern aivan into a single temple chamber with two round central flanking columns made of

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651 Lyonnet 2021.
652 The following description of the temple is distilled from Suleimanov’s report of temple excavations (2000: 101-111).
triangular mud bricks. The mudbrick columns were installed on upturned column capitals used as bases. While it is unclear where these capitals came from, it is reasonable to infer that they were from a Hellenistic or post-Hellenistic temple that once existed on the site.

Whatever structure existed on the 6th-3rd century BCE platform is now lost. However, there can be no doubt that this platform had a major role in the social life of Er Kurgan. This precinct was accessed by a road leading directly from the southern gate to the center of the city. It is possible that this area was the location of an open bazaar from which a cultic element emerged, as is known for pre-Islamic phases under the Magoki-Attori Mosque in Bukhara which Narshaki described as the location of a temple to a Sogdian moon god adjacent to an outdoor market (see below).653 The accessibility of the area from the main gate implies a welcoming atmosphere for outside communities rather than a restrictive one, even if fortifications ultimately secured city defenses. Coinciding with the arrival of the sacred platform in the 6th century BCE, Er Kurgan expanded its walls to 35 ha, indicating a rapid development. Evidence for production also emerges with the delineation of a blacksmithing quarter southeast of the first phase wall. Thus, Er Kurgan is one of the few unique, clearly documented examples of an Iron Age rural town that rapidly urbanized.

The only secure excavated context for early Hellenistic Er Kurgan is one trench in the sacred precinct.654 By the 3rd–2nd century BCE Er Kurgan had expanded to 150ha when it was surrounded by a third outer wall. Modern cultivation has destroyed most of the archaeological remains here, which are otherwise dispersed within the walled area,

653 Шишкин 1955.
perhaps indicating a walled suburb or shakhristan as opposed to a dense urban core. Both walls of the city interior were overhauled. The construction of the third outer wall might be one referred to in an Aramaic document dated to 3 Sivan in the 11th year of the reign of Artaxerxes III (June 21, 347 BCE) in which the Sogdian satrap Akhvamazda scolded the local administrator Bagavant to begin work on the construction of a wall and a ditch around Nikhshapaya. It is likely these walls that ancient Mediterranean sources describe as a place of refuge for Bactrian exiles who revolted from Alexander, only to be driven out by a rebellion of 2500 local Sogdian villagers after the installation of Amyntas as satrap.

It is at this time that another important development occurred for the social life of the city, the aforementioned dakhma. The structure had a relatively short-lived existence, lasting only 50–100 years which should give us pause to consider the region’s longer-term relationship with Zoroastrianism. At this same time a dakhma was constructed and restorations were undertaken on the first inner wall. In the 3rd century CE there was the construction of a new temple within the palace complex and a mausoleum. Major reconstruction of the city walls was complete by the 4th century CE. Another mausoleum complex, located in the northern inner suburbs, dates to the 3rd century CE but is late for the scope of this description.

Suleimanov notes that local oral tradition claims the presence of a fourth outer wall, which presumably would have surrounded the ancient suburbs, yet no physical trace of this wall survives. Only parts of the outermost wall are preserved on account of

655 Naveh and Shakeh 2012, Khalili IA 1.
656 Quintus Curtius Rufus VIII.2.15.
centuries of agricultural reclamation, however a substantial residential sector of Er Kurgan dating from the Hellenistic period to Late Antique period has been excavated between the entire area of the inner and outer walls in the southeastern corner.

Suleimanov contends that Er Kurgan’s initial development into a city was an organic, long-term process that happened on account of this area’s role in coordinating rural life and facilitating agricultural exchange and distribution in the Karshi Oasis.\footnote{Сулейманов 2000: 20.} Following this sound logic, a trade in folk crafts (i.e. pottery, tools, clothing) would have also emerged, giving rise to the localized production in pottery and metal goods as was documented by the city’s inner walls. An outcome of an increase in specialized craft areas would have been the diminishment of the size of farmlands within Er Kurgan’s walls, simultaneously altering local notions of land ownership. Agrarian families turned to other nascent specializations and gradually exchanged their identity as crop producers and emerged as consumers of agricultural products that were traded into Er Kurgan from the now rural hinterland and suburbs. Perhaps wealthier city dwellers would have profited from land ownership within those exterior suburbs while also maintaining an economic stake in urban activities, such as the ownership of pottery production or distribution centers.

There can be no doubt that Er Kurgan coordinated a major part of social life in the Kashkadarya plain. However, the idea that Er Kurgan was the key political center of Kashkadarya in the middle of the first millennium and early Hellenistic center needs reevaluation in light of the Aramaic documents cited above.\footnote{Naveh and Shakeh 2012, Khalili IA 1.} Suleimanov assumed a
major political role for the city because of its size and social complexity, and additionally the presence of a palace at the city center. He characterizes Er Kurgan thus within the wider context of Central Asian oases more generally:

For Central Asia, in the conditions of river delta oases, this irrigation agriculture required a strong central government to organize the society's resources to create and maintain the irrigation network, which, along with the fiscal tax function, was the most important function of the eastern states.\textsuperscript{660}

Khalili IA 1 seems to indicate the opposite of what Suleimanov had once assumed. In that text Nikshapaya is administered from southern Bactria, which is in turn administered from Persepolis over mundane issues such as managing locust infestations and city wall restorations. While this context on the surface implies that the Achaemenid administration of Nikshapaya was heavy-handed, we know from other texts that none of the work was ever taken seriously by local administrators who chose to prioritize local needs.

The evidence for life beyond the walls of Er Kurgan is robust. The area is noted by Quintus Curtius Rufus as having many villages and particularly fertile soil that was not only beneficial to local populations, but played some role in attracting foreigners from around Sogdiana.\textsuperscript{661} Surface survey of the western half of the Kashkadarya Oasis has given us critical insights into the siting of rural settlements along distributaries of the Kashkadarya river system and has led to the identification of two densely occupied suburban zones around the ancient city. The results of these surveys were coordinated and systematized in \textit{Drevnii Nakhshab}. The rest of this section describes what is known

\textsuperscript{660} Сулейманов 2000: 61.
\textsuperscript{661} Quintus Curtius Rufus, VIII.2.14.
of rural sites through a representation of Suleimanov’s data. However, unlike Suleimanov, I also describe the few rural sites that have been excavated within their micro-regional context. In the following section, I pay particular attention to rural settlement architecture and evidence for production and consumption at these sites within the wider landscape. This in part follows Khasanov’s methodology for rural sites, although I emphasize again that I have not endeavored to create or challenge existing ceramic typologies.

Rural settlements of the western Kashkadarya relied upon the fresh waters of the Kashkadarya river and its distributaries for survival. As with earlier periods, the Rudaksai remained to be the primary feeder channel of the Kashkadarya in the Hellenistic period. However, by this time the outflow of the Ruduksai into the Shosai lake was in jeopardy as the basin dried up and distributaries of the Kashkadarya were becoming endorheic.

Two extramural suburban areas developed in the southwest and northeast of Er Kurgan. The suburban zone to the southwest extends as far as the Kashkadarya River. These areas are now very heavily cultivated, but agglomerated tepas dotting the landscape speak to the presence of large manor houses that were owned by wealthy citizens. Houses closer to the city tended to be located 50–100m away from each other whereas those further away were more dispersed at 200–300m.662 These extramural suburbs certainly played an integral role in the productive and political economy of the city. These farms likely traded all goods at the bazaars of Xenippa or at least traded with wholesalers who would sell directly to urban consumers. It is also likely that wealthy residents of Er Kurgan owned at least some, if not all, of the extramural farmlands,

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profiting off the city’s fundamental need for grain, produce, and animal products such as meat, leather, and wool.

Settlements also emerged to the immediate northwest of Er Kurgan, but in this case were far more dispersed. These are all located on the outskirts of the modern town of Koson. Only one site north of Er Kurgan dating from the Achaemenid period is known, evidently disappearing in the middle of the 2nd century BCE (AMCAA 764). S.K. Kabanov noted only the presence of ceramics dating from as early as the 3rd century BCE at Mudintepa, a site which would later develop into a substantial fortification (AMCAA 795). There is no indication the site was fortified in its earliest phase. One nameless square settlement emerged just west of Koson in the early 2nd century BCE before quickly disappearing after the 1st century BCE. There is a clear intensification of activity after the middle of the 2nd century BCE with the emergence of a massive 350m x 350m fortification with a citadel at Khaybartepa, 18km northwest of the city (AMCAA 761). Another major fortification was established soon after at Aktepa, 14km northwest of Khaybartepa. This site appeared in the 1st century BCE and did not last beyond the 3rd–4th century CE (AMCAA 763). A settlement also emerged along what was likely a route from Er Kurgan to Khaybartepa, known as Shakhrikaybar (AMCAA 762). These three sites are in alignment along a northwest axis from Er Kurgan and with a bend in the Kashkadarya river that grants access to the main throughway to the Bukhara.

The westernmost cluster of sites in the Karshi Oasis is a cluster of small mounds dating from the 3rd–early 2nd century BCE spread over an area of 500ha (AMCAA 774, 775, 776, 777, 778, 779, 780). The cluster is located roughly 21km west of Er Kurgan.

663 Хасанов 2000b: 8.
reflecting a westward expansion of rural land use in the Hellenistic period. A fortification emerged only one kilometer west of the cluster in the late 2nd century BCE at Kutantepa (AMCAA 772) that reached a peak of 19ha in the Islamic period.

No Hellenistic period sites are known to us around the town of Denau, 7.5km south of the aforementioned Hellenistic cluster of sites. However, two sites which emerged in the 2nd century BCE have been documented in this area. Both are now destroyed by cultivation. The first is a fortification known as Aylanmatepa (AMCAA 766) which only existed from the 2nd century BCE–1st century CE. It is unclear how large the site was when it was documented since dimensions are not provided by Suleimanov, who just characterized the site as a large town. An adjacent round tepa had evidence only for the 2nd–1st c. BCE and was perhaps a small farmhouse (AMCAA 767).

Our knowledge of Hellenistic period sites in the southwest of the Karshi oasis is limited to only three sites near the modern village of Obod, 38km southwest of Er Kurgan. No sites are known further to the west in the Sundukli desert. The first is Kiiktepa, a small square mound of 35m x 45m with pottery dating from the 3rd–early 2nd century BCE (AMCAA 765). Koshtepa, an unexcavated cluster of mounds with pottery from the 3rd–early 2nd century BCE followed by a gap in occupation and reoccupation only from the 1st–4th century CE (AMCAA 770). The entire area is only just over 1.6ha of settlement. Just 4.6km southwest of Koshtepa is a mound with ceramics dating from as early as the 4th century BCE with pottery through the Islamic period (AMCAA 771). The only other sites of note are around the village Zafar. These are Kunya Fazli (AMCAA 768), a fortification that emerges in the 1st century CE before developing into a large
Medieval town of 55ha, and Kurgantepa (AMCAA 769), a small scatter of ceramics sherds dating to only the 3rd century CE.

At the end of the 3rd century BCE the suburban zone around Er Kurgan was fortified with extramural garrisons (Figure 48). Our main evidence is the fortification at Kindiklitepa (AMCAA 805), more commonly referred to as Kindiktepa in the literature. The fortification is roughly 8.5km to the northeast of Er Kurgan (Figure 50) in the village of Uzunkuduk along the Neguz canal—a canal that was already functional in antiquity. Kindiklitepa dates from the end of the 3rd century BCE to the 6th century CE.

I will only summarize the fortification architecture as it pertains to underlying strata that indicates the presence of an earlier rural settlement. Kindiktepa is a square fortification, 240m x 240m in size, with a central citadel that is 100m x 100m. Two trenches were laid at the site by M. Khasanov as part of his dissertation. One trench was laid in a corner of the outer fortification and into the corner of the citadel. All indications are that the site was a fortification from its inception since the external fortification wall, built of pakhsa, was constructed directly on virgin soil. Suleimanov adds that there is evidence for an extramural settlement expansion beyond the outer fortification wall to the west and south, which he interprets as evidence for katoikia (land grants to soldiers) associated with the fortification—known to exist in Sogdiana only through the words of Diodorus Siculus. However, these features have not been subject even to trial probes which might reveal these areas as related to the final phases of the site.

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665 Хасанов 1990b:
Khasanov’s brief description of phasing of the citadel is confusing. The following is clear: the citadel walls were built of mudbrick on a pakhsa platform set over virgin soil. Mudbricks were 40cm x 40cm x 9-10cm. A central arched corridor was detected within the fortification wall that was covered by large bricks oddly measuring 70cm x 28cm x 16cm. What is unclear is what lies over and under the first pakhsa foundation platform. However, Khasanov only briefly notes that earlier pit-houses and economic pits were found underneath the citadel featuring pottery that is the same as the late phases of Kurgancha with one very important difference—the appearance of fish plates.667 This type is not known in Northern Bactria until the beginning of the 3rd century BCE,668 after which they are a common shape across all of Northern Bactria and the middle Amu Darya (e.g. Mirzabekkala, Tamoshotepa).669 They could hypothetically have arrived in Sogdiana around the same time and are otherwise known at Er Kurgan,670 Kok Tepa,671 and Afrasiab IIB,672 but are not found at Paikend, Bashtepa, or any rural settlements of the Samarkand and Bukhara Oases as far as I know. This means that we are able to refine the date for the earliest layers of the site to the 3rd century BCE if we factor in some time for the technology to transfer from Ai Khanoum to Sogdiana (if not acquired from trade). Since the earliest layer is just a small cluster of pit-houses, the fortification cannot have appeared until this same period or later. This is complicated by another phase only briefly mentioned by Khasanov in his dissertation summary. After the

667 Хасанов 1990b:10.
669 Тихонов 2019: 14.
671 Lyonnet 2012: 168.
672 Lyonnet 2018; 2020a.
installation of the pakhsa platform above these pit-houses, Khasanov mentions an above-ground multi-room house built of mudbricks that are also 40cm x 40cm x 9–10cm, apparently in two phases. No other information is given in Khasanov’s avtoreferat but presumably exists in his dissertation.

Setting these issues aside, there are two unnamed extramural sites within 200–500m of Kindiklitepa, now known to be small estates or manor houses. For the sake of simplicity, I will refer to these adjacent sites as Kindiklitepa II (AMCAA 804) and Kindiklitepa III (AMCAA 805—now destroyed). Kindiklitepa II (3rd century BCE) was built slightly earlier than Kindiklitepa III (2nd century BCE), at least according to surface ceramics. This continues a pattern that had already emerged in the Achaemenid period in Bactria in which satellite farmsteads and manor houses cluster outside of fortified towns, such as at Kyzyltepa/Kyzylcha and Baitudasht, and more locally, at Er Kurgan proper. A third extramural mound outside of Kindiktepa was excavated by M. Khasanov which turned out to be a manor house, which was then considered a proxy site for rural settlements in Kashkadarya’s Late Antiquity. However, this site falls far beyond the confines of this present dissertation.

Hellenistic sites are also known in modern Karshi, something that seems to be overlooked on account of the foundation of Kalai Zahoki Maron in the 2nd century BCE. A square unnamed tepa located on the northeastern outskirts of Karshi just south of the Kashkadarya (AMCAA 786). A survey of the area revealed pottery dating from the 3rd century BCE–1st century BCE and is a good candidate for understanding the critical transitional phase between the Hellenistic period and the installation of tribal rule at Kalai

673 Хасанов 1990b.
Zahoki Maron. The site measures 75m x 75m. In the northwestern area of Karshi a settlement seems to have appeared in the early 2\textsuperscript{nd} century BCE at Kurgantepa (AMCAA 787) before evolving into a fortification after the 2\textsuperscript{nd} century BCE.

With these observations about Guzar and Baysun said, it is clear that small fortifications were installed around Er Kurgan city proper. The entire Hellenistic land management system of Er Kurgan is very similar to that of the Dasht-I Qala plain. As noted in the previous chapter, Ai Khanoum administered a large, irrigated plain that consisted of suburbs in its immediate environs and a heavily cultivated rural hinterland. A system of small fortifications serving as watchtowers likely secured that plain from attack, for example the Seleucid fortification at Kakul (AMCAA 141). These watchtowers were also inward facing, playing a critical role in the surveillance of rural hinterlands and the maintenance of internal stability. Likewise, we have also noted the same surveillance system underway in the administration of the Gissar Valley, such as the relationship of Zol-i Zard or the Hissar Fortress with whatever large Hellenistic settlement existed at Dushanbe. The populated, heavily cultivated suburban and rural hinterland around Xenippa follows the same pattern with the relationship established between the main urban center and Kindiklitepa.

In the mid-2\textsuperscript{nd} century BCE there was a shift in power dynamics of the oasis with the construction of the massive kala site Kalai Zahoki Maron (AMCAA 784) at the southern border of the oasis. Whereas Guzar has been left undefended during the Hellenistic period, it became the locus of political power and military defenses for Kashkadarya by this time. Kalai Zahoki Maron is an unprecedented site for Sogdiana—a truly new foundation that appeared \textit{ex novo} at a size of 100 hectares. The site is located
within modern Karshi at a critical strategic crossroads between the Guzar, Kesh, and Karshi Oases and where in antiquity it benefited from tributary outflows of both the Guzar River and the Kashkadarya. Other sites also emerged in the immediate vicinity of Kalai Zahoki Maron. One site is Shaykhalitepa (AMCAA 789), a large rectangular fortified town with an area of 3.375ha situated just north of the Kashkadarya between Karshi and Er Kurgan. Kurgantepa, the aforementioned site in the northwestern area of Karshi, also likely had a fortification after the mid-2nd century BCE (AMCAA 787).

Kalai Zahoki Maron has been the subject of several archaeological investigations, but rather undeservedly, is not treated in a comprehensive volume dedicated to just this site. This is only in part because of the overlaying modern city that restricts access to archaeological deposits. Suleimanov attributes the new foundation to a significant Saka presence in Sogdiana during the reign of EuCratides in Bactria. He assumes a collapse of a Hellenized Sogdian governing body in Kashkadarya that is administratively replaced by Saka of the Chirikrabat culture from the lower Syr Darya, who otherwise disappear from that region around the mid-2nd century BCE. With the influx of these new administrators the status of Er Kurgan was reduced to a trade center.

The rapid emergence of a new foundation like Kalai Zahoki Maron in an already urbanized territory forces us again to confront uncertainties about the role of cities as central power centers. There is no indication that Kalai-Zahoki-Maron was, or was ever intended to be, a city. However, K. Abdullaev has suggested that the interior fortifications were likely filled with tent dwellings, reflecting the nomadic lifeways of the}

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settlement founders.\textsuperscript{675} This view has gained some traction.\textsuperscript{676} There is no question however, that it became the seat of power for southern Sogdiana in the 2\textsuperscript{nd} century BCE. Life at Er Kurgan went on as before but only losing its leading administrative function. Here I draw a contrast to Ai Khanoum, which quickly dissolved as a Bactrian power center around the same time that Kalai-Zahoki-Maron emerged. I am also inclined to wonder about how Ai Khanoum’s earliest phases, when it fit squarely within the wider, distinctly Hellenistic tradition of new foundations across Egypt and the Near East. Recalling the previous chapter, Ai Khanoum replaced the large town or city of Kohna Qala as the administrative center of the Dasht-I Qala plain—long before the new foundation developed into the early 2\textsuperscript{nd} century BCE city as we know it. Even though we know nothing about the architectural fabric and stratified phasing of Kohna Qala, we do know that the town was not abandoned with the arrival of Ai Khanoum. Taken together, we have two examples of new non-urban foundations replacing the seat of power in Bactria and Sogdiana, with Ai Khanoum rapidly developing into a city according to Greek notions of urbanization, and Kalai-Zahoki-Maron remaining as a massive kala site from which its founders could administer Sogdiana according to their own notions of control.

I should note the contrast between the functional roles of Kalai Zahoki Maron and Ai Khanoum, which were established as power centers, as opposed to the organic development of Er Kurgan as a city that emerged as a coordinating center for rural life and trade. Neither Ai Khanoum nor Kalai Zahoki Maron would have benefitted from the

\textsuperscript{675} K. Abdullaev 2007: 84-86.
\textsuperscript{676} Rapin 2007: 53.
natural phenomenological aspects of presence and cultural memory among rural populations who helped build a city like Er Kurgan into a trading and cultic center. Instead, Ai Khanoum and Kalai Zahoki Maron were colonial foundations that had to integrate themselves into the local culture and economy while at the same time asserting themselves as the epicenter of administration.

This new foundation is unprecedented in its size, but its form is traditional with predecessors most commonly featured in Iron Age Khorezm, but also at smaller scale settlements within the Karshi Oasis itself. Kalai Zahoki Maron has massive dimensions but a simple plan and has the same odd orientation as the inner walls at Er Kurgan of 20° off meridian. At its center there is a square central tower of mudbrick, 100m x 100m in size and preserved to a height of 15m. Like Er Kurgan it was surrounded by three concentric fortification walls, only in this case all square. The innermost wall has pakhsa facing with a mudbrick core, although evidently what remains dates to the Medieval Period. The entire first wall system is 210m x 210m, preserved to 8–10m with a maximum base width of 10m. The second wall is pakhsa and mudbrick 400m x 400m around, preserved to 8–10m and built on virgin soil with a base width of 10m. Finally, there is a two-row pakhsa outer wall with the extraordinary dimension of 1.5km x 1.5km but poorly preserved. This third wall has a maximum preserved height of 2.5m and a base width of 10–11m. An external ditch of an unclear date once surrounded this wall. Despite the massive effort put into constructing such a fortification system, there is no

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evidence for defensive towers as one would expect in regular intervals. This is an architectural choice known already at Janbas Kala in Chorasmia.678

4.2.e. Ancient Nautaka. Rural settlement in the plain of Shurobsai and beyond.

We are in a better position to understand the development of rural architecture across the first millennium BCE around ancient Kesh than around Er Kurgan. However, these regions are nonetheless interconnected. It is in the vicinity of the Oasis of Shakhrisabz that we can trace the chronological development of rural house types from the Iron Age through Hellenistic Period. This provides critical information that complements as much as challenges the evolutionary scheme of pit-houses to above ground architecture formulated by M. Khasanov at Kurgancha in the Guzar Oasis.679 We are also able to explore the relationship of rural settlements to large “urban” sites, specifically a massive settlement located at the interrelated fortified sites Uzunkir and Padayaktepa, as well as dozens of sites identified in their immediate hinterland.

Being nestled at the foot of the Hissar mountains, eastern Kashkadarya receives more rainfall than the western part of the oasis. It also has better soils that are naturally desalinated by the hydrology of the region, especially in the northeast and southeastern areas of the Kashkadarya river. The central lowlands feature excellent alluvial soils for irrigation agriculture whereas the foothills of the Hissar mountains are more amenable to rainfed agriculture and pasturage.680 Along with Ferghana, eastern Kashkadarya is among the more favorable ecological areas for agriculture in southern Central Asia.

678 Turebekov M., 1990, p. 43
Evidence for the early Iron Age in eastern Kashkadarya is found in the intermontane valleys and micro-oases of the Kashkadarya and virtually all of its tributaries. Settlement in this area is known from at least as early as the Late Bronze or Early Iron Age with the emergence of settlements along the Yakkabagdarya, a small micro-oasis that is particularly amenable to cultivation and thus settlement. Dozens of sites have been documented, but to my knowledge no comprehensive map that clearly indicates any of these sites has been published to date. Most of the surveys are reported only as brief summaries in *Archaeologicheskie Otkrytiya*. Omel’chenko notes that sites within the eastern Kashkadarya feature pottery commensurate with that of the proto-urban centers of Bactria, representing a similar transition from the Bronze Age into the Iron Age documented in neighboring regions.\(^{681}\)

Particularly pertinent is a study of broader first millennium BCE Iron Age patterns around the villages of Kayragach and Guldara in the foothills of the Yakkabag ridge of the western Hissar Mountains.\(^{682}\) This area is roughly 65km northeast of Kurgancha in Guzar. The earliest Iron Age site is Chirakchitepa, a site that is just a little earlier than the known foundations of Er Kurgan, although their foundations could be contemporary.\(^{683}\) An expedition by A.S. Sagdullaev conducted 1976–79 in the micro-oases of the Tankhasdarya, Kayragach, Guldara, and Yakkabag also provided concrete evidence for lifeways in the first half of the 1\(^{st}\) millennium BCE. Unfortunately, most could not be located for this discussion because of the poor quality of available maps and

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681 Омельченко 2003: 162.fisg
descriptions that reference these specific sites. These sites are Turtbulchak-tepa, Samantepa, Daratepa, Kairagach-tepa, Kuzatepa, Beshkutantepa, Kurgancha (not the same as Kurgancha in the Guzar Oasis).\textsuperscript{684} Two sites once thought to date to the end of the 2\textsuperscript{nd} millennium BCE are now known to date to the late Yaz III/Achaemenid period.\textsuperscript{685} These are Yangitepe and Dzhartepa located in the lower reaches of the Tankhsdarya river, a river that begins deep in the Hissar Mountains flowing past the southern boundary of modern Shakhrisabz before adding strength to the Kashkadarya.

Sagdullaev’s survey demonstrated that early settlements in the Karshi Oasis were clustered in the micro-oases formed by intermontane river systems of the Yakkabag mountains. The formation of this clustered zone was apparently a separate process from what emerged at Er Kurgan in the western reaches of the Kashkadarya,\textsuperscript{686} a fact that anticipates what is later recognized in the works of Arrian and Quintus Curtius Rufus. It was those authors who clearly distinguished two cultural zones in southern Sogdiana – Xenippa (Er Kurgan, west) and Er Kurgan (Kesh, east) during Alexander’s invasion of 328 BCE.\textsuperscript{687}

For the sites that were excavated it is clear that the economy and culture were structured around a combination of rainfed agriculture and cattle rearing.\textsuperscript{688} However, we should note that no faunal remains have been reported from the following sites, which is important considering the evidence for wild game hunting at Kurgancha in Guzar.

\textsuperscript{684} Kurgancha in Kesh seems to be easily conflated with Kurgancha in Guzar. This is because of the poor-quality maps available in reference to both. B. Lyonnet (2021: 322) seems to conflate these two sites in her summary of archaeological evidence for Kashkadarya in the Hellenistic period.
\textsuperscript{685} Сагдуддаев 1984: 154.
\textsuperscript{686} Сагдуддаев 1980: 160.
\textsuperscript{687} Quintus Curtius Rufus: VII.5.1; VIII.2.14; Arrian IV.18.1-2.
\textsuperscript{688} Сагдуддаев 1980: 159.
Nonetheless, the communities of eastern Kashkadarya were entirely sedentary—as far as we can tell—and pragmatically situated in areas where the flow of fresh water was reliable, primarily zones where crops were fed by rainfall. However, it is also important that these same river valleys also gave way to routes through the mountains into Surkhandarya, Farob, and Panjikent,\textsuperscript{689} an overlooked factor that is explored in greater detail later in this chapter.

The best evidence for sedentism comes from the interrelated sites of Kurgancha and Daratepa. Kurgancha was subject only to test sondages, revealing fortifications which Lyonnet incorrectly identified as part of a chain of Hellenistic period forts established to secure the oasis.\textsuperscript{690} In actuality, the site is a fortification with no clear evidence for architecture within the walls.\textsuperscript{691} It is located near Daratepa and together the sites constitute a single sprawling settlement area of 10ha situated just south of the Kyzyl-darya-Yakkabag River. Both sites were watered by artificial irrigation canals and aryks that were fed by rainwater and glacial melt from within the Hissar Mountains. Evidence from inside Kurgancha’s fortification was only a floor with evidence of hearths as well as stone tools and pottery up to 2.5m below the surface of the mound. It is unlikely that this site had a residential function because no domestic artifacts or materials related to production were found.\textsuperscript{692} The only other period documented are economic pits above of the early Iron Age layers which were dated only generally to the Hellenistic period.

\textsuperscript{689} Сагдуллаев 1981.
\textsuperscript{690} Lyonnet 2021: 322.
\textsuperscript{691} Сагдуллаев 1984: 155-156.
\textsuperscript{692} Since the strategy was only to use sondages I am careful not to imply that the site did not have a residential function, merely that there is presently no evidence.
Daratepa is critical for understanding early Iron Age architecture and its role in later rural forms. The site is a towering mound of 0.5ha and 8–10m in height. A single small house was excavated here by Sagdullaev, which measures 10m x 8.3m oriented on a north-south axis with an adjacent fenced exterior courtyard at the north measuring 10.8m x 2.4m. The entire house was built of pakhsa. Three stratigraphic horizons were found with two construction phases in the house with a chronological range dating from the 7th–4th century BCE.

The house was accessed at the west through an entryway that was 0.8m wide. At first the house was a single room structure with pakhsa walls that were 0.7–1m thick with no courtyard. To the north the aforementioned courtyard was added with two pillars that would have supported a canopy on a diagonal axis to the house. The inventory included two hearths set into walls, khums, five wheelmade cauldrons, stone tools, and querns. Found together these indicate that grain processing, storage, and cooking were important here. An 18cm long iron knife found in the first phase of the house is one of the earliest iron objects in Kashkadarya and is comparable to earlier types found both at Anau IV in Turkmenistan and Dal’verzhin in Ferghana. Of particular interest are the aforementioned stone tools, of which a wide variety of objects related to the processing of grain were found such as querns, mortars, pestles, and grindstones. Thus there is no question that the family of this house was associated with agriculture in some way. Similar evidence for the processing and storage of grain was found at the nearby Karaultepa in economic pits associated with pit-houses. The site is contemporary with the tail end of occupation at

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693 Ibid.
Daratepa, with the site of approximately 50m diameter dating only to the 5th century BCE. There is a predominance of wheelmade Yaz III storage vessels, some of which have lug handles, others have loop handles, khums, and cylindro-conical open mouth jars. During the second phase the house was subdivided into two rooms with an external room added at the west outside of the structure, but Sagdullaev did not report finds from this phase. All of the pottery from this site coincides with that of the KT II period of Koktepa and the earlier, pre-Achaemenid layers of the fortifications of Afrasiab.695

I reiterate that the evidence presented here is critical for understanding the development of rural society in Kashkadarya. It is perhaps a misnomer to refer to these early Iron Age sites as rural since there is only the nascent development of an urban core at Er Kurgan at this time. What does it mean to be rural in landscapes where the concept of a city is a distant abstraction? Pre-Achaemenid and Achaemenid period communities in this region were sedentary agriculturalists and pastoralists. It is probable that communities living around Yakkabag produced the same goods as at Kurgancha in Guzar—wine and wheat (this is all we have evidence for, but surely other crops were cultivated). Cattle-breeding was a critical aspect of the economy, which implies some degree of pastoralism—for which there was plenty of good land. While only one brief study was conducted on the remains of domesticated animals found among Padayaktepa and Sangirtepa, it is nonetheless clear that the main animals exploited in the late Iron Age were cattle, sheep, horse, Bactrian camel donkey, and to a lesser extent, pig.696 There is also evidence at Padayaktepa for wild gazelle hunting. The evidence from Daratepa in

695 Lyonnet 2021: 316.
eastern Kashkadarya in the west makes clear that the lifeways of early Iron Age Kashkadarya are very similar to those presented in the previous chapter of Northern Bactria in the same period, especially in the Hissar Valley, Yavan, and Vakhsh. The implication is that regardless of where the location of the political boundary of Sogdiana and Bactria might have been at the end of the Achaemenid and early Hellenistic period, rural populations on both sides of the mountains were essentially the same people: sharing in the same basis of subsistence, using the same local pottery variants of wider Central Asian traditions, and living in the same types of dwellings. While we might be tempted to see a disruption of these traditions with the subsequent political upheaval of Alexander’s invasion and his successors, I will show that rural populations asserted themselves in maintaining their autonomy and were only superficially interested in what colonial Greeks had to offer.

To date 150 sites dating from the 4th century BCE–4th century CE have been documented in the eastern Kashkadarya region including the micro-oases of intermontane river valleys. Omel’chenko undertook a statistical analysis based on the area of the site to formulate a general characterization of site type. The following was determined:

<table>
<thead>
<tr>
<th>Site Size (ha)</th>
<th>Number of sites</th>
<th>Percentage overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>66</td>
<td>54%</td>
</tr>
<tr>
<td>0.1-1</td>
<td>17</td>
<td>13.9%</td>
</tr>
<tr>
<td>1-2</td>
<td>14</td>
<td>11.5%</td>
</tr>
<tr>
<td>2-3</td>
<td>11</td>
<td>9%</td>
</tr>
<tr>
<td>3-4</td>
<td>4</td>
<td>2.5%</td>
</tr>
<tr>
<td>5-6h</td>
<td>1</td>
<td>0.8%</td>
</tr>
<tr>
<td>7-8</td>
<td>4</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

697 Омельченко 2003: 37. These sites were given new identifying information by A. Omel’chenko and catalogued in an appendix to his dissertation. The catalog is not included in circulated copies of the dissertation
As is demonstrated, the overwhelming majority of sites are small settlements that never expanded beyond less than 0.5ha. The number of large sites were very few, two of which being Uzunkir-Padayaktep, both of which were abandoned or drastically reduced in the early Hellenistic period. Unfortunately Omel’chenko’s analysis of the degree of fortified sites comparable to rural settlements is incomprehensible without access to his database, which at any rate does not seem sufficiently precise in its periodization of sites. All that can be said with certainty is that each microregion tended to follow a pattern of one or several small-to-medium fortifications governing an area of unfortified, very small, amorphously shaped rural settlements.

In the 7th century BCE a major settlement emerged at Uzunkir that is widely accepted as the capital of eastern Kashkadarya by the late Achaemenid period (AMCAA 1180). The location is almost certainly the one known to ancient Mediterranean historians as Nautaka (“Nine Rivers”), taking its name from the nine rivers that feed the Kashkadarya plain from the mountains. Located near the village Kumyr Tepe 10km west of Shakhrisabz, Uzunkir is a large fortification that has no clear internal development. In plan it draws on the kala tradition known in Chorasmia, but also similar to sites already known from earlier Iron Age Bactria. It is suggested that such a large...
area without clear interior urban development reflected a need to shelter rural populations from nomadic raids.704

Uzunkir was one of several important Iron Age sites discovered by N.I. Kreshennikova during a general survey of archaeological features along the Shurobsai river west of Shakhrisabz in 1981.705 Other significant sites include Sangirtepa (AMCAA 1177) and Uzunkyr’s fortified citadel Padayaktepa (AMCAA 1185). The citadel is located in the northwest at the confluence of the Shurobsai and the lesser Bulak Zakhsai river. The phasing of Padayaktepa’s fortification wall was the subject of excavations from the late 1980’s through 1997 and then again in 1998 by M. Khasanov. From 1999–2000 A. Omel’chenko conducted a targeted excavation of pit-houses in the center of the mound that dates to the Hellenistic period, published in his aforementioned dissertation. The phasing of Podayaktepa and its ecological setting were explored more recently by J. Lhullier and M. Khasanov in 2011–2012.706

Together the entire area of Padayaktepa-Uzunkir is a staggering 100ha. The earliest known phases of the fortification at Uzunkir the complex was surrounded by a powerful wall system and moat up to 25–30m wide, which was supplied with water from local canals. Together the moat and wall formed a defensive rampart that was 26m in width.707 Initial excavations of the wall noted that it developed to its size in three phases since the 7th century BCE. By the 3rd century BCE the fortification walls reached a height of at least 8.1m708 and featured an inner corridor with rectangular towers and pilasters, all

704 Сагдуллаев и Лушпенко 1989; Омельченко 2003: 37
705 Крашенинникова 1983.
706 Lhullier and Khasanov 2013.
707 Сагдуллаев и Лушпенко 1989: 42.
with loopholes for observation. The towers were rectangular and large enough (6.35m x 3.5m) to host internal rooms. It is here that Alexander would have spent the winter of 328–7 according to Arrian. As stated above, no architecture has been detected within the walls of Uzunkir. However, not only would this location have been ideal for political purposes, the agricultural plain of Shurobsai would have been well stocked with provisions to feed Alexander’s army.

Padayaktepa is a large, amorphous fortified citadel with two gateways. From satellite imagery the site appears to be roughly 550m x 350m, although the published size from excavators is far more restricted—210m x 74m. The site is now threatened by erosion on account of the recent draining of the Shurobsai. The earliest phase at Padayaktepa is a collection of Yaz I sherds located on virgin soil with no accompanying architecture and is very poorly understood. The massive fortification walls appeared during the Achaemenid period or earlier, as is representative of Yaz II and III phases associated with the walls and a single adjacent room. While the site is large, like Uzunkir, there is no indication that it was a city. Given its stature, the site has been the subject of several excavations from 1981-2012. The earliest excavations were led by N.I. Krashennikova, who made a section through the citadel wall. She noted that already by the 4th century BCE the fortification wall had lost its significance on account of a single pit-house cut into the fortification wall with a late Yaz III assemblage.

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710 Arrian *Anab.* 4.18.1–2.
711 Крашенинникова 1983: 533.
712 Lhullier and Khasanov 2013: 394.
713 Lhullier and Khasanov 2013: 397.
714 Крашенинникова 1983: 533.
developed a chronology of the citadel’s fortification system, finding that the earliest construction was from the 4th century BCE. This wall features an internal corridor and sixteen towers,715 nine of which are extant.716 This initial construction was a 3.5m thick wall built of pakhsa with intermittent layers of mudbrick for stabilization.717 The overlaying layers of the 4th century BCE wall are quite substantial; up to 2.3m of deposition related to the Hellenistic period. This Hellenistic material at Padayaktepa was later revisited by A. Omel’chenko, then J. Lhullier and M. Khasanov, where all indications point to ruralization between the late 4th century to second half of the 3rd century BCE. I will return to this evidence in a moment after better establishing the importance of the plain of Shurobsai in the late Iron Age.

Padayaktepa and Uzunkir were not the sites that Krasheninnakova believed to be the administrative center of eastern Kashkadarya during the Achaemenid period. That title went to the associated site Sangirtepa some 650m south of Uzunkir (AMCAA 1177), the oldest known settlement around Shakhrisabz. This site features a 60m x 40m inner fortification with corner towers currently extant to 8m in height. An outer fortification 175m x 140 enclosed an internal area on three sides of the main mound. Not known to Krasheninnakova was that the site would turn out to be the location of one of the most important cult centers in Sogdiana during the Achaemenid period. The site developed in three major phases: an initial fortification (phase I, coinciding with Yaz I), a round complex that is possibly cultic (Yaz II), and two stages of an Achaemenid period cultic complex (Yaz III). A fourth major phase dating to the Kushano-Sasanian period was also

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715 Крашенинникова 1983: 533.
716 Омельченко 2003: 52.
717 Лебедева и Ширинов 1997.
documented, which is a fortified manor house with an internal courtyard.\textsuperscript{718} From the earliest phase of the fortification came both handmade and wheelmade Yaz I pottery with herringbone ornamentation comparable to types found at Chust and Kuchuktepa.\textsuperscript{719} Only a few years after this work an even earlier phase was revealed, demonstrating that prior to the construction of a fortification the site was only a dispersed group of settlements, dating to the turn of the first millennium BCE. While there was no architecture, all of the pottery indicated a domestic occupation. It was only later that a fortified cult center emerged.

The phasing of Sangirtepa has not been published coherently, leaving one to piece together important developments over the lifespan of the site from only initial site interim reports and specialized studies on cultic architecture in the late Iron Age.\textsuperscript{720} The site dates from the 7\textsuperscript{th}/6\textsuperscript{th} century to early 3\textsuperscript{rd} century BCE. Unusually, the excavators have stated that the chronology of the site cannot be determined by stratigraphy because of continuity in ceramic traditions across the lifespan of the site (Yaz II and III).\textsuperscript{721} This is quite unfortunate given the site’s likely stature as the center of cult life in eastern Kashkadarya. Given that there are no Iron Age or Achaemenid cities in this region (again, Uzunkir and Padayaktepa were large settlements, but not cities), the sanctuary would have coordinated rural life in the Shurobsai and beyond. The next phase roughly coincides with the 5\textsuperscript{th}–4\textsuperscript{th} century BCE and features the development of two radically different cult complexes over the lifespan of the period, which has been subdivided into Sangirtepa IIIA, IIIC, and IIIC.

\textsuperscript{718} Хасанов, Механдели, и Гударзе 2006: 211-213.  
\textsuperscript{719} Крашенинникова 1983: 534; 1985; Сагдуллаев и Лушпенко 1989: 40.  
\textsuperscript{720} Хасанов и Механдели 2004; Хасанов, Механдели, и Гударзе 2006; Рапэн и Хасанов 2013; Rapin 2017.  
\textsuperscript{721} Рапэн и Хасанов 2013: 50.
During the IIIA period a horseshoe shaped temple was built directly on the ruins of the IIA structure (roughly 25m x 25m).\textsuperscript{722} There are no known architectural parallels for this type of construction in Central Asia during the Achaemenid period. The building features a central courtyard partly enclosed on three sides by long flanking wings and a central room accessible through the courtyard. This central room features a hearth located at its center, which has been interpreted as representing a fire cult. However, central hearths are common in virtually any architectural type in Central Asia. The courtyard was accessed at the south by a pebble-lined ramp and likely covered based on the presence of four supporting pillars. A single inhumation burial was noted just to the north of the temple and might have been associated with the foundation of the building.\textsuperscript{723} The IIIB period is only represented by some minor changes to the accessibility of inner rooms. The structure was drastically altered during the IIIC period with the IIIA building incorporated into a pakhsa platform and building complex. It is assumed that cultic activities moved to the top of the platform, although again the stratigraphy has only been fragmentarily published. We should note one particular find that has some bearing on the IIIB phasing highlighted in the Sangirtepa interim reports. This is an Achaemenid phiale whose form is not included in the report, but we should note that most agree that these vessels only appear after the arrival of the Seleucids.\textsuperscript{724} Since no other “Hellenistic” pottery is reported it is possible that this vessel dates end of the complex sometime immediately after 280 BCE. Otherwise, it is simply an anomaly.

\begin{flushleft}
\textsuperscript{722} Рагзи и Хасанов 2013: 50-51.
\textsuperscript{723} Rapin 2018: 441.
\textsuperscript{724} Хасанов, Механдели, и Гударзе 2006: 210.
\end{flushleft}
The complex at Sangirtepa indicates that a cultic center was important to organizing rural life like the temple complex at Er Kurgan. While the development of the final phases of the cult complex have been stressed, from an architectural standpoint even the second phase of the site is reasonably of similar function (again, the assemblage has not been fully published). The location of the complex outside of Padayaktepa-Uzunkir is also important. Not only is Sangirtepa older than the other site(s), the fact that it was intentionally left outside of the administrative center of the plain would have had the effect of mediating interactions between town and countryside. This is seen elsewhere, such as the extramural temple outside of Ai Khanoum, the Oxus Temple at Takht-i Sangin, Setalak among the Kyzylkýr and Bashtepa groups of sites in Bukhara (discussed below), and Kindyk-tepa in southern Surkhandarya—to name only a few. This is not surprising, however I emphasize here that scholarship tends to only consider Central Asian cult in relation to urban, elite life at the expense of the rural populations who were just as likely to be worshippers. On the one hand, rural populations were kept at a distance from the local seat of power, but on the other hand, the temple was close enough to a town in which agricultural goods and crafts could be exchanged and relationships formed.

We have some clarity about the development of settlements beyond the walls of Padayaktepa-Uzunkir that helps us better understand the social dynamics of the Shurob microregion. Alongside Sangirtepa, quite a few likely contemporary sites have been identified clustered along a 2km along the southern stretch of the Shurobsai (AMCAA 1175, 1176, 1178, 1179, 1181, 1182, at least as far as the fortified site Saraitepa (AMCAA 1166). Most sites documented in the plain have been lost to development since
the 1980’s.\textsuperscript{725} Sites surveyed in this zone suggest that the entire Shurobsai region was a vast agricultural plain in the first half of the first millennium BCE that was formed by the convergence of the Sanginak and Shurobsai rivers.\textsuperscript{726} Other sites were also documented in a more dispersed pattern, seemingly forming pairs (AMCAA 1176, 1177; AMCAA 1158, 1159; AMCAA 1162, 1163) and distant from each other in a range of 1.5–1.8km. Another small cluster of sites flank both the right and left bank of the Shurobsai at its confluence with the Kashkadarya river 6.75km southwest of Uzunkir. Kilns, pottery wasters, and ceramic slags were documented by N.I. Krasheninnikova in 1982 in the southernmost area on the banks of the Shurobsai dating at least from the late Achaemenid and early Hellenistic periods, but this material has not been published.\textsuperscript{727} Omel’chenko interpreted these finds as evidence for a production center for local forms on account of the high quality of clay obtainable from the Shurobsai river.\textsuperscript{728} The pattern seems to reflect one already indicated by sites associated with the immediate vicinity of Er Kurgan and Ai Khanoum—a fortified urban core with clustered suburbs that were oriented towards the dominant waterway of the region with a dispersed rural zone and production areas in the immediate hinterland.

Some sites in the suburban and rural areas of the plain of Shurobsai were fortified, such as Palvantepa, Saraitepa and Kairagachtep. Kairagachtep is a small fortification of only 40x50m whose walls are built of mudbricks with the dimensions 40-44 x 40-44 x 10–12cm.\textsuperscript{729} Saraitepa is a fortified settlement located along the right bank of the

\textsuperscript{725} Lhullier and Khasanov 2013:
\textsuperscript{726} Крашенинникова 1985.
\textsuperscript{727} Омельченко 2003: 84.
\textsuperscript{728} Омельченко 2003: 85.
\textsuperscript{729} Сагдуллаев 1987b: 132-133.
Shurobsai which utilized that river as a natural defense to its south and east and a surrounding wall with towers on other sides. The town was crossed by a central street running along an east-west axis. A pit-house was document in the “loess area” of the citadel that seems to have dated from the 2nd-1st century BCE.730

Uzunkir and Padayaktepa were drastically reduced in the scale of their habitation by the 3rd century BCE, reflecting a significant power shift in the oasis. This resulted in populations intensifying settlements on the peripheral zones of the eastern Kashkadarya—the very intermontane valleys and micro-oases that were initially the loci of dispersed settlement communities in the early Iron Age.731 A new occupation emerged 10km to the northeast at the modern city of Kitab, which in the Medieval period was known as Kesh, and even earlier as Suse.732 In Kitab a fortified site emerged at Kalandartepa in the 3rd century BCE that became the seat of power for eastern Kashkadarya, although it is possible that this power shift was only completed in the 2nd century BCE.733 It is around this time that canals were initially dug around the modern cities of Kitab-Shakhrisabz, creating a new agricultural plain to support the nascent power center by drawing water from the Kashkadarya river as well as the Aksu.

Kalandartepa is the ancient citadel of Kitab and was subject to sustained exploration by N.I. Krasheninnakova in the early 1970’s.734 The site still towers over modern Kitab to a height of 13–15m and is over 1ha in area. In its earliest phase the citadel was surrounded by a moat and accessed from the west. Excavations revealed that

730 Омельченко 2003: 58.
731 Омельченко 2003: 19.
733 Крашенинникова 1985.
734 Крашенинникова 1978.
a massive pakhsa platform was installed at some point in the 3rd century BCE directly over virgin soil. This platform received a massive extension to the north in the 2nd–1st century BCE for the construction of a monumental building.

One striking aspect of the development of the post-Hellenistic phase at Kitab is the introduction of marble as an architectural material. This comes in the form of columns found at Kalandartepa and a marble quarrying industry located in eastern Kashkadarya, and did not influence architectural practice elsewhere. Apparently, the trade in this stone was restricted to this micro-region. Polished marble column bases are documented around Kitab. These marbles range in color from medium to dark gray as well as from lilac to purple, which is taken to infer multiple quarries in the area.

Omel’chenko’s summary of this marble trade notes that evidence for quarrying in antiquity is found along at Miroqi along the Aksu river southeast of Kitab (AMCAA 1188) and in the upper regions of the Makrid river valley northwest of the same city (AMCAA 1188).735 These do seem the likeliest sources for the marble at Kalandartepa but no additional information about the quarries are known for dating.

Rural domestic architecture in the plain of Shurobsai.

During N.I. Krasheninnikova’s 1984 field season three pit-houses dug into the northern fortification wall of Padayaktepa were documented but not excavated.736 At the time they were considered to be Iron Age pits. The citadel would later be revisited by A. Omel’chenko, then J. Lhhulier and M. Khasanov, whose collective work drastically alters

735 Омельченко 2003: 99.
736 Крашенинникова 1986: 461.
our understanding of Padayaktepa’s post-Achaemenid life. These excavations demonstrate that Padayaktepa and Uzunkir seem to have lost their political authority in the early Hellenistic period, at which point the site was used by rural populations with the formation of a small settlement of pit-houses over the abandoned architecture of the Achaemenid citadel.

Several Hellenistic period pit-houses were excavated, providing critical information about the concepts of rural domestic architecture during this period. It should be noted that the fortification walls were occasionally repaired at this same time. Omel’chenko’s report on the excavation of a pit-house settlement for his dissertation is an especially detailed example of the construction techniques, architectonic principles, and lifespan of a pit-house in this region. Similar pit-houses to those found at Padayaktepa are found at other sites in the immediate vicinity in the plain of Shurobsai at Saraitepa (3rd–2nd century BCE; AMCAA 1166), Upper Sarai, and another nameless mound that cannot be located. To my knowledge these pit-houses were excavated but not published.

Houses at Padayaktepa were round in shape and surrounded by the haphazard and uneven installation of economic pits that were also round. Economic pits often had khums set into their base, clearly justifying their purpose as storage. The houses were discovered 1.1–1.4m below the modern surface of the mound and located between the center of the mound and the south wall of the fortification:

[Two pit-houses] consisted of twenty-one [economic] pits, three large khums fixed to the pakhsa base [i.e. an earlier feature repurposed as part of the pit-house floor],

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737 Lhullier and Khasanov 2013: 395.
738 Омельченко 2003: 19.
739 Омельченко 2003: 58.
two special bath-shaped depressions, passages between them, two hearths and eighteen pits with a diameter of 10-20 cm from the columns of the roof of the house arranged in a certain order. Judging by the filling of the pits, in which there were also whole square bricks (40x40 x 12-14 cm), grain was stored in most of them. Pit No. 6 was cultic in function, and pit No. 1 (1.9 x 1.4 m)… in all likelihood was a residential one.\(^\text{740}\)

Omel’chenko describes round interlinking pit-house structures connected under the same canopies. One structure has a diameter of 4-5 m and the other 8 m in diameter. Other dwellings of similar size were installed in the ruins of earlier buildings.\(^\text{741}\) These dwellings were quite large. At least some of the subterranean walls were reinforced by square-format mudbricks that were 44 cm x 44 cm x 16 cm. From the published plan, the house is most like the Hellenistic period pit-houses at Dal’verjin in Surkhandarya and post-Hellenistic pit-houses at Saraitepa, also in Shurob.

The floors of Padayaktepa’s pit-houses were plastered, although branches of vegetation and reed (kamysh) found spread over the floor is probably the collapse of the roof. Green residues were also found pressed into the plaster, suggesting some organic matrix was added to the floor plastering. Post holes encircling the inner walls of several houses indicate that wooden posts supported a concentric roof with a central roof hole to evacuate smoke at its zenith. In some areas pit-houses utilized pakhsa blocks of the earlier Achaemenid construction as floors in the later period, a common practice also documented by us at Bashtepa.

Hearths were found at the center of houses which probably served a dual function for cooking and heating. These were made of pakhsa but delineated by the square mudbricks Omel’chenko describes above. As noted, smoke would easily be evacuated

\(^{740}\) My translation.

\(^{741}\) Lhullier and Khasanov 2013: 394-95.
through a central hole left in the roof. Large khums were often found either dug into the ground or fixed upon special pedestals with heights of 0.3–0.7m.

Later Hellenistic pit-houses were also documented at Padayaktepa. This phase is represented by a series of economic pits partly dug into earlier architecture, partly into the infilling of the fortification and partly into the fortification wall. The presence of fish plates comparable to those found in the Afrasiab IIB complex allows Omel’chenko to date the initiation of these later houses to the second half of the 3rd century BCE or slightly earlier on account of the presence of some Afrasiab IIA forms. This sort of disregard for earlier architecture in which the seams of underlying features and pragmatic areas of looser earth for installing a pit or pit-house is also documented among several pit-houses at Bashtepa (see section III). Associated with these pits are post holes that indicate the installation of light post-and-beam constructions. Lhullier and Hasanov also report one earlier semi-subterranean pit-house with a trapezoidal entrance facing south, which gave way to a rectangular room at the north (no plan is provided). At least two more structures dating to this later phase were documented by Lhullier and Khasanov but it is unclear if they were pit-houses. One building is partially destroyed by even later Hellenistic pits and is extant only on three sides. The presence of a fireplace and circular grain silos suggest that the building was a dwelling, in accordance with cooking, heating, and storage practices of the earlier period. An adjacent, above ground, older building (presumably still Hellenistic, this is even less clear) is also reported with the dimensions of 3.7 x 1.9m and of mudbricks 44cm x 44cm x 16cm in size.

742 Омельченко 2003: 83-84; Омельченко 2006.
It is clear that agricultural production was central to the local economy. Aside from the aforementioned pits and khum installations for the storage of grain, artifacts from these structures include stone querns and mortars and as well as stone sickles. There is also evidence for grain processing, “grain stored in the pits was ground in special recesses, “bathtubs”, and poured into nearby khulms with a capacity of 150–300 liters.”

We can only give a general comparison of the Padayaktepa pit-houses to those found down the road at Saraitepa, also excavated by A. Omel’chenko, and seen as representing a transitional development to above ground domestic architecture. Here there are three phases of construction tentatively dated from the late 2\(^{\text{nd}}\) century BCE–2\(^{\text{nd}}\) century CE (Figure ??). The earliest phase is represented by two round pits, one economic and one domestic dating to the end of the 2\(^{\text{nd}}\) century BCE on account of the presence of stemmed goblets that are a distinguishing marker of the period. The size of the domestic pit-house is 2m in diameter and to a depth of 1.35m. This impossibly small unit is justified as domestic on account of the presence of a hearth set into the wall and a storage vessel set into the floor, both by the northern wall. The entire unit was plastered with a heavy lip protruding above the surface, around which a post and reed superstructure would have capped the house. The very small dimensions do indicate that this was only temporary housing. Omel’chenko notes that a rectangular vessel, 0.6m x 0.3m, was installed into the earth to the east of the pit-house, which has already been

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743 My translation. Омельченко 2004: 63. The excavator notes similar bathtub shaped grain processing pits at the nearby site of Saraytepa as well as at Merv in Turkmenistan. Likewise, the author draws comparisons to shallow holes in domestic structures in Khorezm dating to the Kangui period (See Неразик 1976: 45.
744 Омельченко 2003: 63.
745 Ibid: 76-96.
shown to be a vessel for grinding grain in Margiana, Chorasmia, and Sogdiana in the second half of the first millennium BCE.\textsuperscript{746}

Pit-houses disappear quickly in Saraitepa’s second phase, from the early 1\textsuperscript{st} c. BCE–1\textsuperscript{st} century CE. Instead, a more durable above ground structure was built over the earlier pit-house,\textsuperscript{747} taking on a form similar to that of late Achaemenid period structure at Daratepa. The structure is irregularly shaped, with obtusely angled walls, and follows the contours of mound topography. The northern wall was built of large pakhsa blocks (75cm x 75cm x 17cm and 80cm x 80cm x 20cm). The western wall is set at an obtuse angle towards the southwest and built of square mudbricks typical of the period (40cm x 40cm x 10cm). The two walls enclose what has been defined as room 1. West of this wall is a narrow room (room 2) that might be storage or a corridor. The southernmost extent of this wall abruptly ends at a threshold in which a ceramic lined posthole was set into the floor, likely indicating an inset for a door hinge. A hearth was located just south of the northern wall and a khum was installed into the western wall, which was interpreted elsewhere as cool storage for meat.\textsuperscript{748} The final phase of the structure is represented by a second coat of floor plaster and the inset of an upright cladding along the northern wall made of smaller mudbricks (33cm x 33cm x 10cm). Two additional rooms were added to the north of the building but with an unclear connection to the former rooms.

It is clear then that there is a rapid development in the architectural sophistication between the first and second phases of this briefly inhabited space. As noted, Omel’chenko sees this in evolutionary terms—a logical progression from a less

\textsuperscript{746} Омельченко 2003: 63; Неразик 1976: 45; Качурин и Буряков 1963: 132, 141.
\textsuperscript{747} Омельченко 2003: 65.
\textsuperscript{748} Качурин 1964: 134-135; Кругликова и Сарианиди 1971: 170.
sophisticated temporary housing to a more permanent structure. This much is true, the pit-house is temporary, and the later structure reflects permanence in the intended occupation. Is this the same type of evolutionary scheme also documented at the late Achameneid / Early Hellenistic farmstead at Kurgancha? This is difficult to say. Unlike Kurgancha the early phase seems short enough that one might need to consider the possibility that the homeowner needed to live on this property in temporary housing while constructing the larger house over an indeterminable amount of time dependent upon available labor and access to higher quality construction materials. The pottery from the first and second periods is very similar.\textsuperscript{749} While there is a gradual refinement in the quality and sophistication of stemmed goblets, the method in which this data was published does not grant us a granular periodization contoured by stratigraphic control. Otherwise, we might be able to see the shift from cruder to highly refined goblets that is so commonly known across the rest of Sogdiana and northern Bactria. Development of the final phase of Saraitepa is beyond the concern of this analysis.

Taking stock of our evidence for rural architecture in eastern Kaskadarya, the tradition of rural architecture in the plain of Shurobsai was primarily round pit-houses that were sometimes temporary constructions, and at other times more permanent habitations. This tradition is only documented as beginning in the Late Achaemenid period in eastern Kashkadarya. They do not follow in the same footprint as the pit-houses documented at Kurgancha and Kindiktepa in Guzar and the Karshi Oasis, which are in part contemporary with those at Padayaktepa. What is more, there was a parallel tradition of constructing above-ground farmsteads, first documented at Daratepa in eastern

\textsuperscript{749} Омелченко 2003: 84-89.
Kashkadarya, then in the later phases of Kurgancha in Guzar. Pit-houses continued as a known house type into the 2nd century BCE in at least a temporary capacity at Saraitepa before an above-ground farmstead also emerged there. All of these sites indicate that residents were engaged in a combination of agriculture and pastoralism. This calls into question evolutionary paradigms that see a progression from temporary pit-house construction to permanent above-ground structures. What is more, while the possibility of mobile groups using pit-houses and engaging in agriculture cannot be ruled out, as I have argued elsewhere, the evidence does not permit us to find such a direct correlation between nomadism or semi-mobility. In fact, it seems to point to a tradition of very simple vernacular structures operative parallel to a tradition of above ground farmstead construction, both of which were utilized by sedentary communities.

4.3. Eastern Sogdiana: the oasis of Panjikent and the Zerafshan-Hissar Mountainous zone.

East of Kashkadarya is the formidable Hissar Mountain range that divides modern Uzbekistan and Tajikistan into two distinct zones.\(^{750}\) For at least part of antiquity this range formed the political (if not cultural) boundary between Bactria and Sogdiana. This was certainly the case after the exit of Seleucid power from Sogdiana in the second half of the 3rd century BCE. In the modern day, geography and topography also has political ramifications that have resulted in real tragedy in Tajikistan. Communication routes between the Hissar mountains restrict traffic to only a few passable highways, which

\(^{750}\) As discussed earlier, I do not subscribe to the notion that Bactria was politically and culturally bounded by the Oxus River.
leaves practical aspects of administering a country and its economy quite difficult with ethnic tensions between the north and the south only amplifying the dividing role of the mountains. Intermontane travel would have also been difficult in antiquity, but hardly impossible. In fact, we have some archaeological evidence that the Hissar mountains were traversed by people from Kashkadarya and Samarkand, with populations living in the valleys of Surkhandarya and Hissar in northern Bactria.

Yet there are also populations living within the mountains and along key routes linking these broader cultural zones, something that has been overlooked in scholarship of the Hellenistic and post-Hellenistic periods. These are the rural populations of Panjikent and the dozens of intermontane micro-regions established along tributaries of the Zerafshan and Kashkadarya rivers nestled in the Zerafshan and Hissar Mountain Ranges. The detection of ancient settlements within mountainous zones is difficult, but a network of semi-nomadic pastoralist groups as the backbone of an interregional trade network through the mountains is generally accepted as developed by the Bronze Age. New methods of analysis such as the study of sedimented human fecal biomarkers in Central Asia’s mountain lakes seem to confirm this in areas where material culture is absent.

Ancient eastern Sogdiana had its own unique development compared to other Central Asian regions in the late Iron Age. Here we consider an expansive oasis zone that developed along the Zerafshan River from the mountainous region of Gorno-Sogd, famous for the Bronze Age city of Sarazm and Late Antique town of Panjikent but

Schroeter, Lauterbach, Stebich, Kalanke, Mingram, Yildiz, Schouten, and Gleixner 2020.
otherwise with a long tradition of mixed rainfed agriculture and pastoralism. The
difficulty of the landscape led to the development of an entirely new irrigation
technology for the region during the Hellenistic period, the lateral korez (qanat), which
would drastically alter the trajectory of the rural landscape towards the more densely
populated zone that we are familiar with today.

The region in question is the first major alluvial plain of the upper Zerafshan
River. This river originates east of the alluvial plain at the intersection of the Turkestan
range to the north and the Hissar to the South and is fed by glacial melt. The entire
drainage basin for the headwaters of the river is 17,710km$^2$ from this point of origin to
the Bukhara and Karakul Oases at the border of Uzbekistan and Turkmenistan.$^{753}$ Water
in the form of snow and ice melt along the southern Hissar drains into many tributaries of
the Zerafshan River throughout Panjikent’s alluvial plain, the most significant being the
Matcha, Fandarya, Kishtudarya, and Magiandarya. Each of these rivers are themselves
formed by smaller tributary rivers at higher elevations. Several mountain lakes also act as
natural catchments and outflow points for intermontane tributaries, where a number of
Medieval and modern towns are sustained deep in the mountains around lake
Iskanderkul.

To be clear, the idea that the inner mountains were inhabited at the end of the first
millennium BCE is speculative, however there is good reason to suspect as much when
considering wider trends of habitation in similar mountainous zones of southern Central
Asia. For example, a recent study has focused on human and animal fecal matter trapped

$^{753}$ Эшонкулов 2007: 8.
in sediments of Lake Chatyr Kol in the Tian Shan Mountains, Kyrgyzstan. This region shares a similar ecology with the inner Hissar as a high-altitude subalpine zone with pockets of steppe grassland. As a region inhabited by pastoral populations there is very little archaeological evidence for human habitation in the traditional sense. One way of overcoming this obstacle was to analyze lake sediment cores for evidence of palaeobotanical remains (especially pollens) and mammal feces accumulated as runoff into the lake. The team was able to single out three significant phases of human habitation during the Holocene, of which one subphase corresponds with the 5th–4th century BCE. This phase identifies the beginning of a climatically dry period in which high-altitude populations were entirely engaged in livestock farming before there was a significant drop in habitation by the 1st century CE. Taking this evidence as a proxy we can at least entertain the idea that similar ecological zones such as the inner Hissar were also inhabited by pastoralist populations.

While the peaks of the Zerafshan and Hissar Mountains are glaciated for most of the year, the slopes and intermontane valleys are rich for crop cultivation and pasturage. Approximately 4.5 million tons of sediment runs off from the mountains, depositing minerals such as calcium, magnesium, potassium, and humus into lower alluvial fans. Thus, these fans are rich in mineral resources that provide nourishment for crops, but also vegetation and grasses for grazing animals. Advanced irrigation techniques for food production in these mountainous zones are unnecessary. At altitudes of roughly 1,700m–2,700m rainfed agriculture was the norm in antiquity. As we shall see, however,

754 Schroeter, Lauterbach, Stebich, Kalanke, Mingram, Yildiz, Schouten, and Gleixner 2020.
advanced lateral korez technology was utilized nonetheless to facilitate the stable flow of fresh water to canal networks in lowland fields that relied on irrigation.

Wild and domesticated cereals, fruits, and vegetables are bountiful across all of Gorno-Sogd. Current varieties that are cultivated in the mountains can be summarized as follows in Table 15.

Table 15. Wild and Domesticated Crop Availability in the Zerafshan and Hissar Mountains.

<table>
<thead>
<tr>
<th>Wild and Domesticated Crop Availability in the Zerafshan and Hissar Mountains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereals:</td>
</tr>
<tr>
<td>- Millet, rye (2 types), wheat, oat, barley</td>
</tr>
<tr>
<td>Spices:</td>
</tr>
<tr>
<td>- cumin, mint, nigella</td>
</tr>
<tr>
<td>Fruits:</td>
</tr>
<tr>
<td>- hawthorn, grape, cherries (2 types), pear, apple, plum, blueberry,</td>
</tr>
<tr>
<td>barberry, jujube, strawberry</td>
</tr>
<tr>
<td>Vegetables:</td>
</tr>
<tr>
<td>- arugula, onions (10 types), carrots, rhubarb (10 types)</td>
</tr>
<tr>
<td>Legumes:</td>
</tr>
<tr>
<td>- peas, barley, mung bean, beans, lentils</td>
</tr>
</tbody>
</table>

While we have no palaeobotanical information from the region, at least some of these cultivars would have been harvested in antiquity, especially wheat and barley as much as grapes and apples.

Stock-rearing would have certainly been focused on cattle, horse, sheep, and goats as with elsewhere in Bactria and Sogdiana. Animals were also essential as beasts of burden in agricultural labor as well as interregional travel through rugged terrain. Depending on the task various forms of transportation and transport technologies have

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756 Based on Эшонкулов 2007: 15.
been identified in pre-modern Central Asia. Ethnographic data collected by U. Eshonkolov helps us understand how movement along this ancient network would have operated, as well as the primary materials transported by each animal and mode of transportation. This is summarized as follows in Table 16:

Table 16.

<table>
<thead>
<tr>
<th>Animal Transportation and their Burden in the Zerafshan and Hissar Mountains(^{757})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donkey:</td>
</tr>
<tr>
<td>● Burden up to 80–100kg; long-distance travel (up to 35–40km/day), capable of difficult terrain</td>
</tr>
<tr>
<td>Camel:</td>
</tr>
<tr>
<td>● Salt, tea, fabric, cotton, metal, metal products; long-distance travel.</td>
</tr>
<tr>
<td>Ox:</td>
</tr>
<tr>
<td>● Agriculture, “chigna” sled (2.5–3m x 1.5–1.7m); low-land travel.</td>
</tr>
<tr>
<td>Horse:</td>
</tr>
<tr>
<td>● Travel; Cargo up to (115–130kg); short and long-distance—up to 40–50km/day.</td>
</tr>
<tr>
<td>Elephant:</td>
</tr>
<tr>
<td>● Big stuff; very rare.</td>
</tr>
</tbody>
</table>

Table 17.

<table>
<thead>
<tr>
<th>Pre-Modern Transportation Technology in the Zerafshan and Hissar Mountains(^{758})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chigna cart:</td>
</tr>
<tr>
<td>● Agricultural work; cargo</td>
</tr>
<tr>
<td>Two-wheeled cart:</td>
</tr>
<tr>
<td>● Drawn by donkey or horse (320–500kg); 30–35km/day.</td>
</tr>
<tr>
<td>Grain pole:</td>
</tr>
<tr>
<td>● Two poles tied to a horse or donkey (4–5m long) for grain and hay.</td>
</tr>
<tr>
<td>Zambar stretcher or basket wheelbarrow with wooden wheel (“galtak”):</td>
</tr>
<tr>
<td>● Short distance transport; agricultural work</td>
</tr>
<tr>
<td>Basket on the back:</td>
</tr>
<tr>
<td>● Transport clay, earth, or manure.</td>
</tr>
<tr>
<td>Human labor:</td>
</tr>
<tr>
<td>● Sheaves of grain, hay, firewood; up to 25kg.</td>
</tr>
<tr>
<td>Rafts (only known in major riverine zones)</td>
</tr>
</tbody>
</table>

\(^{757}\) Based on Эшонкулов 2007: 59.  
\(^{758}\) Based on Эшонкулов 2007: 59-60.
In addition to a diversity of crops, the Zerafshan and Hissar Mountains are also rich in mineral resources and raw materials. As with today, these mountains feature thick juniper forests. Copper and iron are widely available, but silver and lead mines are also known to have been mined since the Bronze Age. Gold extraction was also practiced here both as alluvial panning and mining.

4.3.a. Rural settlement patterns in the micro-oases around Panjikent.

Nestled between the Turkestan Mountain range in the north, and the Zerafshan mountain range in the south, is a narrow valley that runs roughly 80km east-west with the river at its center. In the modern day this area is the district of Sughd, whose largest city is Panjikent—a city that inherits its name from ancient Panjikent and was a major trade hub for merchants from China, South Asia, and the Near East. The wider oasis of Panjikent adjoins dozens of other micro-oases and intermontane valleys. The modern cultivable zone is restricted to a narrow strip along the main river, stretching for approximately 40–60km before one enters the vast oasis of Samarkand. The rest of the basin is roughly characterized as naturally terraced piedmont zones that are more suitable for pasturage. These piedmont zones are cut by hundreds of tributary rivers of the Zerafshan river as well as sais that only operate during winter, spring, and early summer. The wider region is exemplified by its biodiversity with a variety of wild and domesticated animals living alongside the region’s human inhabitants. What is more, in

760 Эшонкулов 2007: 8.
761 Avanesova 2021: 666.
antiquity many parts of the banks of the Zerafshan would have been lined by thick tugai forests creating a number of minor ecological niches, or ecotopes, which would have enriched not only subsistence but an appreciation for biodiversity experienced by ancient communities living within the area.

The overwhelming majority of work done in Panjikent has focused on the Late Antique city. At the inception of archaeological inquiry in the area in 1887 the first trenches were laid by Russian military officers engaged in amateur archaeology. This was followed by the recognition of the traces of buildings and streets on the Medieval fortress of Urdakan by the topographer G. Koschenich, which led to the further identification of this site with Panjikent. The site has been subject to major long-term explorations by the Hermitage Museum of St. Petersburg, whose work has made the Late Antique and Medieval town of Panjikent perhaps the best excavated and well-known archaeological monument to Central Asia’s past. Two major publications deal with excavations of this city in great detail and collectively weave together the minor reports of excavations here, of which there are hundreds. The first is A.I. Isakov’s 1977 *Tsitadel’ Drevnojo Pendzhikenta* (*The Citadel of Ancient Panjikent*) which restricts itself to excavations of the ancient citadel complex of the city. The second major work is V.I. Raspopova’s groundbreaking book on urban residential life, *Zhilishcha Pendzhikenta: Opyt Istoriko-Sotsial’noi Interpretatsi* (*The Dwellings of Pendjikent: towards a historical-social interpretation*) in which most urban residences were systematically published as a means to explore social aspects, economics, and domestic institutions within the city. While

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762 Распопова 1990.
Raspopova sees inheritances of Hellenistic period features like architectonics of
devotions, temple planning, fine arts, and figurine production there is a distinct lack of
Hellenistic occupation at this particular site, at least as much as the state of evidence
allows.\footnote{Распопова 1990: 190-98.} We also note that S.K. Kabanov saw rural architectural influence in the urban
dwellings of Panjikent based on his excavations at Aul-tepa in Kashkadarya—which is

West of Panjikent, the discovery of the late Chalcolithic and early Bronze Age
site Sarazm has drastically reformulated our understanding of the emergence of rainfed
and irrigation agriculture in Central Asia.\footnote{Исаков 1981; Бешеневал и Исаков 1989.} The development of rural life in Panjikent
from the Bronze Age through Late Antiquity is the research focus of only one scholar, U.
Eshonkulov.\footnote{A 1999 dissertation by Sh.F. Kurbanov involves the development of rural settlements in the upper
Zerafshan from the 5th c. BCE – 7th c. CE but could not be accessed. From the author’s summary he
concludes that there is no evidence for irrigation agriculture outside of the immediate environs of Panjikent
in the Hellenistic period. It is unclear whether this amounts to a criticism of Eshonkulov’s evidence or a
lack of access to the dataset. It seems the latter it most likely.} The publication of his *History of the Agricultural Cultures of the
Mountains of Sogdiana* (Итсория Земледельческой Культуры Горного Со́дгана) is the
culmination of the author’s archaeological and ethnographic fieldwork undertaken 1976–
1991 in Sughd. His book is the only source for this topic and is barely cited in modern
scholarship on Hellenistic Central Asia. Therefore, I draw heavily from this important
work in this discussion, while also highlighting some of the issues in using this single
source as my narrative progresses. In chapter two I noted some of the liberties
Eshonkulov takes with this data in linking traditions that are best exemplified by material
culture to the ethnic origins of the Tajiks. I stand by those criticisms while also accepting

\footnotesize
\section*{References}

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\begin{itemize}
\item Raspopova 1990: 190-98.
\item Исаков 1981; Бешеневал и Исаков 1989.
\item A 1999 dissertation by Sh.F. Kurbanov involves the development of rural settlements in the upper
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lack of access to the dataset. It seems the latter it most likely.
\end{itemize}
the mechanisms of cultural transfer across generations and therefore feel free to base my own description on Eshonkulov’s work in the area. One benefit of Eshonkulov’s analysis is that his combined anthropological and ethnographic perspective allows us to consider life at the local, village level and adaptive strategies for mountain life. At the least the dating of sites reported from Eshonkulov’s surveys is reliable enough for us to consider the wider development of human habitation in the second half of the first millennium BCE. This section demonstrates the continuity of lifeways from the Sogdian Neolithic to the present day around the rivers that form the origin point of the Zerafshan River.

Rural Panjikent has been the subject of dozens of expeditions that were focused on the formation of feudal estates from Late Antiquity and beyond. After our period of interest there is a significant development of the rural hinterlands along the upper Zerafshan River and especially the rapid constructions of castles along mountain spurs deep into the Hissar Mountains. Settlements emerge much further into the mountains than our evidence allows for the earlier periods, although I am quite confident this picture will change given the high mobility of Sogdian populations in antiquity. The wide historiography of this branch of research is beyond my consideration here. However, the region still continues to challenge scholarship with new discoveries. This is exemplified by recent excavations at Hisorak at the extreme eastern margins of Sogdiana near the origin of the Zerafshan River deep in the Turkestan-Hissar Range, a site that emerged in the 3rd century CE and later approached the same size as urban Panjikent by the 10th century CE.

768 The most comprehensive overview of Soviet archaeological research of inner Gorno-Sogd is found in Yu. Yakubov 1988: 6-12.
769 Смиринова
The Panjikent Oasis plays an important role in the history of rural life in Sogdiana, as it was here that our earliest evidence for agriculture emerges in the region, at Sarazm (AMCAA 997). Less known is that the Panjikent oasis and the eastern micro-oases of the Magiandarya have some of the best-preserved evidence for hydrological management from the Hellenistic period, which allows us to explore in some detail the symbiotic relationship of mountain and lowland communities in Sogdiana. What is more, evidence for settlements that emerged along other micro-oases east of Panjikent and the Magiandarya are a testament to a vast agricultural zone nestled in the mountains, such as the Uchkoya’sai, and the plain between the Amondarya and Ruztsobnaksai. Perceived antagonisms between mountain dwelling communities and their counterparts closer to sea level is a common trope that appears in archaeological literature in which there is a long-standing myth about rural and urban antagonisms that which finds its origins in the writings of ancient Mediterranean authors as much as their Mesopotamian antecedents. In a place with no written record of its own before the 5th century CE, and which falls at the extreme disciplinary “margins” of both the Classical and Near Eastern worlds, we are allowed to let the archaeological evidence speak for itself and think about the ways in which mountain and lowland populations would have coordinated with each other for survival and cultural exchange.

It is only later that the Panjikent Oasis becomes a significant urban zone and enters the historical record of Sogdian life. From as early as the 5th century CE this valley constituted the state Panch with its capital Panjikent located at the entrance to the valley from the plains east of Samarkand. Panjikent rivaled Maracanda at Afrasiab and Bukhara in its importance as a so-called “Silk Road” city in facilitating trade and international
exchange in Late Antiquity. But this is later than our period in question. During the
Hellenistic period, the Panjikent oasis was a lush agricultural valley with no cities but
with bustling communities of farmers and pastoralists.

The breadth of the Panjikent Oasis is surrounded on three sides by high ridges and
mountains which restrict intermontane communication. The vast inner mountains of the
Zerafshan and Hissar ranges are difficult to traverse, but not impossible. Given the
vastness of glacial drainage the river networks of the inner Hissar are well networked and
amenable to travel. In addition to travel along rivers, lateral paths and switchbacks were
developed in east-west directions that bisect sais, gorges, and low peaks. These routes are
essentially seasonal, as winter snow would hinder accessibility. Within the valley of the
Panjikent Oasis the development of permanent settlement was tied to the management of
seasonal fluctuations in the level of the Zerafshan River. The unreliability of riverbank
stability meant that early settlement was more confidently situated at the foothills of
upland terraces, situated along the left bank of the river with farming activities
undertaken in the lowland floodplain, a situation similar to that of Panj in Bactria as
described in the previous chapter.

Substantive human exploitation of the environment in the Panjikent Oasis and its
mountainous zones was already underway in the Neolithic period but not yet with a need
for managing these seasonal river fluctuations. By as late as the 5th millennium BCE the
region was inhabited by hunter-gatherer populations that utilized stone tools representing
an intersection between Kelteminar and Hissar Culture traditions.770 These populations
lived along the low-lying terraces of the upper Zerafshan rather than the lower floodplain.

770 Эшонкулов 2007: 63.
Two such terraces exist along the left bank (Figure 51), south of the Zerafshan River. The first terrace is situated roughly 20–30m above the lower valley and with easy access to the lower valley at many points. The second terrace system is located several kilometers to the south of the first and is already the lower mountainous zone of the northern Zerafshan Mountains. This area is quite rugged and has never been amenable to large scale settlement. With early habitation situated around these piedmont terraces, sustenance was maintained first through hunter gathering before eventually giving way to dry farming and pasturage.

By the 3rd millennium BCE the Panjikent Oasis was already in communication with the wider Near East and South Asia, a situation which likely played a role in the emergence of intensive agriculture and agglomerated village life at Sarazm. The foundation of Sarazm is generally considered to be the result of a gradual population movement from the Geoksyur Oasis north of the Kopet Dagh in Turkmenistan to the eastern Zerafshan basin. This is on account of certain Bactria-Margiana Complex (BMAC) forms found reproduced in this eastern Sogdian context. Ceramics at Sarazm are generally similar to those found in Margiana but with the important continuation of production techniques that were indigenous to these eastern zones, in particular the Neolithic Hissar Culture. Yet there are also strong ties to Iran, and specifically Baluchistan, which have vexed the notion of a direct connection with the Bactria-Margiana Archaeological Complex. This “disruption” to neat diffusionary influences from west to east is similar to the presence of earlier Chalcolithic ceramic traditions evident in the plain of Taluqan in Afghanistan or the Harappan colony Shortughai in
Dasht-I Qala in Afghanistan, admittedly to a lesser degree. Nonetheless, taken together these examples should encourage us to steer clear from overly confident hypotheses of cultural replacement caused by migration and diffusion as well as other parts of BMAC Central Asia.

Only with the development of irrigation during the Chalcolithic and Bronze Age and the installation of canals was stable settlement possible in the lowlands along the banks of the Zerafshan in Panjikent. In addition to changing notions of land-use, canal infrastructure emerged as a means to stabilize riverbanks that were prone to erosion. With the establishment of a permanent lowland settled community at Sarazm, terrace zones were apparently utilized exclusively for pasturage. While this much seems certain, there are some who suggest that an increase in pasturage in Penjkent’s terraces were due to the arrival of ethnically Afanas’evo-Jamnaja migrants from northern Central Asia and the Siberian steppe, a theory that is only predicated on evidence from west of the valley of Panjikent at the Zhukov sanctuary. This may be the case, but there is no sound reason to assume these terraces did not continue to be used by local herdsmen who were still within the indigenous milieu of settled communities emerging at Sarazm.

A major cultural transformation occurred in the late Chalcolithic to early Bronze Age, proto-urbanization and intensive agriculture at Sarazm (3000–2500 BCE) This development is viewed as an outcome of an influx of ideas, and possibly people, from the Bactria-Margiana Complex societies of southern Turkmenistan and northern Afghanistan—as well as ideas and peoples from the northern steppe—which apparently

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772 Avanesova 2021: 666.
merged Neolithic traditions of the Panjikent Oasis. However, it is important to stress that the traditions of stone tool production at Sarazm remained within the broad local tradition of the Hissar Culture of the Hissar Valley in southern Tajikistan. The result was the emergence of a highly developed urban society in the early 4th millennium BCE at the site known as Sarazm, located in the modern town of Chimkurgan, as well as a new crop of rural agricultural farmsteads that emerged at places like Khamirtepa. There are also strong indicators of the permanent presence of mobile populations, or at least traditions, known from the Afanasiev culture north of the Syr Darya and southern Siberia.

The long-term development of irrigation from the Chalcolithic through late Bronze Ages in the Panjikent Oasis is marked by technological and cultural innovations. Irrigation developed from a rudimentary to complex system over time with a tendency towards greater control exerted incrementally over the meandering river valley. As noted, the earliest system, dated to late 5th–early 4th millennium BCE, took the form of narrow strip land cultivation located within the floodplain of the Zerafshan. Stone hoes in the form of digging sticks with stone heads are already known in this period, with the plow emerging during the 3rd millennium BCE. The main crops at this time were likely wheat and barley, as found in the remains of a 15m x 15m granary situated atop a stone platform near Sarazm dating to the 3rd millennium BCE. In addition to plant cultivation, animal agriculture also emerged at this time, with inhabitants transitioning from hunting game to the breeding of goat and cattle. What is more, these irrigation networks also facilitated the establishment of clay extraction zones for mud brick materials.

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773 Avanesova 2013.
775 Эшонкулов 2007: 70.
However, the most substantial building material was stone, which had to be locally imported to this area from the mountains. It is assumed that this stone was brought from a quarry found 1.5km southwest of Sarazm at Sangkov, which has evidence for mining activities dating from the Mesolithic through Medieval periods. The use of copper and bronze also appears for the first time.

Irrigation networks involved the use of gravity-fed canal networks drawn from the tributaries and sais of the Zerafshan in the Panjikent Oasis, of which there are dozens on both sides of the river. These networks were quite simple. A major water source (i.e. a Zerafshan tributary river) was tapped by a collector from which water was controlled and distributed into fields on a schedule organized by farmers seeking to irrigate narrow strips of land. Estuaries were built off of the main river and its tributaries to keep a steady supply of water in reserve in canals that bordered farms. When water was needed it was released from the canals through the opening of small dams built to direct water into the fields. However, between the 4th–2nd millennium BCE, water was gradually directed into a more direct canal system around Sarazm. Glacial runoff along the Hissar’s northern sais was directed into channels where floods were controlled, and water access was restricted to only what was needed for the growing season. It is during this time that extra-urban Bronze Age settlements moved from the foothill terraces and into the lower floodplain. Spillways were then constructed to channel away any excess water from west to east. The Bronze Age culture associated with Sarazm gradually disappeared or changed by the mid-2nd millennium BCE—a decline that is still unaccounted for, but generally attributed to drought.

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776 Эшонкулов 2007: 240.
There is a gap in our knowledge of life in this zone from the end of Bronze Age agricultural communities until the mid-first millennium BCE. The only evidence for early Iron Age occupation in Panjikent comes in the form of burials. However, several Bronze Age canals and spillways were revived in the first millennium BCE and serve the same role to the present day.

Sometime in the first millennium BCE, likely in the 6th or 5th century BCE, the Zerafshan river and irrigation of its basin was drastically altered with the construction of the Dargom canal in the plain of Samarkand, which draws its water from the upper Zerafshan in the oasis of Panjikent. The canal originates at the location of the modern May 1st Dam in Ravotkho’ja at the border of modern Uzbekistan and Tajikistan. The establishment of the Dargom Canal is only just before a resurgence of Bronze Age irrigation networks in the Panjikent Oasis,777 with the likely implication that the two events were somehow interrelated. This resuscitation and expansion of earlier irrigation systems led to a substantive renaissance in irrigation technology in the Panjikent Oasis from the 3rd century BCE that greatly increased the opportunity for agriculture in the valleys and the emergence of large towns and urbanization at Panjikent in the 4th–5th century CE. This Hellenistic period intensification of canals also reflects patterns known in Bactria, such as in the plain of Kwhaja Gar and Hazar Bagh across the Kokcha river from Ai Khanoum as much as within Dasht-i Qala.778 I will return to this evidence in a moment.

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778 Gardin 1980: 495-496.
Our understanding of human habitation in this area during the Achaemenid period remains quite underdeveloped. North of Sarazm, U. Eshonkulov has identified what may be the remains of a late Iron Age *paradeisos* and military training area that may have been established by the Achaemenids, or more likely, the local elite aristocracy (AMCAA 998).\(^{779}\) The *paradeisos* was apparently enclosed by an 11km long earthen wall at its south although the dating of its ruins is not absolute. The remains of a round tower (AMCAA 999) 2.5km west of Sarazm is assumed by Eshonkulov to be of the same period, and thus part of the same complex, but here we should be a bit cautious about the dating. The site is located directly on the Zerafshan river at the confluence of a small ravine. The *paradeisos* is apparently associated with a small settlement near Chimkurgan known as Kurgontepa (AMCAA 1002) of 70 x 125m dating from the 5\(^{th}\)–3\(^{rd}\) centuries BCE. This site features the earliest evidence of the cleaning and restoration of canals that supplied Sarazm in the Bronze Age. Eshonkulov suggested that a canal featuring sherds dating to the 6\(^{th}\)–5\(^{th}\) century BCE dug into the right bank of the Akkurgan river by Sarazm was the clay source for buildings in the area. Only one other Achaemenid period site is known along the Akkurgan (AMCAA 839) but no architecture has been found and the clays for any of these sites have not been tested.

Kurgontepa reflects a continued occupation of the oasis during the political fallout of Alexander the Great’s wider conquest and the assumption of Seleucid control in Sogdiana. There is no indication that the Panjikent Oasis fell under the administration of either power, although this can perhaps be assumed by the presence of both administrations at Maracanda. If the valley of Panjikent was temporarily administered by

these powers, there was no investment made in the region and the people of the oasis were left to their own devices. Geography might be a reason. The narrow valley was surrounded by formidable mountains that naturally restricted the flow of traffic and secured the region from outside incursions. Trade with places further east was also still in its early stages and thus monitoring these activities may have been insignificant.

The lack of a Hellenic presence, and ultimately infrastructural investment, meant that the Panjikent Oasis developed on its own during the Hellenistic period. It was during this period that agricultural life in the Panjikent oasis flourished. This was due to two major technological achievements. The first is the continued restoration and expansion of Bronze Age canals. The second is the internal invention of the lateral korez (elsewhere, qanat or falaj). This new technology emerges in the 3rd century BCE for increasing the water supply to terraces in the valley and expanding cultivable alluvial zones. Our evidence comes from two korez structures explored by U. Eshonkulov—first, the Kofir canal system in the oasis of Panjikent and Sarazm and second, Sangi Surokh in the Mangiandarya micro-oasis east of Panjikent.\(^780\) This lateral system was the main korez technology in the Panjikent Oasis from the Hellenistic through Medieval periods, after which a mixed hydrological system of vertical and lateral korez shafts became more common until their gradual abandonment in the 19th century CE.\(^781\)

Unlike the better known vertical korez technology of Central Asia, Iran, and southern Arabia, these korez networks were lateral channels dug into mountain bedrock. Vertical shafts could be tied into these horizontal korez networks, as they were in the

\(^780\) Эшонкулов 2007: 237-239.
\(^781\) Эшонкулов 2007: 239.
post-Hellenistic and Late Antique periods. The earlier lateral networks were mined through conglomerate bedrock escarpments along tributary flows to ease the flow of glacial melt from within the Hissar mountains down to riverine valleys. The entire oasis is abundant with water, but the need for such a system arose as a means to navigate the complex terrain of a region where the landscape rises and dips over smaller mountains, hills, and terraces. Minor sais and distributary rivers are prone to blockage from landslides and falling boulders which may have been a consideration.

The ability to mine through mountainous rock efficiently enough to facilitate hydrological infrastructure was only enabled by the introduction of iron tools in the region. Rather remarkably, the lateral korez seems to be described in Quintus Curtius Rufus as a particularly Sogdian innovation, only there it is described as within the vicinity of Nautaka in Kashkadarya. Quintus Curtius writes, “a torrential river flowed nearby, at its rear closed up by a crag; through this the natives artificially had made a passage; but whereas at either entrance a cave receives light, the inner parts are dark unless a light has been brought in. A continuous passage, known only to the natives, gives access to the plains.” To my knowledge, no lateral korez was ever found in Kashkadarya, although that region is not so far from Panjikent that minor geographic information was confused by the time it was received by Quintus Curtius. Alternatively, such a system did exist in the sais of Kashkadarya and has been lost.

Eshonkoluv systematically documented several ancient lateral korez systems in Panjikent dating from the Hellenistic through Medieval periods with particular emphasis on their construction. Korez tunnels were round or ellipsoid shafts dug through the

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782 Quintus Curtius Rufus VIII.2.20-22; my translation.
conglomerate rock of mountains, typically in areas close to vertical cliff faces for ease of access, maintenance, and general practicality. They tended to be dug in a snaking, horizontal zigzag meander through the rock with access points to the outside world at the bends nearest to the external cliff face. The diameter of these passageways ranged from 1–1.5m. As one might imagine, this would have been very difficult work as workers with limited mobility would have to carve through rock with tools in dark conditions, while also employing a mixed mining method of water and fire setting. Eshonkulov reports the regularity in which he observed smoke stains on the ceilings of such tunnels.

Initially, access points were made horizontally into the cliff face, giving way to internal shafts and accessible at the external ground level. These access points were blocked by stones or earth that could be removed later for maintenance. However, the tributaries of the Zerafshan mountains are prone to flooding, which threatened the internal stability of korez networks. Thus, by the Medieval period, or perhaps earlier, two variations of the initial design were crafted that involved the gradual raising of access shafts. The first variant involved a slight raising of the entryway with a shallow decline to the otherwise ground-level internal tunnel. The second variant, which appeared well into the first millennium CE, involved the raising of access points several meters above the external ground level. In this case a horizontal access passage would give way to an internal vertical shaft that would drop down into the waterway. The benefit of this “L-shaped” design was that flooding was mostly mitigated, unwanted visitors (human or animal) were less likely to enter the tunnels, and that in the rare occasion of excess water flowing into the tunnels from their source, water could raise up the vertical shafts and
discharge out into the valleys (a system that is less destructive for the shafts than the earlier variant in which unwanted water flowed into the tunnels from the valleys).

Like the better known vertical korez/qanat/falaj of Central Asia, Iran, and southeastern Arabia, the use of lateral korez hydrology required an entire industry for their maintenance and administrative mechanisms to organize labor to keep them active. Korez cleaning, let alone construction, was an extraordinarily dangerous job as it required all skills and risks associated with mining but with the added pressure of torrid, gravity-fed water flow that could drown a worker instantly. It is no surprise then that all jobs associated with this technology were considered highly skilled labor. In other parts of the Middle East, these systems tended to be funded by wealthy patrons who initially claimed ownership over the qanats. However, the extraordinary labor requirements for their maintenance regularly resulted in the dissolution of single ownership to a more communally-held system. This was further complicated by generational ownership being handed down to descendants, which of course tends to multiply rapidly as family trees expand. In Medieval Iran, shared ownership was reflected in time-sharing of water access, with water being redirected into a shareholder’s plots for an agreed time that reflected the stake of a family in access rights.

It is possible such an ownership system was implemented in the Panjikent Oasis, but there is no way of knowing this for the period of interest here. However, the sophistication of lateral korez technology, labor demands, health effects on workers, and level of care for maintenance already implies a great deal of social cohesion and

783 English 2008: 201.
coordination that is comparable to better known systems of Iran and southeastern Arabia. In a moment I will discuss the archaeological evidence for rural habitation in the Panjikent Oasis and its tributary rivers and sais, which adds another dimension to the social cohesion of populations in this region. We have strong indications that already from the 3rd century BCE families were building farms along mountainous riverbanks as much as within the oasis lowlands itself. These farms were often situated in access zones associated with korez networks or even other, less taxing hydrological features such as chutes dug into rock faces. Like communities in the lowlands, these riverine farmsteads would have also had access to korez networks and at the least would have maintained some degree of power over their success and maintenance. Simply put, there could not have been an antagonistic relationship between communities living in the mountains and in the valley along the Zerafshan for the lateral korez to survive, especially since the mountain populations had less of a need for such structures than farms situated on the terraces and lowland valley. At the least, mountain communities were in a position to disallow or disrupt the water supply if political circumstances signaled antagonism. Given the success of these systems for up to 1500 years in some micro-regions around Panjikent, we can assume much cooperation.

The earliest evidence for the lateral korez is found at Sang-i Surokh in the northernmost watershed area of the Magian-darya, east of the Panjikent Oasis. I will return to Sang-i Surokh below. The most successful lateral korez was part of the Kofir canal. This canal was the main distributor of water for the watershed area around Sarazm, stretching along an east-west axis from the Kiriarcha river to the area around the May 1st
Dam (i.e. the origin of the Dargom canal) near the Medieval site of Varagsar.\textsuperscript{785} This korez also dates to as early as the 3\textsuperscript{rd}–2\textsuperscript{nd} centuries BCE and was utilized well into the late pre-Islamic period;\textsuperscript{786} in some parts even later. The entire Kofir network is an amazing feat of early Sogdian engineering with korez and canal segments collectively totaling well over 20–25km of moved earth. While Eshonkulov is very descriptive in his survey of the area, his description is exceptionally difficult to follow for locating this canal network with precision. Because of this, the Kofir canal was excluded from the AMCAA.

The Kofir canal has undergone a great deal of redevelopment on account of political accommodations made in the 19\textsuperscript{th} century for competing interests of ethnic Uzbeks, Tajiks, and Afghans in the area of Varagsar.\textsuperscript{787} I am able to note that generally the canal ran along the foothills of the first terrace in the Sarazm plain, passing by the Bronze Age site on a westward approach, reaching the southeastern area of Medieval Varagsar before sharply turning southwest. Once turning southwest, the canal snakes towards Urgut and in many places seems to break apart into minor irrigation networks for modern agriculture. The canal originates in the east as an offshoot from a distributor sourced from the Kirarcha river and it is in this area that the Hellenistic to Medieval period korez is likely to be found, ceasing to function later when the entire network became reliant upon external rivers and vertical korez structures installed elsewhere.

While these infrastructural developments rapidly increased cultivation in the area of Sarazm, the lowland floodplains only became heavily cultivated after the Medieval

\textsuperscript{785} Мухамеджанов 1972.
\textsuperscript{786} Эшонкулов 2007: 111; 117-118.
\textsuperscript{787} Эшонкулов 2007: 112.
period. The burial of a warrior (2nd–1st century BCE) set into the floor of the Bronze Age corridor 3 at Sarazm during the makes it clear that not only were the earlier remains of Sarazm known to local populations, but the site was considered viable for a prestigious burial (AMCAA 997). Yet overall, the site was apparently not the location of new habitations. The area around Sarazm is now a center of rice cultivation but this would not be the case before the 1st millennium CE. Instead of the lowland areas, cultivation of the Sarazm plain during the Hellenistic period seems to have been localized on the second terrace of the valley, in the area just south of Sarazm (which is itself located on the first terrace). Eshonkulov notes the presence of two small tepas located on the second terrace along an aryk that diverges from the Akkurgan river and heads in a north-northwesterly direction, but did not map these sites. Both sites date from the 2nd century BCE–1st century CE and are now heavily ruined by recent cultivation. Thus, following Eshonkulov’s logic, agriculture on this terrace was served by this single aryk that was ultimately supplied by the Akkurgan river.

Further east along the same terrace there are two major north-flowing rivers with several smaller north-flowing distributaries and aryks that discharge through the various gorges and shallow valleys that cut through the conglomerate terrace. The westernmost river flows by the modern town Shurnova and the eastern river is the Kiriarcha, which flows by the town of the same name. No settlements dating before the Medieval period are known on the terrace around Shurnova despite the fact that this aryk ultimately fed

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788 Исаков 2020: 300.
790 I was unable to map these sites since Eshonkulov did not map them either. They are excluded from the AMCAA until they can be located with a marginal degree of certainty.
791 Эшонкулов 2007: 112.
canals that supplied water to Sarazm during the Bronze Age. The situation is slightly
different along the Kiriarcha. Around the irrigated zones encompassing the villages of
Kyrkarcha, Yanaknshlak, and Abdusamad two sais are fed by the main river and flow
northwards in parallel to each other (Figure 52). Together they irrigate the plain by their
confluence around these villages before diverging in parallel and feeding small fields
established in independent gorges. Taking stock of this complicated arrangement, we
ultimately have three north-running parallel rivers—the Kiriarcha at the east, an unnamed
sai in the middle, and a western sai.

Sites along the middle sai dating to the Hellenistic period illustrate that life
continued close to riverbanks of the intermontane valleys of this terrace. Three sites were
identified but were difficult to map for AMCAA with more than moderate
confidence. All were dated by Eshonkulov to the 3rd–1st century BCE based on the
similarity of red engobe pottery that were comparable to Afrasiab IIa, IIb, and III.
However, this pottery is mostly restricted to thin bowls with upright rims, shallow frying
pans, and a single thick goblet base, a type that only appears in Central Asia after the
middle of the 2nd century BCE. I err on a slightly later date for the sites found here by
Eshonkulov but leave open the possibility for a slightly earlier date since these finds were
not stratified (there has been no excavation in this valley).

The first site in the area of Kiriarcha (AMCAA 1005) is located approximately
1.5km west of the center of Kyrkarcha village on a low mound overlooking the
agricultural lands to its east. The site (if this is indeed the location described by

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792 Эшонкулов 2007: 116-117.
793 Эшонкулов 2007: 117, Figure 39, no. 10.
Eshankulov) also takes advantage of a natural passage into the plain of Shurnova to its east and thus, while we have no documented evidence for settlements in that area in the second half of the 1st millennium BCE, there was likely at least an interest in utilizing that valley as pasturage west of the settlements along the Kiriarcha and its dependent rivers. The next two sites are located north of Kyrkarcha. One is a scatter of ceramics located within the village of Abdusamad (AMCAA 1003) and the other (AMCAA 1004) is a scatter of ceramics located 2.25km to the northwest along the northern road to Shurnova and the Kiriarcha.

Across the river from the plain of Sarazm, on the right bank of the Zerafshan there is also evidence for habitation as early as the 2nd century BCE. The area is a very narrow floodplain irrigated by canals drawn from the Zerafshan that is really a small spur of the plain of Samarkand just past the Dargom canal. In antiquity any cultivation in this area would have been gravity fed and drawn from rainwater runoff from the southwestern tip of the Turkestan range. Unlike the Sarazm plain this area features no terraces on account of the steepness of the mountains here. There is only one small site that testifies to habitation in this zone during our period of interest. Kattakurgan (AMCAA 1026) is a site located just below the mountain cliffs and measures 50m x 65m, surviving well into the 12th century CE. It can only be assumed that irrigation in this narrow zone coincided with the establishment of Kattakurgan in the 2nd century BCE.

Moving from the plain of Sarazm towards the famous city of Panjikent, founded in the 4th century CE, we note more evidence for the habitation of the oasis and the rivers and sais that are tributaries of the Zerafshan. Some sites are present in the conglomerate terrace zones known as the Dashti Khamirtepa, i.e. along the mountain spurs overlooking
the lowland plain between Kiriarcha river and plain of Panjikent (AMCAA 1014, 1015). Eshonkulov reports that the ceramics at these sites date from the 2nd–1st century BCE to the 1st–2nd century CE. Canals within this terrace were established in the Bronze Age to increase agricultural viability in shallow gorges along the terrace sais but like in the plain of Sarazm fell out of use until their restoration during the Hellenistic or post-Hellenistic period. In the agricultural plain north of the Dashti Khamirtepa, now heavily populated and developed, fields were watered by a canal running eastward from the Kiriarcha as well as rainfed canals flowing out from the mountains, although this network might not be so early in date.

It is the Panjikent Oasis and the terraced intermontane valleys where we find more substantive evidence for human habitation in our period of interest. What is revealed is a preference for this microregion over the plain of Sarazm beginning in the Hellenistic period, culminating in the establishment of Late Antique Panjikent. As noted earlier, there is no clear evidence for Hellenistic period occupation at Panjikent. All evidence comes from the surrounding plain. This region is roughly 6km east of the confluence of the Kirarcha with the Zerafshan. This now densely populated region is fed with water by two of the most significant tributaries of the Zerafshan—the Zebon at the west and the Magiandarya at the east. Both rivers have their origins to the south in the Zerafshan Range and are fed by glacial melt. The Zebon River takes its name from a rapidly expanding town located 6–7km south from Panjikent (as the crow flies). It flows northward into the Zerafshan and is the major supplier of the agricultural oasis around Panjikent. The river is fed by several large intermontane rivers that all fertilize irrigated plains within the mountains with canals which date from the Medieval Period. Five and a
half kilometers south of the confluence of the Zebon River and the Zerafshan is the first major tributary, the Chinarsai. Here the two rivers join with the Zebon originating to the west and the Chinarsai at the east. Another major tributary joins the Zebon roughly 3.5km south of the confluence of the Chinarsai and the Zebon. This tributary is the Savr River and together with the Zebon the entire alluvial plain of the town of Zebon is supplied with water. Numerous canals and minor tributaries also supply this small micro-oasis.

In addition to the Zebon, the plain of Panjikent is also supplied with water fed from a west-flowing canal that originates at the Magiandarya, the next major tributary 12km east of the Zebon outflow. This river is far more powerful than the Zebon, originating approximately 120km south of the Zerafshan along the heavily glaciated peaks of the Zerafshan, then Hissar, Mountains. Pathways around these peaks provide direct access to the interlinked, intermontane rivers the Iskanderdarya, Saratok, and Karakul and its associated east-west running valley that would have been the critical seasonal connection between the Hissar Valley of northern Bactria, Kaskhadarya, and Sogdiana around the upper Zerafshan. What is more, the watershed of the Magiandarya forms its own micro-oasis of comparable size to all of the plain of Panjikent, originating 20km south of the confluence of the Zerafshan and Magiandarya and with a wide 1–4km alluvial valley protected by the northern spurs of the Hissar. The entire alluvial watershed is an area of approximately 35km². I will treat the Magiandarya micro-oasis separately but reiterate its importance alongside the Zebon for providing water to Panjikent’s agricultural plain.

The evidence for rural habitation in antiquity is stronger around the plains of Panjikent and Zebon than near Sarazm. Within this zone, it appears there is more
evidence for habitation nestled in the mountains around Zebon than around Panjikent. Panjikent is one of the most rapidly urbanizing zones within Tajikistan, resulting in a significant loss of archaeological heritage outside of the ancient city. We should also acknowledge the fact that the lowest lying agricultural zone north of the modern bank of the Zerafshan has completely washed away since the 19th century—an area called the Obhurak floodplain. The terrace system overlooking the Panjikent Oasis was the location of several small settlements that utilized canals and tributary rivers dating to the end of the 1st millennium BCE (AMCAA 840, 841, 842, 843). These settlements were situated along the Kiriarcha River and its tributaries. Eshonkulov documented the presence of antique period pottery throughout the agricultural plain around the modern town of Panjikent. He notes a dense concentration northeast of ancient Panjikent and east of the modern town (AMCAA 1011), which he interprets as a settlement but does not offer precise dating nor a description of the pottery here to help us along. In 1927 a commemorative coin of Antimachos Theos and Hellenistic pottery was found by chance by a resident of Panjikent digging in his yard somewhere northwest of ancient Panjikent (AMCAA 1016).

Across the Zerafshan River from the plain of Panjikent are three gorges with irrigated intermontane valleys, each with its own modern village. These are Gabirak along the Shingaksai River, Khodzapandj along the Oibadamsai, and Rabot along the Uchkoya’sai. In Garibak there is evidence for some sort of a Hellenistic period building at the confluence of the Shingaksai. A low mound, roughly 30m in diameter, was partly

796 Массон 1928; Кастальским 1940; Зеймаль 1983: 45.
washed away by the knee of the Zerafshan, exposing a mudbrick wall and vaulted corridor infilled with pottery dating from the 4th–1st centuries BCE (AMCAA 1027). Given its strategic location, this structure may have functioned as a watchtower to oversee travel by river or through the surrounding alluvial terrace. It is just as likely that the structure was the home of generations of farmers overseeing agricultural activities in the plain of Garibak. However, just a few kilometers along the right bank of the Zerafshan is a wider agricultural plain along the Oibadamsai and its tributaries—the Khodzhapandj. Here we also have indications of habitation, not near the confluence of the rivers, but 2km north in a nestled terrace that has evidently been settled since the 3rd century BCE (AMCAA 1028). In the wide irrigated plains around Rabot there is also good evidence. Eshonkulov reported pottery dating from the 3rd century BCE—1st century CE concentrated along the southwestern shelf of the plain. A small mound called Khirmanjo (AMCAA 1029), roughly 100m x 70m, might have been the main manor or watchpoint for fields within this small valley. When this site disappeared in the 1st century CE, another emerged just a few kilometers to the south at Eshbek (AMCAA 1031).

One kilometer south of Panjikent along the Chinarsai is a burial at Gori Gurg firmly dating from 2nd–1st century BCE based on both Afrasiab IV ceramics and the type of jewelry that accompanied one of the dead. The site was discovered by schoolchildren named E. Koneev and V. Peresunko, wonderfully credited by Boris Marshak as the discoverers of the site.797 Later graves of excarnated individuals placed in khums were also found here but dating to the 7th–8th century CE. The remains of the earlier graves

797 Marshak 1959.
were disarticulated and scattered across the ancient surface and left unburied (the bodies were buried by alluvium and not a deliberate fill). Grave goods were left with the bodies that include conical spouted jugs, unspouted jugs, an iron ring, an iron knife, the remains of white, red, and green fabric, frog-shaped beads, and a polychromatic bead with the double-sided image of a human face. Marshak was unable to calculate a minimum number of individuals. These same individuals were laid on a layer of pure sand and river pebbles, a treatment evidently utilized for the upper burials as well. These facts lead Marshak to suggest that these individuals had also been excarnated and received the same unique ritual treatment in a practice that was recognized over the course of eight to nine centuries. As Marshak notes, the presence of such a grave site during the 2nd–1st century BCE implies the presence of a settlement within the vicinity of Panjikent of the same period. This seems to have been confirmed by Eshonkulov who documented ceramics regularly churned up in the fields on the opposite bank of the Chinarsai across from the Gor-i Gurg cave (AMCAA 1016).

We are on even better grounds for understanding the settlement dynamics of the region when turning towards the village of Zebon and the confluences of its main river and the Savr river. Zebon is protected at the west by the ridges of the Dashti Khamirtepa, but minor outflows of that terraces own sais not only provide water but transport access to intermontane roads that bypass lowland roads of the Panjikent Oasis at the south—ultimately linking to the Kiriarcha. The entire alluvial plain of roughly 6.5km$^2$ featured pottery dating from the 4th century BCE–3rd century CE. Habitation continued through the Medieval period but we should note that the modern town of Zebon was only founded in the 18th century with rapid expansion since the 1960’s and thus we do not have a true
understanding of settlement structure within this zone. Whatever settlement looked like here, it appears to have been light and sparsely populated in antiquity. Eshonkulov reports heavy concentrations of Hellenistic and post-Hellenistic pottery primarily situated along the Zebon as opposed to the Savr. These sites are especially found around modern Zebon (AMCAA 844, 1009, 1012) but with two significant concentrations further north as the Zebon between the confluence of the Savr and the Chinarsai (AMCAA 1008 and 1013). However, while habitation might have been light, there are indications that a significant investment was made to prepare the area for agriculture. Both the left and right banks of the Zebon River are situated on steep escarpments cut by the river over millions of years. At some point in the second half of the 1st millennium BCE, likely as early as the 3rd century, a 5km long canal beginning in the mountain village of Shurcha was cut into the right bank terrace of the Zebon at a width of 2–2.5m and depth of 1–1.5m. This canal, the Mergan, would have been a monumental feat of organized human labor as it would have required cutting through conglomerate rock, eased only by areas of alluvium. This canal still functions and supplies water to the right bank terrace of Zebon where sites AMCAA 1009 and 1012 are located and feature Afrasiab III and IV type pottery with engobe in both brown and red.

To summarize the ground covered so far regarding the Panjikent-Zebon microreregions and right bank inner gorges of the Zerafshan, there is evidence that these alluvial zones were more heavily exploited than Sarazm and its southern terrace zones. This is somewhat surprising given the importance of the Dargom Canal for irrigating the

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798 Эшонкулов 2007: 123.3
799 Эшонкулов 2007: 123, Figure 42 nos. 4-8.
Middle Zerafshan Oasis and the need to manage its headwaters, which begin at the transition from the plain of Sarazm to the oasis of Samarkand. Yet perhaps we should not read too much into this – every single site dating to the Hellenistic and post-Hellenistic period around Panjikent and Zebon is known only by its ceramics, with the only exception being the burials in the Gori Gurg cave. It is only across the Zerafshan where there are mounded sites dating to the Hellenistic and post-Hellenistic period. What we do know is that the intermontane piedmont terraces around Zebon were subject to substantial infrastructural development for supplying fields with water and supporting agriculture around that area. Despite the fact that ancient Panjikent is the site of one of the longest running excavations in Central Asia, we have very scant information about life in this plain beyond what has been presented here, largely because of rapid urbanization in the late 20th and 21st centuries.

The largest settlement of the Hellenistic and post-Hellenistic period in the Upper Zerafshan Valley is found over 11km east of ancient Panjikent in the plain of the Magiandarya. Curiously no sites are known between the outflow of this river and Panjikent despite its richness for agriculture and pasturage. At Sang-i Surokh along the right bank of the Magiandarya is a large settlement dating from the 4th–3rd century BCE to the 2nd–3rd century CE. The site was excavated in 1976 by Eshonkulov with a detachment of the North Tajikistan Expedition of the Institute of History of the Academy of Sciences of the Tajik SSR. Eshonkulov’s excavations have not been properly published outside of a summary of the site and three images of pottery in his 2007 history of the Upper Zerafshan. To my knowledge no plan of the site has been published. The

800 Эшонкулов 1985: 572.
site is a settlement located on the first terrace overlooking the Magiandarya floodplain, known as the Dashti Mullo. At least 6ha in size, the site is bisected by a swift ravine that brought an end to the village with a major flooding event in the 2nd-3rd century CE that covered the area in mountain silt. For the sake of simplicity, I have divided the site into a western and eastern zone for the archaeological map (west: AMCAA 1020; east: AMCAA 1019). After this destruction, in the 3rd century CE the settlement moved to a high point in the northwest corner of the Dashti Mullo, a site known from the Medieval period as Sanjarshah. At the time of this site’s founding a new canal, the Khazamova, was built that originated upriver along the Magiandarya around the modern village of Chorbag. The Khazornova canal extended 25km along its path up to Sanjarshah, parts of which are still used within the current irrigation system of this terrace.

The inhabitants of Sangi Surokh may have been those responsible for establishing Central Asia’s first lateral korez network, the Sang-i Surokh korez. The korez is evidently the namesake of the site—meaning “Leaky Stone” in Tajik and clearly referencing the network’s function for discharging water. Living on the terrace overlooking the floodplain inhabitants of Sang-i Surokh utilized the korez and canal for directing water from the Zerafshan in a westward approach towards the Magiandarya. The korez and canal extends for roughly 7.5–8km within the cliff of the first terrace. The korez sector is located in the northeast of the terrace and extends for approximately 500m total. The tunnel entrance is 2.8m wide x 1.5m high at its origin near the Zerafshan. The tunnel within the network is round and 1.5m in diameter. Eshonkulov documented six access

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801 Эшонкулов 2007: 168.
points along the ridge. At the western end of the korez the channel opened into a canal that was 3m wide and 1m deep, the entire length of which is now covered by a road. A second lateral korez network dating from the 4\textsuperscript{th}–3\textsuperscript{rd} century BCE was noted by Eshonkulov at the foothills of the Dashti Mullo terrace but provides no information about its location or structure in comparison to the Sang-i Surokh network.\textsuperscript{803} The presence of this second korez of the Hellenistic period attests to the significant investment undertaken in opening this region up to intensive agriculture and regulating hydrology, a point I will return to.

Settlements also appeared deep within the intermontane valley of the Magiandarya. The earliest exploration of the Magiandarya and its southern tributary the Nignot River were undertaken by the Tajik-Pamir Mining Expedition to explore the mineral resources of the Zerafshan and Hissar Mountains. A detachment led by T.N. Ivanova documented hematite and silver mines near the villages of Shing and Koni-Nukra although there are no indications that these were mined in antiquity.\textsuperscript{804} The entire stretch of this river was explored in detail by B.Ya. Staviskii in three seasons from 1957–61 with the Magian Group of the Tadjik Archaeological Expedition with the Institute of Archaeology.\textsuperscript{805} His team mostly focused on excavating Late Antique and Medieval monuments along the river such as Kalai Nofin and Kalai-Mug, only rarely noting materials encountered from earlier periods. It was then explored again by U. Eshonkulov decades later who noted the inhabitation of this vast alluvial valley as early as the 3\textsuperscript{rd}

\textsuperscript{803} Эшонкулов 2007: 170.
\textsuperscript{804} Иванова 1934; Сверчков 2009: 150.
\textsuperscript{805} Ставискии 1959; 1961; 1962.
century BCE.\textsuperscript{806} A small settlement and pottery kiln dating from the 3\textsuperscript{rd}–2\textsuperscript{nd} century BCE was documented in a narrow terrace along the river north of Chorbag (AMCAA 1021). Approximately 17km south of the confluence of Zerafshan with this river in the village of Fil’mandar a settlement emerged at the site Kholiknazar (AMCAA 1022). The area is the southernmost agricultural plain of the Magiandarya and from the 3\textsuperscript{rd} century CE was irrigated by the head of the Khazarnova. The site was partly excavated by A.I. Isakov in 1975, from which only pottery dating to both Afrasiab II was reported.\textsuperscript{807} Later excavations exposed a large single-room building (20m x 20m) surrounded by an outer fortification wall and shallow moat dated from the 2\textsuperscript{nd}–1\textsuperscript{st} century BCE.\textsuperscript{808} Yakubov interprets this structure as the predecessor of rural farmhouses common to the region until the 19\textsuperscript{th} century CE, but this is quite speculative. The site remained inhabited from the 3\textsuperscript{rd} century BCE to the 8\textsuperscript{th} century CE and so occupation here is unclear since most of the area is covered in Medieval layers. Inhabitants here benefitted from the security of the surrounding mountains and reliability of glacial runoff from many tributaries.

Burials dating from the 2\textsuperscript{nd} century BCE to the 1\textsuperscript{st} century CE are also known in the Magiandarya near the village Sudjin. These were excavated jointly by B.Ya. Stavisky and E.V. Zeimal in 1961, who collectively exposed 11 burials.\textsuperscript{809} Nine burials were simple inhumations and two were burials within khums. There was no pattern in orientation of the bodies, which were all otherwise prostrate on their backs. Individuals

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\textsuperscript{806} Eshonkulov does not provide the dates of his expeditions.
\textsuperscript{807} Исаков 1976.
\textsuperscript{808} Якубов 1988: 59.
\textsuperscript{809} Ставиский 1961b.
\end{flushright}
were buried with stemmed goblets, jugs with vertical handles, iron daggers, knives, arrowheads, iron rings, clothing appliques or plaques, and stone buttons.\textsuperscript{810}

In reality there are many cultivable microregions further into the Hissar mountains, which we will turn to in a moment. As mentioned earlier, the Magiandarya provides direct access to the west-flowing Iskandardarya deep in the heart of the Hissar Mountains which gave way to the Kashkadarya river further west. The entire area can be traversed by donkey, horse, or camel, but perhaps not by wheeled caravan. This of course limits the types and quantities of goods that could be traded but I nonetheless suggest that we take seriously the likelihood of intermontane contact through Magiandarya to Kashkadarya and Surkhandarya during summer months. This of course takes the view that mountains are not barriers, but seasonality is. The situation of Kholiknazar takes on particular significance in this regard as it would have been the first village encountered by travelers exiting the mountains. It would have also been the last point to gather provisions before the long journey through the mountains. Thus, the site probably not only functioned as the main settlement from which surrounding fields were managed and cultivated, it also probably served as a stopping point for those with long-distance business and social connections that sought to bypass the otherwise months-long circuitous journey through southwest Sogdiana to access Bactria via Kashkadarya and Baysun.

We have less information about life along the Magiandarya during the post-Hellenistic period. Our indications are that life continued unchanged. The Sang-i Surokh korez still provided water to agricultural fields in the floodplains and those fields

\textsuperscript{810} Ставский 1961b.
continued to be worked by the inhabitants of the site of the same name. In fact, the majority of pottery from Sang-i Surokh seems to come from the 2nd–1st century BCE and slightly later, so perhaps there was some degree of intensification at that time. Otherwise, several burials dating from the 1st century BCE to the 1st c. CE were found in the modern village of Sudzhina along the right bank of the Magiandarya west of Sang-i Surokh. On the right bank of the Zerafshan opposite the plain of the Magiandarya two sites emerged around the modern village of Maykatta that were both situated along a river of the same name that originates in the Turkestan range. In this area there is a very narrow strip of land that only seems to have been first settled in the 1st century BCE at the site Tupkhona (AMCAA 1033) with small expansion in the 1st century CE at Zartepa (AMCAA1032).

The Panjikent Oasis terminates east of the Magiandarya at the end of another broad irrigated floodplain overlooked by the modern towns of Gusar and Navabat on the left bank of the Zerafshan and a large piedmont terrace zone to the north on the right bank that is almost equal in size. Together they comprise a cultivable zone of almost 90km². Therefore it is surprising that the evidence for utilization of these lands is somewhat thin before the Islamic period. This is a zone that is well known from the famous Mount Mugh archive that was discovered within a Medieval castle in its environs as well as later waqf documents.

Our best evidence for habitation in the Hellenistic period is on the right bank in a large alluvial and steppe terrace known as the Dasthi Yori. This plain is bound at the west by the village and river of Amondara and at the east by the Ruztsbnaksai, a river that

811 Зеймаль 1961.
emerged from a steep gorge at the village of Yori. Eshonkulov’s survey reports pottery dating from as early as the 3rd century BCE spread across all of the irrigated terrace, most notably around the areas in which later canals were dug. The most substantial concentrations occur closer to the Zerafshan at an area where the width of the river narrows. This concentration is at the village of Kyzyldzhar (AMCAA 1035) and at a low mound in farmland immediately to the east (AMCAA 1036). Approximately 5–6.5km to the northeast, surface pottery of the same period was found along the northern interface between the plain and slopes of the Zerafshan (AMCAA 1034, 1037). All of these assemblages demonstrate an unbroken sequence until the 1st century CE.

There are only two additional sites around the eastern basin of the Panjikent Oasis from the period in question. The first is a cemetery located in the small village of Ziddy just north of the village of Mingdona located 18km east of Kyzyldzhar. The site is located along the outflow of the Mingdona River and was excavated by Ginsburg in 1958. At the extreme end of the Panjikent Oasis is the final major tributary of the oasis—the Kishtudarya. Roughly 11.5km south of the confluence of the Kishtudarya and the Zerafshan River is a small village called Shishkat on the way to a more populated zone deep within the Zerafshan mountains. Like the Magiandarya the Kishtut originates along the peaks of the Hissar, also with direct access to the Iskanderdarya. Copper and tin deposits located in mountain spurs along the lowest reaches of the Kishtut River were exploited by so-called “steppe-type” tibes in the 2nd millennium BCE at Mushishton.812 At Shishkat (AMCAA 1045) Eshonkulov reports finding ceramics dating from the 1st

812 Sverchkov 2009: 151, with a lengthy bibliography of archaeological research at Mushishto (n. 90).
century BCE to 1st century CE churned up by farmer plows, testifying to the existence of settlements deep in the Zerafshan mountains at that time.

The left bank is watered by the Obisaray and Zavron Rivers that originate in the Zerafshan mountains to the south. This region has been subject to even less survey than the previously described micro-zones around Panjikent. There are many archaeological sites dating from the early Islamic period and later—but only one earlier site that hardly stands out. This is the site of Khamtuda (AMCAA 1023) which is not located in the plain around Gusar, but deep in the mountains between the Obisaray its tributary, the Mazar River. There, a small village also called Mazar developed out of the ruins of the settlement of Khamtuda and its two castles. None of these sites have been excavated. On the surface of the settlement zone was pottery dating from the 2nd century – 8th century CE, but nothing earlier. All archaeological field systems seem to be located in the mountains in places like Khamtuda and dated to after the Islamic conquest. This lead Eshonkulov to suggest that the floodplain at the confluence of the Obisaray and Zavron Rivers was pasturage until at least the late Middle Ages.\textsuperscript{813} Given the lack of evidence for settlement during the Hellenistic and post-Hellenistic periods, I am inclined to agree.

This completes my analysis of the plain of Panjikent and its adjacent microregions. A summary is in order before moving on. Virtually all sites described here are located directly on rivers or piedmont terraces. This is an entirely different situation than what emerges in the hinterland of Panjikent in the early Medieval period. Yu. Yakubov demonstrated in a systematic study of rural settlements across these same micro-oases that after the 5th century CE the agricultural oases were governed by fortified

\textsuperscript{813} Эшонкулов 2007: 171.
estates that were typically two stories high and built on the spurs of mountains away from the rivers. As with the Hellenistic period we have no indication what more mundane vernacular structures looked like. It is likely that the local agricultural peasantry also lived within these riverine zones and among the fields of the lowland valleys, houses that are now lost. What is more, Raspopova also suggested that at least the immediate agricultural hinterland around Panjikent was probably governed by urban elites. This much at least seems to be confirmed by the tenor of the “Mount Mug” assemblage of texts found at Mount Mug to the east of Panjikent, in which the local ruler Devastich’s governed rural estates and the emergence of a feudal society. We simply have none of this granular information for the Hellenistic and post-Hellenistic periods with the only likely power centers (if that’s what they were) being located along the Magianadarya at Sang-i Surokh and Kholiknazar. However for these earlier sites the relationship was different. The Magianadarya is the principle route into the Hissar Mountains, connecting with mountain routes through Farob and into Kashkadarya as well as routes further south that could link with lake and river systems even deeper into the mountains around the Iskandardarya and connected routes into Baysun and Surkhandarya. There was also no dense urban core from which local lords could rule in the Hellenistic and post-Hellenistic periods. It seems that before the emergence of Panjikent villages and fortifications emerged along these riverine routes connecting Panjikent with other regions, and less involved with control of an agricultural hinterland.

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815 Распопова 1990.
Taking a more intraregional focus, it is important to stress what is now apparent from my discussion of both the expansion of settlement and the development of the vertical korez around the Panjikent Oasis during the Hellenistic period. The two coincide around relatively the same time but develop slowly before reaching a higher degree of sophistication in overall irrigation technology by Late Antiquity and the early Islamic period. What should we make of this? For one, while it is likely that there was already some light agricultural activity still practiced in the late Iron Age in the area, the evidence for it is quite thin—far thinner than what is known of the strategies that emerged out of Sarazm even earlier before falling out of practice. We can also assume that pastoralism was widely practiced during the Achaemenid period before we are confronted by the same methodological issues as agriculture—the processes are difficult to detect.

Thus, something changes in the Panjikent Oasis in the 4th-3rd century BCE that drives an impetus to begin land cultivation with such intensity as would require an all-out new technology to facilitate its success. What is more, the infrastructure established by the lateral korez was extraordinarily physically dangerous and labor-intensive work. Yet, what should also be stressed is the degree of technical sophistication that goes into the planning and execution of such a network. As far as we know, no vertical korez existed around Panjikent by the time despite its contemporary usage in other parts of Central Asia and Iran. In terms of the spread of technical knowledge, there must have been a network established with developers who worked with local populations to integrate the knowhow of traditional korez construction into a modified form that worked with the complex topography of the region. The lateral korez was a technological solution for dealing with the problem of increasing the supply of glacial water from the Zerafshan and
Hissar mountains through the rising and falling grades of terrace slopes towards the northern outflow in the Zerafshan. Many areas feature conglomerate bedrock that is close enough to the surface to prevent a long-distance vertical korez. Thus, the installation of channels laterally through conglomerate rock along the vertical terrace slopes by rivers at places like Sang-i Surokh was likely the result of necessity as much as rural optimism for an expansion of viable cultivable areas.

In chapter one I emphasized the importance of recognizing rural zones as loci of innovation and optimism about the future, joining many others who have challenged a view of rural life as static and conservative. Through developing the lateral korez, rural populations sought to increase agricultural production, possibly for the first time substantively since the Bronze Age through quite sophisticated means and investment. This investment formed the basis of the rapid intensive cultivation of the Panjikent Oasis in the 1st–4th century CE and urbanization in this same region over 700 years later. While the lateral korez would later fall out of use in the early Islamic period, its development was a milestone in irrigation technology for the region that directly changed rural culture for the future. While I do not wish to overstate its physical capacity in terms of the increased amount of water actually distributed within the lower plains of the Magiandarya, it is the idea that rural populations within the oasis invested in their future, apparently without any influence from elite outsiders living in urban centers (i.e. Maracanda). We will revisit the implications of rural investment in the following chapter, because I believe this serves as a critical counterpoint to existing narratives that focus on the achievements of Hellenized elites after Alexander.
4.3.b. Inner Gorno-Sogd: the Zerafshan-Hissar mountainous zone.

It is to the inner Zerafshan and Hissar mountains of Gorno-Sogd that I now briefly turn. This region garnered much interest from Yu. Yakubov in a 1988 study titled *Rannesrednevekovye Sel’skie Poseleniya Gornogo Sogda (Early Medieval Rural Settlements of Gorno-Sogd)*. Earlier I mentioned the importance of the Magiandarya for its accessibility to the mountains, and ultimately Kashkadarya and Surkhandarya. I cited Kholiknazar as evidence that from the 3rd century BCE – 8th century CE the exit of the gorge of the Magiandarya was an important area of settlement for both safely cultivating the intermontane valley as well as likely being a location for provisioning travelers undertaking the arduous journey through the mountains. But what about the mountains? What is our evidence that humans actually did utilize pathways to reach Kashkadarya and Surkhandarya through this route? Where are these pathways that in some places would have been quite treacherous?

Kashkadarya was (and still is) far more accessible from the Magiandarya than Surkhandarya. Traveling to either region would have utilized separate pathways of varying degrees of difficulty, and it is only Kashkadarya that could have been accessed through these routes at any time of the year. The route to Surkhandarya would have been off limits during the winter on account of expanding glaciation. I will discuss the route to Kashkadarya before considering how one might have made it to Surkhandarya in antiquity.

The main routes from Kashkadarya into northern Sogdiana would utilized one of many access points connecting the southern and northern oases. A route from the Panjikent Oasis to Kashkadarya would have been secondary for long-distance travelers,
but primary for communities settled within the mountains. In the mountains, the Kashkadarya River flows westward. It begins at the town of Farob, a settlement with origins in the Medieval Period nestled between the Zerafshan and Hissar ranges. The river is formed of many inner mountain tributaries comprised of glacial melt, but importantly it links with two other significant rivers, the Shinchasai and the Sor. The Sor River runs both west and east, splitting at the coordinates 39.275645, 67.526296 and forms the connection between the Kashkadarya and Magiandarya rivers. The Sor is one of the main tributaries of the Magiandarya at Gezani-Bolo, which is situated 45km southwest of the aforementioned Kholiknazar. At this split in the Sor there is the remains of a small castle dating to the 13th century CE.\textsuperscript{816} In fact, this small Medieval castle is one of ten crammed along this 10km stretch that links the Kashkadarya and Magiandarya.\textsuperscript{817} It is certain that in the 13th century it was critically important to mitigate traffic through this corridor. It is possible this was also a fact in antiquity. An early survey of this region by B.A. Stavisky confirmed the presence of ceramics dating from the 2nd–1st century BCE – 4th century CE around Tali Tuti.\textsuperscript{818} Eshonkulov reports regularly finding ceramics dating from the 2nd–1st century BCE (AMCAA 1040, 1041, 1042, 1043, 1044) along the entire stretch and apparently in an unbroken sequence until at least the establishment of the castles. At some point from the 1st century BCE – 1st century CE a building was constructed at the confluence of the Sor and Magiandarya with settlement concentrated here well until the 3rd century CE—a site known as Tali Tuti (AMCAA 1039).\textsuperscript{819} A test

\textsuperscript{816} Эшонкулов 2007: 188.
\textsuperscript{817} Смирнова 1953; Ставиский 1961: 111-112; Эшонкулов 2007: 188.
\textsuperscript{818} Ставиский 1961а.
\textsuperscript{819} Ставиский 1961а; 1962: 101.
trench was made at this site revealing a corridor infilled with mudbrick and pakhsa. Removal of the infilling exposed a wall covered in many layers of alabaster, the innermost of which featured a wall painting depicting a vegetal motif painted in red.\textsuperscript{820} To my knowledge this wall painting has not been published nor do we know its date, which would be no later than the 4\textsuperscript{th} century CE.

It is entirely possible that agriculture began along the Sor, and especially around Tali Tuti, as early as the 2\textsuperscript{nd} century BCE, to support a community living deep in the Zerafshan mountains. We should expect that forms of pastoralism such as cattle breeding were also undertaken around here. Tali Tuti is situated between the villages of Gezani-Bolo and Sor which are part of the widest alluvial zones within the mountains. An area of roughly 10km\textsuperscript{2} is currently farmed beyond the outflows of many gorges of tributaries around the confluence of the Sor and Magiandarya rivers which testifies to the fertility of the land. Some of these farms are located at very high elevations, nearly abutting glaciers.

Most important is that Tali Tuti is located along a direct point of westward egress along the Sor River that linked with the origin of the Kashkadarya River. As noted above, ceramics dating from the 2\textsuperscript{nd}–1\textsuperscript{st} century BCE were regularly found along this route, connecting the area with wider pottery traditions of Sogdiana but demonstrating that the Magiandarya and Kashkadarya Oases were linked through this point. The early appearance of rural agricultural settlements along this route were further explored by B.Ya. Stavisky in the late 1950’s who identified the 2\textsuperscript{nd}–1\textsuperscript{st} century BCE – 4\textsuperscript{th} century CE as one of three major stages in the development of settlements in the Hissar Mountains.

\textsuperscript{820} Эшонкулов 2007: 189.
To my knowledge there are no known Hellenistic or post-Hellenistic sites around Farob along the upper Kashkadarya. The distance between 2nd–1st century BCE sites along the route leading from Magiandarya (AMCAA 1040, 1041, 1042, 1043, 1044) to the closest antique sites linked with eastern Kashkadarya (AMCAA 1120 and 1121 in modern Varganza) is 40km. While much of this route along the Kashkadarya River is through gorges, most of these gorges are flanked by upland terraces that are settled and cultivated.

We should also consider the possibility of routes connecting the Panjikent Oasis with northern Bactria. Surkhandarya and the Hissar Valley could also be accessed through the Hissar Mountains from the Panjikent Oasis, albeit with some difficulty and only seasonally. Eleven seasonal roads connect the northern Hissar Mountains with Northern Bactria.821 These routes required travelers to ascend some of Hissar’s highest elevations and yet the presence of both modern and Medieval villages along these critical arteries attest to the fact that the mountains were not always a barrier. To ease travel in rough terrain, paths are reinforced with braided branches and switchbacks as they are today.822

Traveling southward from the Zerafshan River, two major roads are known to have been utilized in antiquity for inter-regional travel: along the Kishtut Gorge through the Mura Pass and the Matcha Gorge. I have already indicated that settlements dating to the Hellenistic and post-Hellenistic area are located at the confluence of these rivers with the Zerafshan. In the upper reaches of these rivers, one road would merge with another.

821 Эшонкулов 2007: 53.
822 Эшонкулов 2007: 53.
connecting Sogdiana to Kashgar, and ultimately, the Tarim Basin. From there, several routes could have been taken. After exiting the Panjikent oasis through the Kishtutdarya gorge and following the river of that same name, the Zerafshan branches southwest and joins two tributaries, the Sarumat and Archamaidan rivers. Both rivers could be ascended to their terminus where many pathways wind around the Sarykhodon peaks. Today this 4000–4500m elevation is a popular hiking and camping destination but in antiquity this would have been a major artery connecting routes along Zerafshan tributaries to the Khovam River and To’palang Daryo which together drain into the northern reaches of Surkhandarya.

Travelers beginning their journey from further east in the Hissar Mountains would have utilized a different network of rivers and switch-backed pathways to access the Hissar Valley. South of the Zerafshan River runs another long, parallel east-west waterway—the Yagnob-Iskandardarya. The Yagnob-Iskandardarya changes names as it progresses west, becoming the Saramok River at the popular mountain lake known as the Iskandarkul. The Iskandarkul and its associated rivers are fed by glacial runoff from the Khodur, Bakhodur, and Obisafed peaks to the south, and the Sarykhodon peaks to the north. However, the mountains were not likely traversed at these points. Instead, tributary rivers and pathways following along the modern RB01 Highway would have facilitated passage as they do today (although without the benefit of a quite treacherous modern tunnel). This highway egresses at the Maikhura River, which flows into the Varzob River. As noted earlier, the Varzob River watershed is a densely populated river valley that eventually terminates at Dushanbe in northern Bactria.
Barring the complexity of routes, topographic diversity, and vastness of territory in the Hissar Mountains, it is conceivable that the mountains that divided Bactria and Sogdiana were not so much of a barrier, but a frontier zone that facilitated communication between these two regions. Aside from basic economic infrastructure supporting intermontane travel such as inns and caravanserais (or their earlier counterparts), rural farmsteads are known to have opened their doors for travelers to rest their weary heads and provide shelter for animals when journeys became strained by the elements.⁸²³

4.4. The heart of Sogdiana: Afrasiab and the oasis of Samarkand (ancient Marakanda).

In the previous subchapter I explored evidence for Hellenistic and post-Hellenistic settlements of the Oasis of Panjikent as evidence for a vast rural zone that developed new modes of irrigation technology to vastly increase cultivation and mitigate natural ecological challenges to life along the upper Zerafshan. I also stressed the importance of the Zerafshan and Hissar Mountains in facilitating, rather than restricting, human connectivity between the Oasis of Panjikent and Kashkadarya, and the same with Surkhandarya and the Hissar Valley in northern Bactria. Yet Kashkadarya and Panjikent were also culturally entwined with another region of Sogdiana, a region that perhaps had more bearing on the future of either zone than any other. This is the vast alluvial plain of the Middle Zerafshan Valley and the plains around modern Samarkand and the ancient city itself—Maracanda.

⁸²³ Эшонкулов 2007: 60.
The ruins of ancient Maracanda (at least that is how it is known to us by ancient Mediterranean historians and geographers) are located in the center of modern Samarkand in the archaeological park Afrasiab (AMCAA 688). Since Afrasiab is how the site is commonly referred to in archaeological literature naturally I follow this convention. Maracanda is clearly the namesake of the modern city of Samarkand, which was founded on the outskirts of the original settlement. The ancient and Medieval city was besieged by Genghis Khan in 1220 CE, after which the site never recovered and evolved into the park that it is today.

The oasis of Samarkand is the third largest in Uzbekistan after the Aral Sea Delta and Bukhara Oasis. Among the 314,000 hectares around Samarkand only 10% is irrigated and suitable for cultivation.\textsuperscript{824} The plain stretches along an east-west axis on the banks of the Zerafshan River and features irrigated lowlands flanked at the north and south by upland steppe terraces. To the north the oasis is contoured by the Nuratau ridge which extends from the western spurs of the Turkmen Mountains to the Bukhara Oasis. Between the two is a somewhat narrow steppe plain that connects the oasis of Samarkand to regions further north, such as Jizzakh, Taskhent, Ferghana, and all settlements along the Syr Darya River. In antiquity these were the lands of Chach, Ustrashana, Dayuan (Ferghana), and the Chirik-Rabat culture (lower Syr Darya). South of Samarkand are the western spurs of the Zerafshan Range dividing this region from Kashkadarya and primarily connected by routes along the Medieval Eski Angor canal. In the southwest the plain touches on the Karshi steppe which is itself an extension of the western reaches of the Kashkadarya watershed.

\textsuperscript{824} Ростовцев 1975: 98.
4.4.a. Afrasiab: Historical and Classical inquiries into Hellenistic Maracanada.

The stature of Afrasiab as a pristine site continues to be a rare opportunity for archaeological science to explore a relict 14th century CE urban site. There have been substantive excavations at Afrasiab since at least the 1840’s although interest in Afrasiab’s antiquity certainly began much earlier. A review of the origins of scientific research at Afrasiab was published by V.I. Shishkin in 1969, which was later updated by S. Gorshenina and Y. Lambert in 1999. In terms of the history of research at Afrasiab we should also mention Sh.Sh. Sharakhnmov’s 1977 historiography of ceramic studies at the site (and thus the chronology) up to that point, which is less pertinent to our own overview here.

I will not indulge in an in-depth history of archaeological research at the site. Instead I will focus on a few notable moments when people and projects emerged to explore the deep antiquity of the site. Early exploration at Afrasiab was quite crude and antiquarian, especially in the mid-19th century when the prime motivation for digging was treasure hunting across all Central Asia. However even some treasure hunters published or kept notes that speculated about Samarkand’s Hellenistic roots, which makes them still relevant resources for research. Perhaps the first academic interest came from M. Rostislavov, who by 1875 was able to extrapolate important information about Afrasiab’s potential relationship to Hellenistic antiquity around the main citadel from

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825 Шишкин 1969а; Gorshenina and Lambert 1999.
826 Шарахимов 1977.
827 Gorshenina and Lambert 1999.
these earlier reports.\textsuperscript{828} By the 1890’s Rostislavov had worked with local authorities to establish Samarkand’s first archaeological museum specifically to bring order to items haphazardly collected from Afrasiab. This early interest immediately drew foreign attention from Paris and St. Petersburg, with competing scientific missions established by J. Chaffanjon and V.V. Krestovskii to explore Afrasiab’s citadel.\textsuperscript{829} It was Krestovskii who first hypothesized that the city was the same Maracanda occupied by Alexander the Great, and the same site obliterated by Genghis Khan in 1220 BCE.\textsuperscript{830} The quality of Krestovskii’s excavations were on par with practice of the day but he nonetheless attempted to establish a general picture of the city’s chronological development by excavating down to virgin soil. Therefore, he is the first to fully appreciate the dynamism of Afrasiab’s material past and its value for the study of history. However, as Shishkin notes, Krestovsky assumed that all periods of Afrasiab’s development were represented in his excavation, thus incorrectly dating many stratigraphic layers, none of which are now known to have dated to earlier than the 9\textsuperscript{th} century CE. What he assumed was the Hellenistic period was, in fact, Islamic.

By 1885 new excavations at Afrasiab were already underway by N.I. Veselovsky who was tasked with undertaking more targeted stratigraphic excavations as well as investigating mounds in the wider suburbs of modern Samarkand.\textsuperscript{831} He also conducted explorations as far west as the Bukhara Oasis and many sites in between. Despite his instructions, Veselovsky disregarded his mandate and conducted excavations in a rushed,

\textsuperscript{828} Ростиславов 1875; Шишкин 1969а.  
\textsuperscript{829} Gorshenina and Lambert 1999.  
\textsuperscript{830} Gorshenina and Lambert 1999: 370.  
\textsuperscript{831} Шишкин 1969а: 24-25.
unsystematic, and cavalier manner. He also disregarded basic stratigraphic principles already practiced by Krestovskii just a few years earlier. It is impossible to know the scale of damage done as Veselovsky did not leave detailed records comparable to the scale of his excavations. Aside from being a characteristic study of how one should not conduct archaeological research, two important results came from Veselovsky’s work. The first is that he excavated materials dating to the Hellenistic and post-Hellenistic period which he then used to establish the first (and now greatly revised) typology of coroplastics at Afrasiab. Second is that Veselovsky produced the first professionally commissioned topographic plan of Afrasiab (1:2100 scale).

By the 1890’s archaeological practice in Samarkand made major strides with the entrance of V.L. Vyatkin into the field. Before beginning work at Afrasiab he had already become an important translator of Persian and Arabic texts pertaining to Central Asian myth and history and a fluent speaker of Tajik, Uzbek, and Kazakh. For his academic works he regularly considered *waqf* documents and epigraphic material in comparison to other types of evidence. He was also the first to aggressively tackle the problem of modern and historical topography and geology. In 1896 he became director of the new Samarkand Museum, which opened on July 21 of that year, and which was dedicated to the history and archaeology of the city by housing the private collections of wealthy Russian donors. This post led him to be appointed as the official “caretaker of antiquity” with some authority in law enforcement for the protection of Samarkand’s cultural heritage.

Perhaps the most prolific individual from the early age of Central Asian archaeology was the Russian Orientalist V.V. Bartold. Bartold is a foundational figure in
the wider field of study but, in particular, we should mention the advances he made to the study of Central Asia as an historical science in addressing social and economic developments across time. Despite his contributions he actually only conducted limited excavations in Samarkand during the 1920’s that were restricted to test trenches around the ruins of the Medieval mosque to the west of the citadel, explorations that were never fully published. He was particularly focused on producing a detailed, academically rigorous study of the Islamic and pre-Mongol periods as well as publishing important works on nomadism. In 1903 Bartold worked with Vyatkin to produce a new map of Samarkand’s wider historical topography. It was at this point that the ancient walls of Afrasiab were mapped for the first time. This led Bartold to suggest that ancient Samarkand was not in fact limited to Afrasiab but encapsulated a broader extramural suburban area. In turn he focused attention on the irrigation history of the city with more interest in the city’s origins. He was also able to establish that Afrasiab’s large citadel was not natural, but entirely anthropogenic. By 1905 V.L. Vyatkin had assumed responsibility for Bartold’s excavations at Afrasiab and successfully resolved some issues over the extent of the mosque complex. However, in his critique of their work Shishkin notes that Bartold and Vyatkin did not conduct excavations in accordance with archaeological practice already contemporary around the world of the time, particularly with attention to stratigraphy.832 And whereas Bartold was a prolific writer, Vyatkin barely published any results from his archaeological work.

Cavalier archaeological practice ended in Samarkand after the October Revolution and the formation of the Soviet Union. On October 10, 1918 the official

protection of cultural heritage was decreed by V.I. Lenin and the Sovnarkom (Council of People’s Commissars). This official commitment to cultural heritage from the highest level of the Soviet government led to real reforms to archaeological practice in Samarkand, but only after several years of institutional instability and reorganization as local governing bodies found their footing.  

On January 20, 1920, the Commission for the Protection of Monuments of Antiquity and Art was established within the Central Administration of Archival Affairs of the Turkic Republic at the Central Department of Archival Affairs of the Republic of Kazakhstan. In 1921 this committee became the Turkestan Commission for the Protection of Monuments, which in turn established the Committee for Museums and the Protection of Antiquities, Art, and Nature (Turkomstaris), with a Samarkand division. The reorganization of Central Asian republics in 1925 led to further reorganization with Turkomstaris becoming Sredazkomstaris, until 1928, with the creation of the Uzbekistan Committee for the Protection of Monuments (Uzkomstaris).

Archaeological activities at Afrasiab and in Samarkand proper were extensive in the 1920’s, especially under the direction of V.L. Vyatkin, which focused on later periods. Much of this work was never published and it was only in the 1960’s that it was realized that Vyatkin did not keep substantive records of his excavations. This situation changed in the 1930’s as the new nation stabilized.

Exploration of the rural hinterland of Afrasiab first became the target of inquiry in the late 1930’s led by I.A. Sukharev representing the Respublikanckii Muzei Kyl’tury

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834 Шишкин 1969а: 76.
Uzbekskogo Nadora (Republican Museum of Culture of the Uzbek People) in Samarkand. Recognizing that Samarkand was surrounded by hundreds of tepas that towered over the agricultural plain, this mission attempted to systematically document the entire eastern part of the oasis. Investigations of Samarkand’s oasis wall, the Divar-i Kiyamat, as well as substantive work at the extremely important site of Kafir-Kala, were also made. It was on account of Sukharev that, for the first time in Sogdiana, an attempt was made to establish a typology of observed sites.835 This new methodological approach had a profound impact on archaeological exploration in the wider regions of Bactria, Sogdiana, and Margiana. Not only did Sukharev introduce the scientific practice of archaeological field survey, what was (and still is) perceived as a science of settlement typologies became a standard method for future archaeological research.

While Sukharev was executing his survey, excavations began at another site that would have a profound bearing on our understanding of Sogdiana in the 1st millennium BCE. This was the excavation of Tali Barzu southeast of Samarkand by G.V. Grigoryev from 1936–39. The site had already been recognized by N.F. Sitnyzkovskii in 1894, with subsequent work undertaken in 1928 by V.L. Vyatkin and V.P. Cheilytko and briefly again in 1936 by I.A. Sukharevym and M.M. Oleinekovym.836 Working for the Institute for the History of Material Culture of the Academy of Sciences of the USSR, the Grigoryev expedition would transform our understanding of the chronology of Sogdiana, and of Central Asia more generally. For the first time in Sogdiana a ceramic column was developed from well excavated, well documented contexts. Grigoriev’s expedition would

835 Шишкин 1969а: 106.
also be among the first to meet the demands of early Soviet science in taking
methodological cues from S.P. Tolstov’s revolutionary, interdisciplinary approach to
researching Khwarezm’s past. Grigoriev set out to coordinate his efforts with experts
from various scientific disciplines and with the explicit goal of overcoming the legacy of
antiquarianism. In addition to developing the first relative chronology for ancient
Sogdiana, Gregoriev also attempted to trace the historical development of irrigation
around Samarkand, being the first to correctly identify the Dargom canal as an
anthropogenic hydrological feature of deep antiquity.\(^{837}\) However, in his chronology
Gregoriev also proposed a very early date, situating the foundation of Tali Barzu in the
6\(^{\text{th}}\) century BCE with an unbroken occupation sequence until the 1\(^{\text{st}}\) century CE, followed
by a 2\(^{\text{nd}}\) century CE gap, and resumption of habitation in the 5\(^{\text{th}}\) century CE. The record
of Gregoriev’s excavation was revisited by N.I. Lebedeva alongside a brief excavation in
1989, resulting in a drastic revision of the original chronology with a new foundational
date in the 4–5\(^{\text{th}}\) century CE.\(^{838}\)

The work of A.I. Terenozhkin in the 1940’s was a milestone for our
understanding of Afrasiab in antiquity. Through small sondages Terenozhkin was able to
isolate four distinct stages of occupation at Afrasiab from the 6\(^{\text{th}}\) century BCE – 13\(^{\text{th}}\)
century CE, although it was only later that others realized aspects of his ceramic typology
were incorrect.\(^{839}\) Excavations at Afrasiab in 1950 only developed out of understanding
of later phases, leading to a temporary assumption that there was no early foundation of

\(^{837}\) Greg; The Talli Barzu chronology was later refined by T.I. Lebedeva in her dissertation (1994).
\(^{838}\) Лебедева 1994: 21, 46.
\(^{839}\) Lyonnet 2018: 420-21.
One important but overlooked event in the history of archaeological research at Afrasiab was the establishment of a fixed archaeological grid over the entire site in 1967. At the direction of Ya.G. Gulyamov concrete pillars were set across the entire park in 40m intervals which allowed for a more systematic approach to future excavations tied to a single local system.

While our knowledge of a Hellenistic ceramic typology gradually accumulated from secondary depositional contexts, it was not until 1989 that a Hellenistic occupation became the target of specialized study. This collaborative effort led by F. Grenet and M. Isameddinov brought together the Centre national de la recherche scientifique (CNRS) in Paris and the Institute of Archaeology in Samarkand under the title “Hellénisme et civilisations orientale”—a project that would last from 1989 to the present day under several iterations as the French-Uzbek Archaeological Mission (MAFOuz). This project was organized specifically to target remains of the Hellenistic period, especially after their success with excavations at Ai Khanoum, but also to anchor Hellenistic chronology within a broader framework of Central Asia’s archaeological past. An explicit goal was to excavate a site that was known to ancient Mediterranean, Sogdian, Arab, and Persian authors, a situation not so straightforward for the identity of Ai Khanoum. Basing their excavations on the work of earlier excavations of the northwestern fortification wall, it was decided to target an area in which the Hellenistic period was easily accessible. Thus, new trenches were opened on the northwest wall of the inner fortification ring. Notably, their work identified Hellenistic period renovations made to the Achaemenid “Bukhara

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841 Бурякова 1981: 5.
842 Bernard 1996.
Gate,” a small postern entryway that granted access to the ancient settlement over a natural ravine, documented by C. Rapin and M. Isamiddinov.\textsuperscript{843} It was during this period that this postern complex was expanded and stabilized due to earlier structural flaws.

West of the citadel are the remains of the Great Mosque of Afrasiab, also known as “site 7” in French excavation reports. During the excavation campaign directed by Martinez-Sève the remains of a granary was found under the mosque. The structure is apparently only a single room, part of a larger structure which remains unexcavated.\textsuperscript{844} The room is built of square mudbricks of the same dimensions as those found in the aforementioned Hellenistic infilling of the Achaemenid fortifications and Bukhara postern gate. A large amount of burnt millet grain was found therewithin and identified by G. Willcox, indicating that the room was destroyed by fire.

Simultaneous to work at Afrasiab there were several important projects exploring the wider Middle Zerafshan valley that shed light on the region during the 1\textsuperscript{st} millennium BCE. From 1971–73 the Zerafshan detachment of the Institute of Archaeology of the Academy of Sciences of the Uzbek SSR surveyed the rural hinterland of Samarkand within the oasis under the direction of Yu. F. Buryakov.\textsuperscript{845} The purpose of the expedition was to explore the development of extra-urban and rural settlements of the Zerafshan Valley while taking into account issues of ecology, geography, and topography. The result of the expedition did more to simply identify rural sites and create an internal typology for the region. The Buryakov expedition paid particular attention to the areas north of Samarkand between the city and the southern foothills of the Nuratau. In the

\begin{footnotesize}
\begin{itemize}
  \item \textsuperscript{843} Bernard 1996: 350.
  \item \textsuperscript{844} Bernard 1996: 351, n. 70.
  \item \textsuperscript{845} Ростовцев 1975.
\end{itemize}
\end{footnotesize}
1980’s an expedition surveying sites around the immediate environs of Samarkand was undertaken by the Institute of Archaeology of the Uzbek Academy of Sciences but was not completed. The results of this work are not published but are accessible in the archives of the institute.\textsuperscript{846}

The northern zone and areas west of Samarkand were revisited again in two important studies. The first expedition was undertaken by G.A. Pugachenkova from in the mid-1980’s to further explore rural settlement dynamics around Miankala and the southern terraces of the Nuratau taking Hellenistic and post-Hellenistic sites into account. The results of this work were collated and published in 1989 as \textit{Drevnosti Miankala: iz Rabot Uzbekistsanskoi Iskusstvovedcheskoi Ekspeditsii} (The Antiquities of Miankala: from the works of the Uzbekistan Art Historical Expedition). Unfortunately, this resource was unavailable for my present study although some of Pugachenkova’s work is reconstructed from brief interim reports published in \textit{Archaeologicheskie Otkrytiya}. This is quite unfortunate since several important Hellenistic sites are only published in this report (Kumyshkenttepa, Umaramintepa).\textsuperscript{847} The second is a 1994 doctoral dissertation by T.I. Lebedeva on rural Medieval settlements in the Middle Zerafshan \textit{Sel’skaya okruga i ee rol’ v formirovaniii rannesrednevekogo Samarkanda} (The Rural District and its Role in the Formation of Early Medieval Samarkand). This dissertation is a break from the Soviet tradition of producing detailed typological schemes and instead considered the relationship of rural settlements situated around the Medieval long wall around Afrasiab, the Divor-i Kirmat. In doing so Lebedeva put rural sites like Tali Barzu in conversation

\textsuperscript{846} Mantellini and Berdimuradov 2019. Since these results are not published they have not been incorporated into the AMCAA but should be in the future.

\textsuperscript{847} Lyonnet 2021: 320.
with historical information about land management relating to Medieval, urban Afrasiab. What is more, the dataset compiled by Lebedeva enabled the author, alongside T.Sh. Shirnov, to publish a milestone study on the architectonics of (above ground) rural domestic architecture and fortifications.848

Since 2001 the entire oasis south of Samarkand is being systematically surveyed and mapped under the auspices of several projects—the first directed by T. Shirinov and M. Tosi, and now directed by Simone Mantellini and the Uzbek-Italian Expedition in Samarkand. The Shirinov-Tosi expedition aimed to create a comprehensive “Archaeological Map of the Middle Zeravshan Valley” over the course of two field seasons (1999–2000).849 Following this work, a team led by S. Mantellini researched the administrative districts of Nurabad, Pasargom, Samarkand City, Samarkand Selski, Talyak, and Urgut, this project has undertaken the monumental task of documenting, to the best of their ability, over 2,000 of archaeological sites and irrigation canals within 2,500² km of the oasis around Samarkand. Methodologically this project involves the satellite remote sensing of tepas, low tepas, kurgans, palaeochannels, canals and palaeocanals, and visible architecture to locate sites that are then visited for traditional field survey, GPS recording of features not observable from space, and targeted excavations.850 Additional recent work by a Spanish team led by B. Rondelli, S. Stride, and J.J. García-Granero (but coordinated with S. Mantellini) has applied the same method to the immediate vicinity Samarkand.851 One of the great achievements of these projects

848 Лебедева и Ширинов 1997.
849 Shirinov and Tosi 2003.
850 Mantellini 2018 for an overview of this project, which has otherwise produced numerous publications associated with heritage monitoring, archaeohydrology, and ancient regional ecology.
has been the recognition of Soviet Military maps in documenting the widespread destruction of archaeological sites around Samarkand due to terraforming activities associated with Soviet land reclamation policies for cotton production in the 1950’s. The result is that we now understand the scale of destruction to Uzbekistan’s cultural heritage due to Soviet agrarian reforms. Statistically speaking we understand the following percentages of site loss by district since the 1950’s: Samarkand—52%, Samarkand Sel’ski—51%, Taylak—49%, Urgut—40%, and in the southwestern steppe—30%. This is an average of 40% of all archaeological sites lost due to such reforms. Two relevant takeaways for this current dissertation are first, we should be cautious about our data indicating the number of settlements in one period or another (even if the current state of evidence is accepted for my general assessment below) and, second, we must bear in mind that there is an inverse relationship between the scale of tepa destruction and the quantified size and chronological scope of the resulting ceramic scatters when these tepas are razed. That is to say, unmolested tepas tend to have fewer sherd quantities on the surface, affecting chronological observations based on field survey. Razed tepas essentially “burst” and spread their contents over a wide agricultural plain giving the impression of a larger settlement than may have originally existed. The fact that the architectural footprint is lost leaves the true scale of a settlement unverifiable.

Setting aside this historiography of archaeological field methods and research as applied to the Middle Zeravshan we must make a special note on the branch of research associated with refining the chronology of Afrasiab. Afrasiab is the typological anchor for all of Sogdiana on account of its chronological breadth and historical significance, but

852 Mantellini 2017: 42-43.
especially because of the mass of data that has emerged from a century of excavations.\textsuperscript{853} Refining this chronology remains one of the principal tasks for archaeologists working along the Zerafshan in part because Sogdiana (in fact most of Central Asia) lacks seriation.\textsuperscript{854} Additionally, no radiocarbon samples have ever been taken from a first millennium BCE context.\textsuperscript{855} One of the principal tasks for researchers has been to refine the chronology of Afrasiab.\textsuperscript{856} The ceramic column of Afrasiab remains one of the most contested areas of scholarship in Sogdiana with an immense bibliography. There is no need to review the history of scholarship on the wider Afrasiab complex here. Instead, I restrict myself to the most current understanding of this chronology from the earliest layers through post-Hellenistic period.

The periods concerning the first millennium BCE at Afrasiab are divided into the following periods: Afrasiab 0, Afrasiab I, Afrasiab II, Afrasiab III. Within these phases are further subdivisions. A summary of the current periodization, to the best of my knowledge, is as follows in Table 18.

Table 18. Summary of the Afrasiab ceramic chronology.

<table>
<thead>
<tr>
<th>Chronological period</th>
<th>Dates</th>
<th>Historical period</th>
<th>Characteristic elements</th>
<th>Comparanda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afrasiab 0</td>
<td>Late 2\textsuperscript{nd} – early 1\textsuperscript{st} m. BCE</td>
<td>Pre-Achaemenid</td>
<td>Painted handmade pottery</td>
<td>Yaz I</td>
</tr>
<tr>
<td>Afrasiab I</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Afrasiab IA</td>
<td>6\textsuperscript{th}–4\textsuperscript{th} c. BCE</td>
<td>Achaemenid</td>
<td>Yaz III cultural package</td>
<td>Yaz III; Lolazor</td>
</tr>
<tr>
<td>Afrasiab IB</td>
<td>328 – 280 BCE.</td>
<td>Post-Alexander</td>
<td>Continuity of Yaz III; some basic Greek shapes.</td>
<td>Yaz III; Saratepa-2</td>
</tr>
</tbody>
</table>

\textsuperscript{854} Mantellini 2018: 181.
\textsuperscript{855} Lyonnet 2018: 422.
\textsuperscript{856} Lyonnet 2018: 421.
\textsuperscript{857} Lyonnet 2018: 425-433.
4.4.b. Settlement patterns and ancient hydrology along the middle Zerafshan River.

The earliest evidence for human habitation and exploitation of the local environment around modern Samarkand begins in the upper Palaeolithic. This much was recognized in 1939 with the discovery of a Mousterian point under Ovrazhnaya Street in Samarkand\(^{859}\) and a site of the same period at Komsomolskoye Lake.\(^{860}\) This early community lived in somewhat different ecological conditions than the Samarkand oasis from the 1\(^{st}\) millennium BCE through the present day. At that time the oasis was apparently forested in more areas than in subsequent millennia but also covered with expanses of steppe grassland as it is today. Here populations were tied to late middle Palaeolithic populations who already were present along the Middle Zerafshan as is known from sites like Kuturbulak and Amankutan. These groups were already part of a pre-Holocene long-distance network of exchange, as is indicated from the presence of

<p>| | | | | |</p>
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<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Afrasiab</td>
<td>IIA</td>
<td>Antiochus I – Antiochus II</td>
<td>Whitish in color; limited shapes (i.e. bowls with T- and I- shaped rims. In some places the introduction of tulip bowls/phiale</td>
<td>AK I</td>
</tr>
<tr>
<td>[hiatus in occupation]</td>
<td></td>
<td>Only 13 sherds from under IIB pit-house; post-IIA ashy layer of IIA sherds.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Afrasiab</td>
<td>IIB</td>
<td>Hellenized Sogdian independence; Eucratides in Bactria.</td>
<td>Fish plates; Megarian bowls (and imitations); echinus bowls; red and black slip wares.</td>
<td>AK VII and VIII</td>
</tr>
<tr>
<td>Afrasiab III(^{858})</td>
<td>Early to mid-2(^{nd}) c. BCE</td>
<td>Post-Hellenistic; Sogdian independence continued.</td>
<td>High-footed goblets; continuity of red-engobe forms from IIA; no “nomadic” or “local” features.</td>
<td>Across northern Bactria and Sogdiana. Lyonnet 1997: 157-172; 2018.</td>
</tr>
</tbody>
</table>

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\(^{858}\) Lyonnet 2018: 432-433.
\(^{859}\) Шишкин 1969а: 115-116; Григорьев 1940: 89-90.
\(^{860}\) Шишкин 1969а: 115-116; Лев 1964; Харламова 1939.
shells traded from the Indian Ocean. The Neolithic in this same zone seems to be a continuation of prior hunting and gathering practices but with a particular emphasis on fishing, evidence only drawn as an inference from Neolithic sites within the oasis being detected in the ancient tugai forest areas on the banks of the Zerafshan.\footnote{Fouache, Cez, Andrieu-Ponel, Rante 2021: 99.}

It is really the early 3rd millennium BCE when the earliest pastoral groups began exploiting the lush steppe of the Middle Zerafshan that the region becomes integrated with developments across the northern steppe and southern Central Asia. Sites along the Zerafshan in this period demonstrate strong connections with the northern steppe, but recall that it is at this time that a major agricultural settlement with cultural ties to Turkmenistan emerges at Sarazm in Panjikent. However, we should note that this is a very poorly researched topic in Central Asian archaeology.

G.L. Bonora suggests that the choice of the Middle Zerafshan for newcomers in both directions was built on trade and rich pasturage.\footnote{Bonora 2021.} Turquoise, carnelian, and lapis lazuli are common items found in early graves in the region. Yet it is metals that might have played a role in bringing people together in the mid-3rd millennium BCE. At the settlements of Tugai and Sichkonchi metalworking was the principle production activity in domestic contexts. The eastern portion of the Middle Zerafshan valley is surrounded on three sides by mountains that are rich in copper, lead, and silver ore, as well as tin. Zerafshan tin is emerging as a candidate for the still speculative Central Asian-Mesopotamian tin trade that is commonly associated with northern Afghanistan. The Bronze Age roots of tin mining in the Zerafshan has been known to Soviet science since
the 1940’s yet the requisite work to connect these sources to a pan-Asian trade in the metal remains to be seen, in part because of the failure of traditional trace-element analyses to work on tin.\textsuperscript{863} While there are now several known sources, the most likely source is at Karnab in near the Zirabulak mountains between Bukhara and the Middle Zerafshan.\textsuperscript{864} This site is a settlement structured around tin processing with tin slags with a ceramic kit tied to the Bactria-Margiana Complex dating to the first half of the 2nd millennium BCE.\textsuperscript{865}

In the late Bronze Age that the plain of Samarkand emerges as a major cultural interface between sedentary agricultural populations and mobile populations indigenous to the vast Eurasian steppe lands north of the Nuratau and lower Syr Darya. Communities living in the Middle Zerafshan were interactive with all contemporary traditions flanking the Zerafshan and beyond, not least of which also include relations with the Bactria Margiana Complex of northern Afghanistan, southern Uzbekistan, and the Murghab Delta in Turkmenistan, as well as the cattle breeding culture of Zamanbaba west of the Bukhara Oasis. This fact led Avanesova to suggest that the region should be considered its own variant of the wider Central Asian Bronze Age, characterized as a significant cultural interaction sphere.\textsuperscript{866} This culture is in fact defined by its interconnectivity with mobile, sedentary, and semi-nomadic populations abroad while itself primarily having an agricultural basis alongside with cattle and sheep breeding. Within this community the

\textsuperscript{863} Garner 2021: 805-806.
\textsuperscript{864} Garner 2021: 805-806
\textsuperscript{865} Parzinger and Borofka 2003: 71-73; Garner 2013: 232, Figure 154; 2021: 807.
\textsuperscript{866} Avanesova 2021: 666-67, 687-688.
mining of metal ores and trade in semi-precious stones was also a key component of the local economy and social self-representation.

In the late 2nd millennium BCE the Middle Zerafshan becomes integrated with various branches of the so-called “Andronovo” culture. This might be significant in that it is during this millennium that the Middle Zerafshan begins to develop into a center of trade in raw materials: turquoise, copper, and tin.\textsuperscript{867} In discussions of a Bronze Age around Samarkand deference is usually made to Sarazm in Pendjikent. Like virtually all other regions of southern Central Asia, sedentary life appears to emerge rather rapidly and without a clear cause. However, we should always remain cautious of our ability to dissect time when dealing with limited prehistoric archaeological evidence; a complex period of one thousand years is rhetorically compressed into a blip of understanding. An overview of this evidence was published recently by N.A. Avenesova in what is one of the only synthetic works on the Sogdian Bronze Age.\textsuperscript{868} Most evidence is represented by burials, such as Siab located near the Khodzha Donijar Mausoleum at Afrasiab, Sazagan 26km southwest of Samarkand, Aksai 32km to the southwest, Dzham 60km southwest, and Tusunsai 48km to the northeast of Samarkand.\textsuperscript{869} The burials at Sazagan are particularly interesting in that one of the interred was biologically female and buried with a whole sheep, likely reflecting the importance of pastoralism to this individual’s community. The most common burial practice was interment in simple pits with pottery

\textsuperscript{867} Bonora 2021: 742-743.
\textsuperscript{868} Avanesova 2021.
\textsuperscript{869} Avanesova 2021: 670-71.
that trends towards influence from Sapalli in Surkhandarya and grave goods in a wider tradition of BMAC sites across southern Central Asia.\textsuperscript{870}

More recently, excavations have revealed evidence for cultic practices among mobile populations in the oasis of Samarkand. This comes in the form of a cultic space known as the Zhukov sanctuary, a large, circular stone monument located between Samarkand and the May 1\textsuperscript{st} Dam.\textsuperscript{871} This sanctuary, active from the 4\textsuperscript{th}–3\textsuperscript{rd} millennium BCE, exhibits evidence for ritual practice and ceramic culture known only from aforementioned northern zones and not local to the Zarafshan. This early cultic practice seems to correspond with later evidence for a similar ritual found at Sazagan II from 1980–81 by a Samarkand University Expedition led by M.D. Dzhurakov in which a circle of large stone slabs bound a depression of 3m in diameter.\textsuperscript{872} The full skeleton of a goat or sheep was found at the center with fleshed limb bones and a skull of a ram found at the southwest of the depression. Ochre was found spread throughout the depression alongside significant areas of burning. While the Zhukov sanctuary indicates the arrival of this practice from the steppe far north of Sogdiana, the continuation of the practice into the Bronze Age with the addition of goat animal sacrifice attests to the integration of ritual elements of pastoralism into the lifeways of a part of the Samarkand Oasis that was also engaged in agriculture and sedentism.

Tugai is among the most interesting Bronze Age sites found in the oasis and one of the only excavated Bronze Age settlements west of Sarazm. The site is the location of an ancient miner’s colony located 48km northeast of Samarkand. Excavated as a rescue

\textsuperscript{870} Аванесова 2015: 60.
\textsuperscript{871} Avasenova 2013.
\textsuperscript{872} Джуракулов 1983: 481-482.
project by N. Avanesova with the Department of Archaeology at Samarkand University in 1986, a pit-house used as living quarters and copper smelting were found installed into alluvial soil.\textsuperscript{873} This includes the discovery of a furnace and heating mechanisms alongside crucibles and entire layers of copper slag. Ceramics here exhibit connections with Sintasha and Petrovosk culture sites of the northern steppe in Kazakhstan and locally with Sarazm IV layers of Panjikent, particularly wheelmade red, black, and grey engobe tablewares.\textsuperscript{874} This ceramic culture reflects traditions known by mobile populations in the southern Siberian/Kazakh steppe, the Volga region, semi-sedentary sites of the inner Kyzyl Kum such as Lavlyakan, as much as sedentary agricultural populations local to the eastern Zerafshan basin and is therefore characteristic of a highly connected interregional cultural tradition.\textsuperscript{875} Calibrated radiocarbon dates collected from the site (2240–1960 BCE) generally confirm the interactivity of the site with contemporary cultures from the late 3\textsuperscript{rd}– early 2\textsuperscript{nd} millennium BCE.\textsuperscript{876}

An elaboration of domestic architecture at Tugai is critical for understanding the development of rural domestic architecture in the first millennium BCE across the Middle Zerafshan Valley. In particular the use of pit-houses at Tugai by a sedentary population complicates the direct correlation between Hellenistic pit-house use in the oasis of Samarkand and nomadism that some see as exerting influence over the Zerafshan Valley. This is a tradition of house construction that persists through the Yaz I period in the same oasis.\textsuperscript{877} From a purely architectural standpoint the vernacular practice of Bronze Age pit-

\textsuperscript{873} Аванесова 1995; 2015; Avasenova 2021: 669
\textsuperscript{874} Аванесова 2015: 52-53.
\textsuperscript{875} Avasenova 2021.
\textsuperscript{876} Аванесова 2015: 59.
\textsuperscript{877} Lhullier 2013: 164.
house construction represents an early stage of a long-standing indigenous practice engaged by sedentary populations over several millennia. As noted in the previous chapter, this deep tradition of pit-house construction is detected in the Hissar Valley in Tajikistan, but also in the Bukhara Oasis (see below).

The Tugai pit-house was built into loose alluvial deposits alongside a riverbank. Because of its close proximity to the river, part of the site has washed away due to erosion and only half of the pit-house was preserved. The house is rectangular in plan, roughly 2m x >2m x 0.9m and dug into the earth. The walls of the structure were later reinforced with thin sheets of stone cladding and plastered with clay. Evidently the site’s ancient inhabitants were aware of the instability of the earth and took measures to reinforce the walls of the structure. In this respect one is reminded of the stone lined pit-house for the mining community at Sariab in northern Badakhshan, which appears much later in the Hellenistic period.878 The Tugai pit-house was filled with debris associated with copper smelting, mining tools, ceramics, and the bones of both wild and domesticated animals. The domestic function of this house is established on the basis of a single centrally placed stone-lined hearth for cooking and heating.

A thin cultural layer and walking horizon external to the pit-house lead Avanesova to suggest that the site was either seasonal or only used short-term. However, given the loose nature of the alluvial earth and its proximity to a river causing significant erosion it is possible that much cultural debris simply vanished. What is more, intensive metallurgical industry at the site of a wide variety of ores imported into the region indicates that perhaps this site, as a whole, was more permanent than has been suggested.

878 Sup. ?? [link to Sariab discussion].
A smelting furnace measuring 1.1m d. x 1.6m depth was found installed into the earth approximately 20m west of the house. Ore samples taken from the furnace were scientifically examined. Testing of the metallurgical remains revealed that in the Bronze Age communities around the Zerafshan were experimenting with polymetallic ores such as copper-tin-zinc, and copper-lead which were almost certainly sourced locally.\textsuperscript{879} Ores of pure copper were also found as well as copper-tin, copper-lead, and arsenical-copper alloys were also processed at Tugai.\textsuperscript{880} Traces of gold ore were also found within the pit-house itself. This is quite a wide variety of metals, polymetals, and alloys for a single site which helps us situate the eastern part of the oasis of Samarkand as a major supplier for processed copper and a diverse kit of bronze alloys. This is further supported by technological traditions of the crucible fragments, which are again drawn from Petrovosk metallurgy.\textsuperscript{881}

It is possible that the metallurgical community at Tugai was initially a transplant community from the steppe whose metallurgical competency provided craftsmanship and technological knowledge to local communities between Samarkand and Sarazm. This hypothesis is supported by grave goods from the aforementioned burials at Siab, Sazagam, Zardcha Khalifa, and Dzham.\textsuperscript{882} Such an arrangement is comparable to the phenomenon of the first millennium and beyond of hiring mobile, nomadic tribes to serve as mercenaries, which taken together, adds nuance to the symbiosis of nomadic and sedentary populations across antiquity.

\textsuperscript{879} Garner 2021.  
\textsuperscript{880} Аванесова 2015: 52.  
\textsuperscript{881} Аванесова 2015: 58-59.  
\textsuperscript{882} Avasenova 2021.
The Yaz I period of Central Asia’s early Iron Age is considered a major break from earlier Late Chalcolithic and Bronze Age traditions in pottery production and what some see as a transition from inhumation burial towards excarnation associated with incipit Zoroastrianism. However some traditions do continue. Quite significant is that the emergence of the ill-defined Burguluk culture (ca. late 13th–8th centuries BCE) around the oasis of Tashkent seems to represent a branch of Yaz I with interregional connections from Turkmenistan to Xinjiang, China. By the end of the 2nd millennium BCE, communities within the Burguluk tradition structured their lives around cattle breeding and domestic life situated within pit-house habitations. While often referred to as semi-pastoral or nomads, at least part of these populations were sedentary, indicating that the Burguluk branch was just as variable in economic subsistence as all other societies in the Yaz I tradition of modeled painted ceramics. Indeed, the earliest phases of Koktepa in the northern oasis of Samarkand are representative of a settled community who lived in densely packed houses made of rammed earth, alongside pit-houses, and practiced dry farming as much as pastoralism. Perhaps efforts to generalize Burguluk society (if this was indeed a cohesive culture outside of shared ceramic production) cannot be resolved by pottery, but instead by a careful consideration of archaeobotanical and faunal remains on all future projects exploring this period. Only then can this issue of mobility, semi-pastoralism, and sedentism be resolved, with pockets of each coinciding simultaneously. This is far beyond the state of available evidence.

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884 Lhullier 2013.
886 Rapin and Isamiddinov 2013.
The settlement history between the era of Burguluk culture traditions and the late Iron Age is really only understood by negative evidence from Koktepa. Around the 10th century BCE Koktepa reverts from being a small village to a collection of light frame structures or yurts, known only from patterned arrangements of postholes. I will revisit this occupation below. After this very brief occupation Koktepa is turned into pasturage until the late 7th century BCE, based on a very thick sedimentation of dark organic material that overlays the earlier phases.

Recent explorations along the left bank of the Zerafshan by S. Mantellini found infrequent evidence for late Iron Age / Achaemenid period sites (6th–4th century BCE). This is striking given the fact that it was during this period that both Afrasiab and Koktepa emerged as powerful fortified sites within the oasis. Instead, major development in the wider oasis does not seem to occur until the Sogdian post-Hellenistic period (late 3rd–1st century BCE) and Kangju period (1st century BCE – 1st century CE). The most significant development of the rural hinterland does not occur until the 6–8th century CE, as is already known from prior expeditions. While the archaeological map developed by this expedition has not yet been published, we can approximate some of Mantellini’s results pertaining to the Achaemenid through post-Hellenistic periods:

**Table 19. Sites in the southern Samarkand Oasis based on Mantellini.**

<table>
<thead>
<tr>
<th>Period</th>
<th>Date</th>
<th>Number of Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achaemenid (Yaz III)</td>
<td>6th – 5th c. BCE</td>
<td>~ 7</td>
</tr>
<tr>
<td>Achaemenid (Yaz III)</td>
<td>5th – 4th c. BCE</td>
<td>~ 8</td>
</tr>
<tr>
<td>Late Yaz III / Early Hellenistic</td>
<td>4th – 3rd c. BCE</td>
<td>~ 45</td>
</tr>
</tbody>
</table>

887 To my knowledge a comprehensive archaeological map resulting from Mantellini’s survey awaits publication. Only aspects of this work have been published thus far. Once this map is published it will be integrated into the Archaeological Map of Central Asian Antiquity.


889 Mantellini 2018: 198, Figure 6.9. Only graph data provided by the author without tabular numbers.
While these numbers are estimates based only on a published synthesis, the data is striking nonetheless. There are only over a dozen Achaemenid sites known in the entirety of the agricultural south of Samarkand. Yet already in the Late Yaz III and early Hellenistic period there is a drastic increase in evidence for settlements, which roughly coincides with the conquest of Alexander the Great, the installation of Greek satraps, and brief administration of Seleucid rule in Central Sogdiana. However, 45 sites are still not many compared to the long post-Hellenistic period (which politically remains somewhat obscure) with over 300 new sites emerging from the late 3rd century BCE – early 1st century CE. It remains an open question whether we consider these numbers as reflecting historically specific trends (i.e. Seleucid land grants to soldiers and mercenaries, the mass migration of semi-nomadic populations, etc.) or if these data are representative of a single long term development.

Two sites currently shape our understanding of the Middle Zerafshan valley in the early Iron Age. These are the first architectural phases at Afrasiab (AMCAA 688) and the emergence of a monumental, fortified settlement at Koktepa (AMCAA 687) in the modern town of Batrak. Due to the urban character of Afrasiab and incredible depth of later cultural depositions we remain at a disadvantage in understanding the Achaemenid and Hellenistic phases of Afrasiab. This is in contrast to Koktepa, where a more limited later occupation has enabled more comprehensive investigations of earlier strata.
Afrasiab is currently an archaeological park at the center of modern Samarkand that is roughly 200ha in size. In antiquity the ancient city and its suburbs encapsulated an even larger zone, the contours of which we may never understand. Ancient Mediterranean sources refer to a fortification wall around the city measuring 70 stadia (10km), which roughly corresponds to the area of the modern park and some neighborhoods in the immediate environs. Yet this would only refer to the state of fortifications at the end of the Achaemenid period. What is more, the entire mound is split into three sections divided by deep canal branches of the Siab river that fed the settlement from an early period. This water course originates from the south, where feeder canals have been documented spanning the Achaemenid and Hellenistic periods in date. The earliest layers are very poorly understood and therefore all interpretations about the foundation of Afrasiab remain speculative. With only rare exceptions, we mostly know of an early Iron Age, then Achaemenid and Hellenistic presence from areas that still feature prominently in the park’s relief—the monumental fortification walls that once defended the city.

An early date for Afrasiab was already known within the limits of Samarkand by A.I. Terenozkhin, who in his dissertation suggested a late Bronze or early Iron Age occupation on the site before the later city developed. In 1960, to work out the question, test trenches were laid on the southernmost slope of Afrasiab by Sh. Tashkhodzhaev at the Tugli Tekin Mausoleum (AMCAA 1049) in the Shakhi-zinda complex, exposing an early mudbrick floor with ceramics that the excavator was able to relate to the early Iron Age of Anau (Kopet Dagh), Gyaur-Kala (Merv), and Nadi-Ali.

890 Тереножкин 1950.
(Afghanistan).\textsuperscript{891} Two alabaster objects were found directly on the floor that might be components of a potter’s wheel. These are two circular disks that are both 20cm in diameter. One object has a pin set in the center that fits into a hole carved into the other, allowing one disk to spin on an axis over the other. If it is indeed a potter’s wheel, then the area of Shakhi-zinda might have been a potter’s quarter set on the outskirts of an ancient settlement in this very early period. This would initiate a pattern of production centers installed at the outskirts of settlements and in immediate rural hinterland already described in relation to Kashkadarya, but with a strong tradition also persisting at Afrasiab into the Hellenistic period.

Afrasiab is first enclosed by an earthen wall before the 6\textsuperscript{th} century BCE, a phase that remains relatively obscure. Pottery dating from the 6\textsuperscript{th}–4\textsuperscript{th} centuries BCE was frequently encountered in secondary depositional contexts by Soviet era expeditions.\textsuperscript{892} It is during the 6\textsuperscript{th}–5\textsuperscript{th} century BCE that a monumental wall is built following the topography of the entire elevated area (Figure 54; Figure 55).\textsuperscript{893} At this time the entire fortification was bisected into a bipartite settlement that divided the site into a bipartite structure,\textsuperscript{894} likely with the main occupation concentrated within the citadel and the wider area as an open enclosure site like Uzunkir. The wall is built of plano-convex bricks, the foundations of which might also predate the Achaemenid period since later Achaemenid period phases of the wall utilized rectangular format bricks, a first for Sogdiana.\textsuperscript{895} This question remains unresolved. An even higher elevated area must have already existed at

\textsuperscript{891} Шишкін 1961: 42-44. 
\textsuperscript{892} Кабанов 1981b. 
\textsuperscript{893} Rapin and Isamiddinov. 2013: 115-116. 
\textsuperscript{894} Shishkina 1994: 85. 
\textsuperscript{895} Туребеков 1990: 44-56; Rapin and Isamiddinov. 2013: 116; Lyonnet 2021: 316.
this time in the northern area because a second inner fortification wall was also built setting the area aside as a citadel. This seems to coincide with other efforts to fortify Sogdiana, such as at Koktepa (AMCAA 687) and Uzunkir. In the west a single pit has been explored that is interpreted as a granary with Yaz III pottery infilling.\textsuperscript{896} What is more, traces of an Achaemenid palace were detected on the citadel of Afrasiab but have not been excavated nor published.\textsuperscript{897}

We know from archaeological excavations at Lolazor in downtown Samarkand that extra-urban settlements existed outside of Afrasiab. Whether these qualify as “suburbs” or merely a rural hinterland is not of concern for a period when Afrasiab itself was unlikely to have been completely urban. Urban redevelopment in the late 1960’s gave some opportunity to explore areas that would have been extramural villages and production sites outside of the main settlement walls as well as hydrological engineering outside of the city that occurred in the Hellenistic and post-Hellenistic periods. Such is the case for Lolazor (AMCAA 1194), a site that is somewhat unique in that it is the remains of Samarkand’s original canal network. The site is crucial for understanding the early factors leading to urbanization, the intensification of craft production, and the types of activities rural populations were engaged in. I will only summarize the most pertinent information.

Eight well stratified canals were excavated by E.Yu. Buryakova from 1976–78 across a trench measuring 120x90m and a 25m long stratigraphic trench.\textsuperscript{898} The general orientation of the early canal networks directed water north-northwest towards Afrasiab,

\begin{footnotes}
\item[896] Кабанов 1981b:
\item[897] Иневаткина 1995; Lyonnet 2021: 316.
\item[898] Бурякова 1981.
\end{footnotes}
3km to the northeast, in what would have been a gravity fed system. These canals supplied water to all three branches of the Siab canal that directs water to different areas within the Afrasiab settlement. Four canals produced a stratified column of ceramics beginning in the 7th/6th century BCE. All canals otherwise had material from the 4th century BCE – 1st century CE although there is a distinct lack of engobe pottery that perhaps indicates a gap in the functioning of this area. This should not be understood as a lack of activity outside of Afrasiab in the Hellenistic period because canals dating to the 3rd–1st centuries BCE were documented under the Registan 3km to the east.899

The assemblages within the canals were well stratified but reflect a mixture of activities that occurred upstream from the 7th/6th–4th centuries BCE. Only the earliest material is published. No architecture was found within Buryakova’s trench, so presumably archaeological deposits were runoff that gradually accumulated with natural canal sedimentation. Therefore, the materials reflect life upstream along the canal rather than the immediate vicinity of the excavation (although these activities were still local). Significant is the variety of vessels found in the lowest levels of some canals, representative of a full range of Yaz II and Yaz III forms correlating with Afrasiab I. The majority of vessels were wheelmade but some handmade ceramics were documented. Wheelmade pottery includes storage vessels (khums and khumchiks), round pots with a distinctive ambulating notch on the lower belly for setting the vessel into a stand (Yaz I), tagoras, and cups (especially cylindro-conical types). Handmade vessels were almost entirely cooking vessels made from a thick clay mixed with crushed slate chamotte and include cauldrons, braziers, and pans. Upstream production sites are certain along the

canal. Bronze slag and small metal finds were common—awls, needles, knives. Ceramic slag and bowls used as molds were documented. Bone needles were also found, which might reflect some textile industry or tanning.

Stone tools from the site are made of siliceous shale and an igneous rock that is only found in the Zirabulak Mountains, south of the Zerafshan River between Samarkand and Bukhara. Presumably a contemporary mining settlement existed along that small range. The stone assemblage included querns of a variety of forms with concave centers indicating prolonged grain grinding, grindstones, square polishing stones, mortars and pestles (including specific types of pestles for crushing minerals and dyes), sharpeners, needles - some of which were part of a tradition that began in the Bronze Age but likely remained unchanged (attesting to the fact that in our efforts to read granular cultural change into each fragment of pottery, there are some artifact classes that reflect conservatism in traditions inherited across the generations). We should also note that crushed slate was used in the clay for cooking vessel production.

There is also evidence for local subsistence and consumption. Buryakova noted that canals were packed with deposits of animal bones, and cattle were the most common type found. Thus, the local population not only consumed large amounts of grain, but also meat. Unfortunately, the assemblage was not analyzed but an association with cattle breeding is certain. This speaks to a typical rural economy that is based on mixed agriculture, cattle-breeding, and pastoralism. Other activities can be inferred as secondary products of animal agriculture such as textile production, tanning, and dairy processing.

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Afrasiab was still organically developing into a city at the time of these deposits at Lolazor. Therefore, these canals reflect an effort between the urbanizing residents of Afrasiab and the rural hinterland to coordinate the local hydrology to accommodate a town that was increasing in complexity and economic sophistication. Evidence for integrated lateral economy between slate mining, stone tool production, and pottery production is particularly intriguing. It is likely that the detritus produced from the processing of stone tools was given over to local potters for further processing into the chamotte used in mixing clay for handmade pottery.

Settlements beyond Afrasiab from the 6th-5th century BCE are few but are located in places where water is accessible. Water is the most important resource in the Samarkand Oasis, the sensitivity to which has led to the expansion and contraction of at least the southern cultivable zone between the city and the Zerafshan Mountains over several millennia.\textsuperscript{901} Whereas new canals were installed in the immediate environs of Afrasiab to expand the agricultural viability of the immediate hinterland, it is not until the Achaemenid period where there is a major coordinated irrigation projects across the Middle Zerafshan such as (but not limited to) the construction of the Dargom Canal south of the Zerafshan. Wider hydrological efforts to expand irrigation would still only reach their peak in the Hellenistic period. This reflects a time when the Sogdian economy became particularly integrated with irrigated agriculture. We might envisage an Achaemenid state exerting authority over local landholders and/or their crop yields, however there is no reliable internal evidence for state intervention in rural agricultural production and expansion. This includes the coordination of labor to build canals.

\textsuperscript{901} Shirinov and Tosi 2003; Mantellini 2001; 2017; 2018
Whereas others have argued for a heavy administrative hand over rural life in Chorasmia and Bactria, these arguments overstate the importance of quite limited Achaemenid administrative texts and selective elite material culture, taking evidence for larger imperial-systemic mechanisms as a proxy for governance over very local affairs.

One of the most contested aspects of Sogdian archaeology is the chronology of the Dargom canal which currently bisects the southern Middle Zerafshan valley. The canal begins at a topographic choke point between the Panjikent and Samarkand Oasis at the modern town of Ravatkhodja. From there it channels Zerafshan River water 120km westward before rejoining the same river at the town Temur’ul. This canal is perhaps the same river famously mentioned in Ptolemy’s Geographika as the “Dargomes” feeder canal for Maracanda (Afrasiab). However, this causes problems because Ptolemy keeps the Dargom conceptually distinct from the Zerafshan river (Polytimos). This speaks to a second problem—whether the Dargom known today took the same shape in antiquity. Complementary expeditions between the French and Italian missions in the Zerafshan valley have different opinions about the ancient origins of institutionalized irrigation in this region (the Dargom and others such as Bulunger). S. Mantellini leans towards a 6th–5th century BCE date for the origins of the Dargom canal based on indirect evidence.

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902 Briant 1984; Minardi 2015; Wu 2018; Ferrario 2022. The problem with this line of reasoning is illustrated by W. Henkelman’s acceptance of X. Wu’s argument (2018: 245), who follows Wu in connecting inferences already present (but not explicit) in the Elamite registers of the Persepolis Fortification Archive about towns and hinterlands in Bactria to the physical settlement patterning of Kyzyltepa and Kyzylcha (i.e. a town and market center surrounded by farmsteads). The reasoning is that the town itself (and therefore the local administration) was responsible for building up the rural hinterland. The argument is taken further that the regularity of transactions dealing in the same commodities implies control over those commodities. In fact, the exact opposite can be said of the PFA – that the journals are merely documenting an Achaemenid practice that exploits the realities of localized settlement structures and agricultural production in Bactria.

903 Rapin and Isamiddinov 2013: 120
904 Rapin and Isamiddinov 2013: 117-121.
He believes that the canal was likely (but not certainly) built in 6th–5th century BCE on account of an intensification of settlements along the present course of the Dargom canal at that time. French archaeological explorations along the Bulunger canal north of Samarkand (also thought to have ancient origins) came to different conclusions that arrive at a Late Antique date, but only for the origin of the present course of the canal. In any event, the earliest confirmed, direct date for the current Dargom canal is the 2nd century CE.

Both missions seem to be in agreement on the possibility that the earliest “canal” may have taken shape through a slow, gradual process of interlinking more minor irrigation channels with outflows from the Karatube mountains to the south. This process would have nonetheless required a significant amount of labor even if not quite the impressive feat of Achaemenid engineering implied by an early date for one long canal. Some lengths are straight cuts through the alluvium. However, most of the canal takes the shape of a natural river winding across the plain. Only a few sites date to the Achaemenid period south of Lolazor, along the Dargom Canal, and Eski Angar Canal leading to Kashkadarya. However, these sites are not yet published comprehensively and therefore cannot be characterized in this discussion.

The entire plain northwest of Afrasiab between the Siab River and the Karadarya branch of the Zerafshan was probably continuously settled during the Late Iron Age and early Hellenistic (late Yaz III) periods. Sites dating to this period are found distributed for

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905 Mantellini 2017.
906 Rapin and Isamiddinov 2013: 120.
up to 50km along the left bank of the Karadarya (Zerafshan). Most significant is Saratepa 2 on the western outskirts of modern Samarkand (AMCAA 1196). This site is not a settlement per se, but a rural open-air pottery production zone spread over 3 hectares excavated in 1987 by I.D. Ivanitskii. It dates from the late 4th–mid 2nd centuries BCE. The site is certainly the most significant pottery production center excavated anywhere in Hellenistic Central Asia and challenges our understanding of localized (domestic) and urban (industrial) pottery production, an issue that I believe has some bearing on the broader indigenous traditions of rural Hellenistic Central Asia. I will return to this below.

Other sites near Afrasiab illustrate our understanding of settlement patterning. Excavations at Kurgancha (not to be confused with either Kurgancha in Kashkadarya) in 1979 by I.D. Ivanitskii near the confluence of the Siab and Karadarya rivers was especially dense with Yaz II – late Yaz III forms dating the area from the 8th–early 3rd centuries BCE (AMCAA 1190). A. Omel’chenko mentions round pit-houses with diameters of two meters at this Kurgancha although no architecture was published. Instead the authors only signal that an area of 2ha was obliterated. It is unclear whether Hellenistic (Afrasian IIA and IIB) pottery was found here but there is a documented resumption of activity in the area in the late 2nd century BCE. This Afrasiab IIA–IIB gap is filled by a rural settlement along the river known as Lyailakui (AMCAA 685). I will return to this site below in discussing rural domestic architecture of the Middle Zerafshan.

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911 Омельченко 2003: 56.
912 Иваницкая и Абишева 1986.
Much further west, new evidence is emerging as a result of the joint Uzbek-Japanese expedition at Kala-i Dabusia (AMCAA 846). Dabusia would only emerge as a major fortified urban site consisting of a citadel, shakhristan, and rabad during the Medieval period, but trenches set into the Medieval citadel reached Hellenistic and levels during the 2009–12 excavation seasons.\textsuperscript{913} At least as early as the early Hellenistic period (late 4\textsuperscript{th}–early 3\textsuperscript{rd} century BCE) a village emerged here. Walls of mudbrick buildings dating to the mid-3\textsuperscript{rd} century BCE were exposed in a single trench on the citadel, whereas heavily destroyed pit-houses are briefly mentioned as installed in the area of the site’s fortification wall.\textsuperscript{914} As the excavators note, these houses co-existed alongside the above ground architecture of the town. The site must have been fortified sometime in the Hellenistic period since by the 2\textsuperscript{nd}–1\textsuperscript{st} century BCE settlement expansion already began in the area of the fortified rabad.\textsuperscript{915} It might be significant that the site is located exactly 150km west of Afrasiab, 150km northeast of Bukhara, and 150km north of Er Kurgan suggesting that the settlement emerged as an important way station for traders traveling between all major Sogdian oases in antiquity—a geographic feature that seems to have escaped the notice of the site’s excavators. This is certainly the role the Medieval city would take for the Middle Zerafshan Valley. If this pattern is not a coincidence then clearly an agreement would have been made between administrators of each zone to establish Kala-i Dabusia in this convenient location.

There are also known settlements north of Afrasiab. Best known is the evidence for an early Hellenistic garrison at Koktepa, a phase that marked the end of that site.

\textsuperscript{913} Такао и Амридин: 2013: 28-29.  
\textsuperscript{914} Такао и Амридин: 2013: 75.  
\textsuperscript{915} Такао и Амридин: 2013: 27.
before the ascension of Antiochus I. I will also return to this site below. Approximately 10km north of Kurgancha is Katta-Kumyshkenttepa (AMCAA 1051), a fortified site considered to be established in the earliest Hellenistic phase of the region—Afrasiab I. The site is located just south of the Bulunger canal and occupies an intermediary position between Afrasiab and Koktepa in the landscape. The site was utilized from the late 4th century BCE through late Antiquity, but with a probable gap during the Afrasiab IIA period coinciding with Seleucid rule.

Moving forward to the settlements of the Hellenistic period (Afrasiab IB, IIA, IIB), we begin with noting that little is known of a Greco-Macedonian occupation at Afrasiab, nor the lifeways of that site’s inhabitants. At present the period is only known from major repair works undertaken on the earlier Achaemenid outer fortification wall, especially at the so-called “Bukhara Gate” in the northern part of the site. In particular we only know that sometime after Alexander’s acquisition of Sogdiana repairs were undertaken on the walls using square format bricks instead of plano-convex bricks used during the previous period. To this is now added the excavation of a granary and a single pit-house along the fortification wall. I will not delve into the literature on the reconstruction of fortifications at the site, which only positively reflects the presence of a Seleucid military garrison at the site and a degree of uncertainty over Greek rule. The presence of a granary during the period is quite interesting from the standpoint of rural life. This feature was excavated by L. Martinez-Séve then C. Baratin from 1993-2004.

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916 Пугаченкова 1983; 1989, Figure 15.
917 Lyonnet 2021: 320.
918 Rapin and Isamiddinov 1994; Bernard 1996; Rapin 2007; Lyonnet 2021.
919 Baratin and Martinez-Sève 2017.
The granary is a rectangular building made of square format mudbricks located 185m southeast of the Bukhara Gate and under part of the Great Mosque complex that was leveled by Ghenghis Khan in 1220 CE. Most bricks are marked with letters of the Greek alphabet, signifying maker’s marks.

The northern area of Afrasiab is one of the most researched areas, which made it somewhat easier to reach Hellenistic phases here. These levels were nonetheless 8.5m below the modern surface. Only part of the granary was excavated, revealing two rooms of a wider building. The building was built on virgin soil, attesting to the fact that at least parts of earlier Achaemenid Afrasiab was not urban, but an enclosure. The entire complex was heavily destroyed by fire which not only sealed the contents of the building, but also preserved part of the reed (kamysh) roof collapse. Most important for this discussion is that the rooms were partly filled with millet (panicum miliaceum) and hulled barley. Room dimensions suggest that each space could hold 75 tons of grain and cereals. Both crops are widely available across all of Central Asia and tend to require intensive irrigation to sustain their viability. From a rural standpoint it is clear that the Greek military garrison relied on the hinterland of Afrasiab. There are two ways to interpret such a large store of grain and cereal. The first is the accepted hypothesis that the stores were for the Greek army alone. A more expansive view would be that these stores were meant to sustain at least part of the residential population in the chance of attack. This would be in line with local practices and fulfilling the spirit of enclosure sites in mitigating crises.

Whereas there is only limited evidence for a Hellenic presence in terms of influence over the urban fabric of Afrasiab, there is some indication that there was a
process of Hellenization in local architecture. Shishkina notes that Greek style roof tiles were found in later stages of a potter’s quarter at Saratepa 2 (Sad-tepa). At Umaramintepa in the Miankala zone we find one of the few rural sites where fish plates and echinus bowls are found although the site has not been excavated and thus I cannot characterize its rural setting any further.

The potter’s quarter at Saratepa 2 is quite substantial and represents a rural pottery production zone 8km west of Afrasiab on an industrial scale from the late 4th–early 3rd century BCE. This dating is based on four factors: the lack of typical elite Achaemenid wares, a continuity of domestic Yaz III forms, an introduction of some Greek elements, but a complete lack of prominent elite Greek forms (Afrasiab IIB). The site is certainly the most significant pottery production center excavated anywhere in Hellenistic Central Asia and challenges our understanding of localized (domestic) and urban (industrial) pottery production. Yet a brief overview of aspects of the site shed light on the broader issues of long-term cultural continuity which I have argued in relation to rural domestic architecture.

Twenty kilns were excavated alongside eighty industrial waste and utility pits at Saratepa 2, all dug into virgin soil. All kilns were two-tiered furnaces with upper firing chambers made of pakhsa. Two furnaces were reused as burials within the same occupation period and both featured individuals buried with pottery wasters—signifying that the individuals were actual potters. Among the 20 kilns each could be typologically linked together in ways that are significant for our understanding of Hellenistic pottery

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920 Shishkina 1994: 87. Note that Shishkina refers to Saratepa 2 by an alternate name, Sad-tepa.
921 Пугаченкова 1989: 22-23, Figure 5.
production. One group of kilns was a continuation of a type of kiln that first appeared at Sapalli in northern Bactria in the late Bronze Age. Another kiln group was a variant of kilns known to Hellenistic Khorezm and Margiana. Yet another is a broad variant known from Yazdepe’s second and third phases.

While these earlier kilns were predecessors to those at Saratepa 2, there were later technological adjustments to accommodate new forms of pottery produced at the end of the Yaz III and early Hellenistic period (no elite Greek wares were found here). This continuity in kiln technology is perhaps more important than currently appreciated. Like Bronze Age to Hellenistic continuity in pit-house construction around Samarkand, domestic architecture, kiln technology withstood major changes to pottery production. In this case, kiln technology was adaptive to new ideas about pottery production that emerged.

Where we lack information about Hellenistic urbanization at Afrasiab, it is now recognized that there was significant settlement expansion south of the city along now abandoned irrigation networks between Samarkand and the Karatyube mountains.\textsuperscript{923} These sites provide indirect evidence of a now relict agricultural plain along the Dargom Canal, Tanghi Aryk, and the Eski Angar canals and southwestern steppe areas of the oasis.\textsuperscript{924} Settlemnts such as Byssartepa (AMCAA 1191, discussed below) and Koitepa (AMCAA 1192) along the Eski Angar canal are important in that this was the main route between eastern Kashkadarya and the oasis of Samarkand. Koitepa is one indication of

\textsuperscript{923} Mantellini (\textit{in press}).
\textsuperscript{924} Mantellini 2017: 45.
what was probably a wider system of fortified roads around the western foothills of Karatyube which would eventually link with those leading to Er Kurgan (see above). The site measures 175m x 150m and is fortified with a surrounding moat, although the fortifications might now have slightly later post-Hellenistic date.925 At Kuldortepa (AMCAA 691) in the Toyloq district 30km southeast of Samarkand black polished pottery was found in secondary deposits by B.Ya. Stavisktii and M.K. Usmanova during their excavations of a later fortification, attesting to a possible Hellenistic period settlement here.926 S. Mantellini has argued the increase in settlements at this time corresponds with the true inception of intensive irrigation agriculture in the region.927 This seems to align with the intensification of agriculture along the Shurobsai in Kashkadarya, suburbs of Er Kurgan in the Karshi Oasis, and in several locations within the oasis of Panjikent as presented earlier in this chapter.

There are some interesting sites north of Afrasiab that might reflect a fortified network of roads leading into the Nuratau mountains. Here we have stronger evidence that reflects patterns already described for the Guzar and Karshi oases of Kashkadarya with a gradual increase in the number of fortified sites along key routes spanning the entirety of the Hellenistic and post-Hellenistic periods. I have now referred several times to Koktepa (AMCAA 687) near the village Pay’arik 30km northwest of Afrasiab. This is perhaps the best excavated site in eastern Sogdiana and will be revisited below in relation to its importance for understanding the development of rural vernacular architecture. The fortified settlement at Katta-Kumyshkenttepa (AMCAA 1051) also continues from its

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926 Ставиский и Урманова 1958; Mantellini 2001: 45.
927 Mantellini 2018.
founding just after Alexander into the Seleucid period, but with a notable occupation gap that matches the hiatus between Afrasiab IIA and IIB. This attests to the likelihood that Katta-Kumyshkenttepa, like Afrasiab, was only a Greco-Macedonian garrison and not a locally inhabited settlement. Otherwise, we should expect locals to have resided in the site immediately after the abandonment of Macedonians. As noted above, the site is situated as an intermediary between Afrasiab and Koktepa. This is perhaps why another fortified site emerged during the Afrasiab IIB period 30km west of Koktepa at Chimkurgan (AMCAA 1053).928 The site is not excavated and so an early date for the fortification is speculative, but at the least a rural settlement emerged here along this time along the Bulunger Canal (although the canal is later). Like Katta-Kumyshkenttepa, Chimkurgan follows routes into the Nuratau range, albeit further west along the Aktepasai.

Less studied are sites located much further north in the intermontane foothills of the Nuratau range. A large fortification and citadel known as Mazartepa (AMCAA 1056, 1057) is located at the village Kudukcha but has not been systematically explored or excavated. The site was documented in a brief field survey by O.M. Rostovtsev, G.A. Bafaev, and I.D. Ivanitskii in 1983 during an exploration of ancient sites located along the Tusunsai river, which to my knowledge has not been revisited.929 While the dates remain speculative it is possible that a fortified settlement emerged here as early as the arrival of the Seleucids (and likely experiencing the same Afrasiab IIA-IIB hiatus seen elsewhere). Otherwise, the site remains occupied throughout the west of antiquity. The

928 Пугаченкова 1983.
929 Ростовцев, Вафаев, и Иваницкий 1983; 1989.
significance of such a site is geographic because it is precisely at this point that the Tusunsai is fed by three other rivers forming a fertile alluvial micro-oasis within the mountains. These rivers also follow accessible routes into the Nuratau mountains, which aside from providing excellent upland pasturage, give access to steppe and desert zones south of the Syr-Darya in an area that side steps Ustrushana and Chach. This pattern is like sites I have explored in Panjikent, specifically along the Magiandarya.

Sites in the foothills of the Nuratau only expanded during the post-Hellenistic period. As noted the settlement at Mazartepa continues to function and it is reasonable that much of the 30ha occupation zone filled out at this time. Sites like Katta-Kumyshkenttepa and Chimkurgan leading into the mountains also remain inhabited while new ones emerge. In the late 2\textsuperscript{nd} century BCE a small fortified site was founded at the confluence of the Aktepasai and Tusunsai rivers—the two most significant rivers leading to micro-oases within the mountains. This site is Kurgantepa (AMCAA 1052) and is 100m x 100m although with clear evidence for occupation within the wider plain.\footnote{Пугаченкова 1983.}

Between Kurgantepa and Mazartepa is Shovkitepa, an unfortified settlement that bridges the two sites beginning in the mid-1\textsuperscript{st} century BCE. Along the Aktepasai a new settlement known as Bulakbashi emerged on the outskirts of the modern town of Koshrabat in steppe lands 40km north of Kurgantepa (AMCAA 1050). The site likely developed at the same time as Kurgantepa in the late 2\textsuperscript{nd} century BCE only to become abandoned by the 4\textsuperscript{th} century CE.\footnote{Пугаченкова 1983.} There is no evidence for fortifications, which justifies this site as an
entirely rural site, which G.A. Pugachenkova has associated with contemporary Kaunchi
culture traditions of Ustrushana and Chach.

I now summarize this in-depth analysis of settlement patterns in the Middle
Zerafshan valley. The entire oasis first became the locus of significant habitation in the
Bronze Age with the arrival of populations from the northern steppe and the adoption of
steppe lifeways of pit-house construction. People seem to have been drawn to the “sweet
spot” positioning of the Zerafshan valley between the steppe and Bactria-Margiana
Complex cities and large towns located in the Murghab Delta and in Surkhandarya. Not
only was the valley seen as attractive pasturage, it quickly developed into an agricultural
plain following the example set at contemporary Sarazm in the Panjikent Oasis. Perhaps
most significant is that the mountains around the Middle Zerafshan are resource rich,
particularly in tin but also other metals and polymetals. Thus it is no surprise that we also
find sites with semi-precious materials such as turquoise, carnelian, and lapis lazuli—
each of which demonstrates long distance interactions with wider Central Asia. At Tugai
we already find a Bronze Age mining colony in which metallurgy happened within
domestic pit-houses, with light agriculture and cattle breeding practiced for subsistence.
This is the earliest evidence for pit-house usage in the area, which continues to persist as
the main architectural form among rural populations through the first millennium BCE
(as is demonstrated below). There is also continuity in ceramic production—not
necessarily in the forms of pottery but in the technology used to produce it, which further
strengthens the case for indigenous traditions persisting through the Iron Age and
Hellenistic periods, even if there are major changes to pottery types over this long
expanse of time. As will be shown in the next section, this pit-house tradition persists
even when above ground domestic architecture emerges in Sogdiana’s Yaz I period at sites like Koktepa.

In the 7th–6th century BCE fortified enclosure sites emerge at Koktepa and Afrasiab, setting forth a series of occupations and redevelopments at both sites. During the Hellenistic period both sites are primarily used as garrisons whereas other smaller fortifications begin to develop along key routes into mountainous zones and in areas communicating with Panjikent, Ustrashana, lower Syr-Darya through the Nuratau mountains, Bukhara, and Kashkadarya. At least at Afrasiab it is clear that there was major craft production (Saratepa 2, Lolazor) and significant cultivation beyond the borders that at the least focused on hulled barley and common millet. Towns such as Kala-i Dabusia and Lyalakui emerge along key trade routes to facilitate travel between the regions and have unsurprising effects on those local economies through the form of an increase in agriculture and settlement expansion. This follows the exact pattern already noted in Panjikent and Kashkadarya in the previous subchapters. Rural settlements also emerge to a greater degree south and west of Afrasiab as well as in the immediate southern “suburban” zone of Afrasiab. At least south of Afrasiab this can be associated with an intensification of agriculture and efforts to install new irrigation networks, reflecting a fundamental, perceptual shift in the relationship of rural populations with their wider landscape away from a mixed pastoral and agricultural landscape towards a more agricultural, controlled anthropogenic landscape.
4.4.c. Rural vernacular architecture in the middle Zerafshan Valley.

Having described the long-term development of typical settlements in the middle Zerafshan I am able to contextualize known evidence for rural domestic architecture along the Middle Zerafshan more effectively. In a 1994 “state of the evidence” article written by G.V. Shishkina we find the following statement regarding the Hellenization of rural sites in Sogdiana:

> The effects of Hellenization were felt not only in major urban centers and the elite sector of society but also in rural areas, where monumental structures with stone elements foreign to local architecture were erected and where the inhabitants used pottery in Hellenized shapes (Hauz-tepe). In the remote foothills and mountinous regions of Soghd (the Tusunsai valley), cattle herders with no skill in pottery making attempted to reproduce this new kind of ware by hand-modelling it.\(^{932}\)

Shishkina’s reference to a rural monumental stone architecture at Khauztepa in the Tusunsai Valley (75km north of Samarkand) is in fact an anomaly and this interesting site was bulldozed more recently.\(^{933}\) To date there is no indication that rural areas in Sogdiana engaged with Hellenism in the way Shishkina implies—something only evident in Bactria (i.e. Saksanokhur, Shortughai in the Dasht-I Qala plain). As I will show, rural architecture in Hellenistic Sogdiana is far humbler although the state of our evidence is not as clear for the Middle Zerafshan as in Kashkadarya, nor the Bukhara Oasis as of very recently. Therefore, this section is brief.

While the tradition of pit-house construction known from Bronze and Iron Age Sogdiana continues into the Hellenistic period, the parallel tradition known from the Achaemenid period of building above-ground rural farmsteads alongside pit-houses is almost entirely absent during the 3rd century BCE, with Kala-i Dabusia being the only

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\(^{933}\) Stark 2022, personal communication. For lack of better data Khauztepa is not mapped in AMCAA.
(poorly understood) exception. As I will show, these two architectural forms only reappear in the late 2nd century BCE with the arrival of more elaborate manor houses—and more elaborate pit-houses.

I have already covered in some detail our evidence for earlier rural settlements around Afrasiab, as well as the Bronze Age settlement at Tugai that anchors the tradition of sedentary farmers and craft specialists utilizing pit-houses further back in time than is currently appreciated. Therefore, I will only draw attention to pertinent evidence from Koktepa northwest of Afrasiab as a proxy for evidence for rural life in the early Iron Age, before engaging with more direct evidence from the Hellenistic and post-Hellenistic periods.

Koktepa (AMCAA 687) is a 17ha site located just over 30km northwest of Afrasiab—the second most important Iron Age site within the wider oasis of Samarkand. It is situated within the main agricultural zone of the oasis irrigated by the Bulunger canal although during its foundation this part of the plain would have been unirrigated steppe. The site was one of the principal objects of investigation by the French-Uzbek Archaeological Mission (MAFOuz) from 1994–2008 alongside Afrasiab. The site is a large, fortified town that had a sacred function for some of its phases. Chronologically it spans from the late 2nd / early 1st millennium BCE through Hellenistic periods. Because the site is well stratified and with more physically accessible archaeological remains for the breadth of the breadth of the 1st millennium BCE than Afrasiab there is now an independent refined ceramic typology built here that is often referenced in concordance with what is known for Afrasiab. In several ways these typologies complement each other since Koktepa has a more refined typology for the Achaemenid period whereas Afrasiab
has better ceramic evidence for the 3rd century BCE. For Koktepa this chronology follows that of Afrasiab but also with earlier Yaz I material that is not present there: Koktepa I (Yaz I, late 2nd millennium to 10th century BCE), Koktepa II (Yaz II; 7th to 5th centuries BCE), and Koktepa III (5th/4th c. to early 3rd century BCE).

One recurring feature at Koktepa is a pattern in which substantive settlement and monumental architecture is often abandoned and followed by layers of more humble architecture types. I will not dissect the site’s complicated stratigraphy. During the Koktepa I phase the earliest layers of the site are a small unfortified settlement built in the ancient steppe and structured around dry agriculture periodically fed by seasonal flows from the northern mountains. The settlement features a dense agglomeration of houses that are mostly multi-roomed above-ground structures built of rammed earth constructed alongside pit-houses.934 Pit-houses were simple round constructions typical of Burguluk domestic architecture of the Tashkent Oasis (Shashtepa).935 The diameter of these houses is not published by the excavators nor is a scale included with their accompanying plan.936 Materially the site is associated with the Burguluk culture, a branch of the wider Yaz I tradition of painted modeled ceramics. There is some evidence that Koktepa was also a production center since significant deposits of metallurgical waste was found within some houses,937 like earlier Bronze Age houses at Tugai. C. Rapin now refers this phase as an urban settlement on the suggestion of centralized planning and architecture,938 yet this is very unlikely for what is more aptly a village or town. After the

934 Исамиддинов и Рапин 1999; Isamiddinov 2013: 126.
935 Дуке 1982.
936 Исамиддинов и Рапин 1999: 71, 75.
937 Lhullier 2013: 163.
site’s abandonment in the 10th century BCE, new occupants arrived and constructed light framed structures such as huts or yurts in the ruins of the earlier occupation, the main evidence for which is patterned post holes densely scattered across these excavated areas.939 These ephemeral features are most likely veritable evidence for nomadic settlements over the ruins of earlier phases. These constructions required very little labor to build and could easily be deconstructed. All phases of this period seem to be associated with Yaz I handmade painted pottery. Just after this occupation the site is sedimented with a thick layer of organic material which Rapin reasonably suggests is representative of a purely pastoral use of the site until sometime in the 8th century BCE.940

During the late 7th–early 6th century BCE (Koktepa II) two fortified monumental enclosures were built, one in the center of the mound (Enclosure A, 150m x 130m) and the other in the southeast (Enclosure B).941 Both courtyards are irregularly shaped and follow the topography of the mound in their respective areas. The function of these spaces is not known but Rapin suggests an administrative role for Enclosure B and a religious role for Enclosure A.942 The walls of Enclosure A feature seventeen semi-circular bastions at regular intervals. The southwest corner of this structure was extensively excavated, revealing a monumental gatehouse with “snail-shaped” bastions in line with a later tradition observed at Tillya Tepe in Afghanistan.943 Within the gate itself was a large square pillar that mediated traffic and obscured the inner courtyard from view. The argument that this is a sanctuary is an interpretive one based on the layout of

939 Rapin 2007: 32.
940 Rapin 2017: 419.
941 Rapin 2007: 33.
943 Rapin 2007: 35.
the enclosure and reconstructed pathways leading to the monumental gate as well as the possibility that another circular structure in the southeast of the enclosure might eventually produce evidence for cult. This is not the space to litigate this interpretation. To date no other architecture is known within the enclosure.

Koktepa is redeveloped again coinciding with Achaemenid rule over Sogdiana (late 6th – 4th century BCE; Koktepa III). The initial function of these enclosures ceased somewhat rapidly. Traces of burning and repair on the gate of Enclosure A are interpreted as a nomadic siege against the building followed by a “squatter occupation” characterized by the presence of hearths haphazardly placed within the gate and a disregard for the “sacred” nature of the site. After this “nomadic” occupation two massive platforms were built within Enclosures A (40m x 30m) and B (50m x 50m). The platform of Enclosure B is a two-tiered ziggurat. The platform of Enclosure A is slightly later in date and features massive loop-shaped bastions with a western approach. This later platform completely subsumed and closed off the southwest gate complex of the enclosure. Ritual foundation deposits detected under the platform are the primary source of evidence for a ritual aspect to the rest of the structure, which to state again, I will not engage with here.

It is during this phase that the entire mound was first surrounded by a fortification wall, coinciding with the same early fortification wall at Afrasiab. Another fortification wall encapsulating a much larger area (100ha) well into the surrounding plain was also

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945 Rapin and Isamiddinov 2013: 128.
946 Rapin 2007: 36.
suggested by the excavators. Like Afrasiab and Uzunkir, this early fortification encircled an open area to shelter a wider rural population during a crisis.

The administrative function of Koktepa over the northern plain of Samarkand ceases by the end of the Achaemenid period, yielding to Afrasiab. However, there are similarities between the Hellenistic period at Koktepa and Afrasiab. Perhaps significant is the fact that the only evidence for Hellenistic occupation at Koktepa is entirely martial. Like Afrasiab, this period is marked by a redevelopment of fortifications with the introduction of square format mudbricks. Other buildings identified in the space of Enclosure A are now recognized as Macedonian barracks, which the excavators consider to be Seleucid. A new building was also constructed on the top of the Enclosure B ziggurat-platform (followed further by a kurgan) but to my knowledge has not been published.

There are critical issues with the dating of this final phase, which was quite short. As B. Lyonnet notes, there are conflicting reports of the stratification of Hellenistic period ceramics at the site, but it seems that the characteristic forms that would help refine the dating of the period are from secondary depositional contexts and are rare. Only single fragments of a fish plate, a krater, and a red slipped plate with thickened rim were found in this secondary context whereas the majority of pottery are indicative of a Late Yaz III transitional phase. On the other hand, a chronology by C. Rapin and M. Isamiddinov was established based on the stratigraphic superposition of architecture and

947 Rapin and Isamiddinov 2013: 128.
948 Исамиддинов 2002: 139-149; Lyonnet 2012: 168.
949 Rapin 2017: 421.
950 Lyonnet 2012: 168.
intermittent phases of light occupation.\textsuperscript{951} To my knowledge a new refined chronology that situates pottery in its appropriate stratified context awaits publication.\textsuperscript{952} In this instance Lyonnet (rightly) cautions against the Seleucid date proposed by the excavators and only allows for wall and barrack constructions in the pre-Seleucid transitional phase,\textsuperscript{953} a view that is now accepted.\textsuperscript{954} Therefore a Greco-Macedonian presence at Koktepa would only be acceptable between Alexander’s conquest and the assumption of rule by Antiochus I (late 4\textsuperscript{th}–early 3\textsuperscript{rd} century BCE).

It is possible to interpret the militarization of Koktepa as a Greco-Macedonian effort to mediate incursions from the steppe, as reported by ancient Mediterranean authors as a characteristic element of initial interactions between Alexander and Saka groups who were called to assist Spitamenes against the Macedonian forces. I hesitate to commit to such an interpretation. As I have indicated in my discussions of Kashkadarya and Pendjikent, there is a long tradition of erecting fortifications along major interregional arteries that in some areas already begins in the Achaemenid period, but truly expands during the Hellenistic period. While threats from the north were probably a factor that could be dealt with by these fortifications, the local strategy for dealing with nomadic invasions was the establishment of large enclosure sites. These sites do not seem to exist in Sogdiana in the Hellenistic period, at least as far as the current state of evidence allows. It is hard to believe that Greco-Macedonian forces would not be interested in protecting local populations, especially since these same populations

\textsuperscript{951} Rapin 2007, 2010b; Rapin, Isamiddinov 2008.
\textsuperscript{952} Rapin and Isamiddinov 2013.
\textsuperscript{953} Lyonnet 2012: 169.
\textsuperscript{954} Rapin and Isamiddinov 2013: 129.
regularly demanded capitulation to Alexander against the best efforts of Spitamenes to
defend Sogdiana from invasion.\textsuperscript{955} It is not until much later—the end of the 2nd century
BCE—where nomads take an interest in this location with the establishment of kurgans
and tombs here and in the wider plain such as at Yangi-rabat.\textsuperscript{956}

Only one construction from Afrasiab might represent a domestic habitation within
the city walls, although this remains speculative. This is the discovery of a pit-house
under the so-called “Kushan” pakhsa building.\textsuperscript{957} The stratigraphy of this area is highly
disturbed on account of later Islamic \textit{badrabs} cut into underlying features. The pit-house
was also cut into a number of earlier pits. The architecture of the pit-house installation
has not been described, perhaps a reflection of the poorly preserved state of the house. B.
Lyonnet’s was able to isolate the occupation of this house to Afrasiab IIB (early 2\textsuperscript{nd}
century BCE) through a careful analysis of the area’s stratigraphy (which must have been
painstaking). Especially interesting is the ceramic assemblage containing high quality
elite Hellenistic ceramics: red-slip and engobe oenochoes, \textit{kraters}, bowls with round
bottoms and rim appliques, white echinus bowls with in turned rims, greyware bowls, and
jug. One \textit{krater} had an applied bust of what might be Buddha, which would be early for
his image in Sogdiana.\textsuperscript{958} While the house shares in a pattern of pit-house construction
within elite and urban contexts across Bactria and Sogdiana (plain of Dasht-I Qala,
Takht-i Sangin, Kampyrtepa, the Hissar Fortress, Padayaktepa), now documented
exhaustively in this dissertation, the assemblage of this pit-house is quite different in the

\textsuperscript{955} Quintus Curtius Rufus VII.vi.24.
\textsuperscript{956} Rapin and Isamiddinov 2013: 129-30.
\textsuperscript{957} Lyonnet 2018: 429-30.
\textsuperscript{958} Bernard 1996.
quality of materials. There is no doubt its situation within Afrasiab set these individuals
in direct contact with elites that reoccupied the area in the early 2nd century BCE. The
high quality of the assemblage certainly challenges the perspective that pit-houses were
exclusively non-elite and related to mobility. Instead, as with Takht-i Sangin and
Kampyrtepa these concepts vary drastically by settlement context.

Our main evidence for rural lifeways during the Hellenistic period comes from a
site 48km west of Afrasiab along the Karadarya branch of the Zerafshan river in the
Karasu floodplain. This is a 1.5km stretch of tepas (Figure 56) situated on a terrace
overlooking the main river, of which individual settlements have been singled out:
Lyailyakui (AMCAA 685), Pulad (AMCAA 686), Bagrytepe (AMCAA 1054), and
Tupkhona (AMCAA 1195). Lyailyakui and Pulad were excavated by I.D. Ivanistikii in
1991, whereas the others were just surveyed but nonetheless feature pottery
representative of the breadth of the excavated sites.959 These sites are collectively a
village of many pit-houses although the number of pit-houses documented by Ivanistikii is
not published. Two areas have small citadels of uncertain date, and it seems Lyailyakui
was surrounded by a fortification wall (for which we also do not have a date). We have a
better understanding of the village—the significance of which is that it represents a
continuity of pit-house construction from the 4th–1st centuries BCE. The site is situated
along the main artery of the Zerafshan and a key road connecting Afrasiab to the Bukhara
Oasis. The village is certainly one example of a type of settlement that probably lined
much of the Zerafshan (and here I note the destroyed settlement of Kurgancha near
Afrasiab). Especially interesting is that in more recent times (late Medieval to early

959 Иваницкий 2005.
modern) new pit-houses were built with some rooms fully underground. This seems to be a coincidental concordance with ancient practice at the site.

Almost nothing about the architecture of pit-houses is published by Ivanistkii. Outlines of underlying features are quite clear from satellite imagery. From Ivanitskii’s section drawings it appears that these were very simple installations set into the earth with no reinforcement.\footnote{Ibid: 55, Figure 2.} However, the walls would have to be plastered to maintain some structural integrity. The earliest settlement is found on Lyailakuitepe, only identified only after the site was inexplicably bulldozed in an \textit{ad hoc} manner. The bulldozer exposed several pit-houses dug into the virgin soil over an area of 2ha and evidence for pakhsa fortification walls. The largest house was 7m wide and up to a depth of 0.8m in one side and 0.4m in another. This is exceptionally wide for most pit-houses. The floor of the house was a compacted clay floor. A hearth was exposed in the center of the room dug further into the earth and with an ash layer of 3–4cm reflecting regular use and indicating a light frame roof with central opening. While the number and characterization of other pit-houses are not reported, Ivanitskii does note that other pit-houses of smaller size were found and surrounded by external storage, ash, and garbage pits across the entirety of the settlement.\footnote{Ibid: 48.}

The assemblage of the Lyailakui pit-house is representative of typical household pottery found in the Saraitepa-2 workshop but also Afrasiab II types, but excluding elite Greek wares such as fish plates, acanthus bowls, and Megarian bowls.\footnote{Ibid: 51-52.} This indicates a date of the late 4\textsuperscript{th} – early 3\textsuperscript{rd} century BCE. A heavily burned cooking pot similar to
Afrasiab II and III types and a yellow engobe jug were found on the floor. The cooking pot is handmade through coiling with pineal affixed handles. The pit-house was infilled by a windblown layer of loose sand and ash, testifying to a long period of desolation after abandonment. The surface finds at the site tell a different story. The earliest sherds are comparable to Lolazor and typical Yaz III wares, clearly attesting to an even earlier occupation in the area (7th – 5th centuries BCE). It might be the case that the fortifications of the site are contemporary with those of Afrasiab but especially Padayaktepa, where there was a similar settlement situation in which pit-houses were dug into already older architecture, although this is pure speculation. Other surface finds attest to the import of more long-distance traditions or imports, such as khumchiks that are otherwise found at Dingildje in Chorasmia and jugs known from Greco-Bactrian contexts at Jenatepa in northern Afghanistan. Ceramic slags, the piece of a kiln with a 10cm vent, and pottery wasters of 4th – 3rd centuries BCE forms spread across the surface clearly indicate localized pottery production.

Pulad is located directly to the east of Lyailakui on the Karadarya arm of the Karasu river, which threatens the site due to prolonged erosion. This site is later and larger than Lyailakui with an overall size of 8–9ha dating to the 2nd–1st century BCE and also with pit-houses set into virgin soil, however nothing else about these houses is reported. Evidently the settlement remained a small village until the 4th–6th century CE when a castle and platform structure were constructed, perhaps altering Pulad’s political or economic status. It remained unfortified throughout its existence.

963 Ibid.
964 Ibid: 42
More recently, a rural settlement dating from the 3rd–2nd century BCE was excavated at Boyssartepa (AMCAA 1191) in Sazagan approximately 35km southwest of Afrasiab at the foothill of the Karatyube spur of the Zerafshan Mountains. The site is situated directly on top of a natural hill on the left bank of the seasonal Sazagansai river which flows northward from the mountains. Boyssartepa was first excavated in 1963 by O.V. Obel’chenko.\textsuperscript{965} In revisiting the kurgans of the site under the direction of A.E. Berdimurov representing the Uzbek-Italian Expedition, evidence for this Hellenistic settlement was first observed under the later necropolis.\textsuperscript{966} The settlement is surrounded by an earthen rampart roughly 225m x 125m in size. A “citadel” measuring 30m x 30m is situated in the southern section of the rampart.\textsuperscript{967} Within the area of the rampart part of a stone fence was found associated with pit-house dwellings. Ceramics from within the dwellings were representative of Afrasiab IIA and IIB and featured stone querns, millstones, and cattle bones attest to a sedentary agricultural economy at the settlement that is also associated with cattle breeding.\textsuperscript{968} By the 2nd–1st century BCE the site ceased to function as a settlement and slowly evolved into a necropolis consisting of stone lined kurgans. One of these graves had the exceptional find of a silver tetradrachm of Seleucus I Nicator, but of course this has no bearing on the Hellenistic occupation of the site. This kurgan phase ceased in the 1st–2nd century CE.

Kurgan Kadirbek is another site within this area that has produced evidence for post-Hellenistic settlement (AMCAA 1193), although very little was published about the

\textsuperscript{965} Обельченко 1966.
\textsuperscript{966} Бердимурadow, Раимкулов, Холматов, Франчеси 2004-05; Genito and Mantellini 2017: 125-126.
\textsuperscript{967} Genito and Mantellini 2017: 126.
\textsuperscript{968} Бердимурadow, Раимкулов, Холматов, Франческин 2006: 71-72.
This site was excavated and seems to be a veritable temporary encampment, which S. Mantellini suggested was for only seasonal agriculture. No architecture of any sort was found, instead finding only post holes, economic pits, and a large assemblage of lithics associated with processing grain. This evidence seems to reflect the temporary nomadic housing found at Koktepa in the early Iron Age described above.\(^970\)

While not part of the middle Zerafshan this is a good space to include one significant site, Nurtepa, located in Ustrushana 100km northeast of Samarkand. The site is possibly one of a string of fortified sites besieged by Alexander during his war with the Saka at the eastern limit of Sogdiana. However, it is impossible to exclude Nurtepa from the perspective of rural domestic architecture even if this comes without the benefit of understanding settlement patterns in the wider oasis around Jizzakh and Tashkent. This is because Nurtepa features a few unique characteristics in settlement architecture but also local terraforming processes in ways that further reflect a perceptual shift in human-landscape interactions.

Nurtepa is typically only cited by others because of a single Greek-style iron strigil excavated at the site that has served as a proxy for the existence of actual Greeks there.\(^971\) Nurtepa is a rugged, fortified site of roughly 18 hectares along a high ridge in the Istravshahan region.\(^972\) It is a naturally formidable complex carved by deep gorges and steep slopes. The site was excavated led by T.V. Belyaeva as part of broader surveys of the oasis undertaken in the 1980’s under the direction of N. Negematov.\(^973\) The site is

\(^{969}\) Mantellini 2018: 182.
\(^{970}\) Rapin 2007: 32.
\(^{971}\) Mairs 2011: 34; Grenet 2004a: 1057, n. 38; Lyonnet 2021.
\(^{972}\) Негматов, Беляева, и Мирбабаев 1982.
\(^{973}\) Беляева 1991.
rather sprawling and features a large fortification network that is still extant in ruins, a citadel, and a village. The site is relatively dated from 7th–2nd centuries BCE with a graveyard of child burials in khums dating to the 5th–8th centuries CE. T.V. Belyaeva refers to the Nurtepa as “urban” based on criteria that includes the presence of a citadel, fortification wall, and expansive size. However there are many features that complicate this notion. The dwellings that Belyaeva exposed were non-agglomerative that do not seem to be contemporary from Belyaeva’s own description and there is also recognition that there is a steep decrease in population size from the 5th–4th century BCE. Following Belyaeva’s line of thinking, this site was accepted by B.A. Litvinsky as one of the seven ancient cities of eastern Sogdiana that were settled by former nomads and later besieged by Alexander the Great. B. Lyonnet seems to suggest that Nurtepa was the location of Cyrus the Great’s easternmost city. Nurtepa would have been difficult to avoid as Alexander approached the Syr Darya. It is certainly possible that it was one of the locations seized by Macedonians when the region was under siege. However, this cannot be an adequate reason for classifying the settlement as a city.

Excavations from 1980-83 focused on settlement morphology and domestic life. The survey was conducted in six excavation areas that included both the village and citadel. The village is located in the southeast corner of the hill which developed over the centuries into a stepped terrace arrangement through a process of landscaping, which

976 Lyonnet 2021: 321.
Belyaeva notes was cause for unique challenges to the excavators and to interpretation.978 The number of terraces documented or exposed is unclear from Belyaeva’s report.

Excavation areas in the village were undertaken in areas 4, 10, 11, and 13 and each area did not produce representative material for every phase of the village’s evolution.979 For example, in excavation area 4, the southeastern section of the village, there were three phases of occupation, the first is a pit-house dating to the 7th–5th centuries BCE, a horizon dating from the 5th–3rd centuries BCE, and the much later phase of child burials that heavily disturbed both preceding layers.980 In the western area of the settlement (excavation 11) the faint remnants of a dwelling complex were detected but only dating from the 5th–4th century BCE.981 In the northwest a large dwelling was found built into an artificial terrace with ceramics only dating from the 6th–5th centuries BCE. It is clear that the village area of Nurtepa, as a whole, functioned uninterrupted for the entirety of the site’s Iron Age existence. However, different areas of the mound were activated at different times while others fell into a state of disrepair and abandon. While the entire southeast section of Nurtepa was densely occupied for most of the Iron Age, by the 4th century BCE domestic life was situated wholly around the easternmost area of the village and with a reduced population density.982 By the 1st century BCE the village area of the mound fell out of use and was abandoned.

Houses at Nurtepa were a hybrid dugout/pit-house type that utilized the natural topography of the mound and artificially terraced landscaping to produce homes of mixed

981 Ibid: 22.
982 Ibid: 23.
architectural components. In Excavation area 10, a dugout dating from the 5th–4th century BCE was located on the highest exposed terrace.983 The house was built by digging into the southeast slope and reinforced with unfired mudbrick. Only the north and west walls of the house were extant, yet it is safe to assume that the south and east walls were also built of the same mudbrick. No plastering is reported. A small, dried spring (sai) was exposed on the terrace just below the dugout which evidently provided water for all stages of Nurtepa’s occupation. This points to a preference for hydraulic sustenance provided through natural resources rather than manipulated through the artifice of channeling and irrigation. The phase dated to the 5th–3rd centuries BCE is represented by pottery wasters of flat bottomed cylindro-conical vessels (i.e. Yaz III), some of which are covered with red engobe, and small narrow necked jugs with faint shoulder ridges and dark brown engobe. Despite the presence of wasters Belyaeva did not surmise an economy of pottery production but we can assume that this type of pottery was produced in the adjacent unexcavated area.

The citadel was explored in excavation areas 6, 8, 12, and 14.984 The trenches in these areas also produced evidence for domestic life. They also provide evidence for continued occupation of Nurtepa into the 1st century BCE. Three main cultural horizons were detected: an uppermost dating from the 3rd–1st century BCE, a second phase dating to the early antique period, and an earliest phase consisting of a dwelling dating from the 6th–5th century BCE. The 6th–5th century dwelling of excavation 6 in the citadel shares characteristics with the aforementioned dugout of excavation 10 in the village. The

983 Ibid: 22.
eastern wall of this dwelling utilizes the natural slope of the mound as it is an earthen wall cut into the loess to a height of 0.6m, which implies the presence of an architectural superstructure. Walls to the north and south were built of spoliated rectangular mudbricks. The similarities between this dwelling and the later dwelling of the village imply the existence of a longstanding architectural tradition with knowledge disseminated locally from the 6th–4th century BCE. Because occupation of both buildings does not neatly overlap in time, it is likely that similar structures linking the tradition are present elsewhere in unexcavated portions of the mound.

Drawing this section to a close, I reiterate the following points. First, the tradition of pit-house usage by primarily sedentary communities focused on agriculture and pastoralism persists during the Hellenistic period. As noted in my discussion of wider settlement patterns, our evidence indicates that this coincides with an intensification in agriculture through the development of irrigation systems, especially south of Afrasiab, but most likely elsewhere as well. Pit-houses were also the main form of architecture in agglomerated village contexts along the Zerafshan river, places that were situated along roads connecting Afrasiab with all regions on its periphery. In this respect sites like Lyalakui were similar to Takht-i Sangin in having more than a simple agro-pastoral basis, centering life around other activities such as trade. Indeed, this must be the case for Kala-i Dabusia, where families utilized pit-houses as well as above-ground residences. In emphasizing long-standing traditions, I also invoked Saratepa 2 within its rural context. While no domestic architecture was found, the site is an open-air rural production center focused on pottery production. There I emphasized the importance of continuity in kiln-technologies from Chorasmia, the Murghab Delta (Margiana), and Bactria from the
Bronze and early Iron Ages to stress indigenous traditions where others might see abrupt cultural changes because of changes to pottery across the first millennium BCE. The fact that kiln technology is modified only strengthens this case, situating the development of ceramic production as a malleable tradition driven by rural communities, even if ideas about ceramic forms and functions are absorbed from other regions.

4.5. Western Sogdiana: The Bukhara Oasis and beyond.

The western extent of Sogdiana in antiquity was the vast terminal delta of the Zerafshan River—the Bukhara Oasis. This is how the oasis is characterized in the only reference to the region by an ancient Mediterranean author. When Spitamenes fled to Chorasmia during Alexander’s Sogdian offensive he passed through the Bukhara Oasis, likely by way of the modern village of Verdanzeh.\textsuperscript{985} Arrian is our only source for the event. In pursuing Spitamenes from Maracanda towards Chorasmia, Alexander is said to have devastated villages and fortifications along the entire length of the Zerafshan until reaching the western limit of the Bukhara Oasis: “from the point where the river water disappears there is only desert thereafter, and though full of water the river does in indeed disappear into the sand.”\textsuperscript{986} Arrian’s single sentence reflects the ecological reality of the Bukhara Oasis today as much as in antiquity. This much was confirmed in Abu Bakr Muhammad ibn Jafar Narshakhi’s *History of Bukhara (Tarikh-i Bukhara)*, a local history of the Bukhara Oasis presented to the Samanid ruler Nuh ibn Nasr in 943/944.\textsuperscript{987} The

\textsuperscript{985} Stark 2016: 134.
\textsuperscript{986} Arrian *Anabasis*, 4.6.6 (M. Hammond trans.).
\textsuperscript{987} Frye 1954.
Zerafshan River flows east-west through the Middle Zerafshan Valley / oasis of Samarkand and through another narrow micro-oasis near Navoi before changing course and directing its flows south—southwest from Hazara and beyond. It is the beyond that constitutes the vast alluvial delta of Bukhara.

Today the amount of irrigated land in the Bukhara Oasis approaches a total of 230,000ha.\textsuperscript{988} For its entire environmental history until the 1970’s the oasis received all of its water from the Zerafshan. Now the oasis is supplemented with water by the Amu-Bukhara canal connecting the oasis to the Amu-Darya to the south, further exacerbating the drainage of the Aral Sea in Khwarezm. The decision to connect Bukhara to the Amu Darya reflects the ecological sensitivity of the region. The oasis is quite arid and surrounded by southern extensions of the Kyzylkum desert. Being the last outflow of Zerafshan water in antiquity meant that irrigation works in Panjikent and Samarkand would have sapped water from Bukhara, especially in seasons of poor glacial melt.

Within the oasis, rapid changes to irrigation through agricultural intensification could drain water from distributaries of the Zerafshan that watered settlements at the western borders of the oasis by way of the three main paleochannels: the Vabkent Darya, the Romitan-rud, and the Makhandarya. Such a situation is what we might have evidence for in the Hellenistic and post-Hellenistic period along two of these distributaries.

The elevation of the entire region gently slopes westerly but appears flat when one stands within this landscape. Consequently, the irrigated zones of the Bukhara Oasis once extended 10–20km west of its current agricultural border (at present roughly concluding around Varakhsha in Romitan). At the end of the first millennium BCE the

\textsuperscript{988} I. Abdullaev 2004.
extent of the oasis concluded around the fortified site Bashtepa and its associated sites.\footnote{Stark, et. al. 2018.}

By the Medieval period the oasis had already retracted as far as the Dīvāri-Kanpirak oasis wall 10km west of the oasis border.\footnote{Мирзаахмедов, Штарк, Мирзаахмедов 2018.}

The first fully sedentary communities of the Bukhara Oasis emerged at Zamanbaba in the early 2\textsuperscript{nd} millennium BCE.\footnote{Гулямов, Исламов, Аскаров 1966: 172-179.} This was a group that lived in large cigar-shaped pit-houses, grew crops, grazed cattle and sheep, and fished. In my opinion, some traditions established by these Zamanbaba communities form the basis for rural life encountered in Hellenistic and post-Hellenistic contexts within this same region. However, this idea is complicated by the very obscure thousand years between, in which there is a drastic rise in mobility and an economy structured around cattle-breeding. However, these early periods remain one of the least researched objects of inquiry and there are critical misunderstandings about the Zamanbaba Bronze Age.

The excellent preservation of archaeological sites in the Kyzylkum Desert has left us one of the most remarkable relict Hellenistic landscapes in Asia. A long tradition of archaeological survey and some intensive excavations at Kyzylkyr, Setalak, and Bashtepa allows us to consider a rural landscape that is completely outside of the shadow of a city. We have evidence for religious life, economic production, and domestic architecture. In this subchapter I will give an overview of rural settlement patterns west of Bukhara with an emphasis on the Hellenistic and post-Hellenistic period. After this, I continue my organizational scheme and provide for the first time the results of our excavations of a post-Hellenistic rural farmstead. This is now the most systematically excavated pit-house
farmstead in Sogdiana. I present this material in the context of other contemporary sites in the immediate vicinity—Kyzylkyr and Setalak, but also Ayaktepa 2 only a few kilometers from Bashtepa. Together this wider rural landscape encapsulates a unique interactive zone that I believe represents the actual conditions of rural life across all of Bactria and Sogdiana, a topic that until now has been almost completely ignored (with the exceptions of M. Khasanov and A. Omel’chenko).

Despite a strong tradition of archaeological exploration there is not a single published work that attempts to trace the settlement history of the Bukhara Oasis as comprehensively as a book like R.Kh. Suleimanov’s *Drevnie Nakhshab*. This much attracted the notice of C. Lo Muzio who then made a narrow effort at synthesizing the historiography of archaeological research and general cultural developments, but only in a brief article. 992 One work that approaches such an attempt, but not nearly as detailed, is Sh.T. Adylov’s 1987 dissertation *Stanovlenie i Razvitie Gorodskoj Kul’tury Bukharskogo Sogda po Materialam Stratigraficheskikh Issledovanij: IV v do n.e. – VIII v.* (The Formation and Development of Urban Culture of Bukharan Sogd based on the Materials of Stratigraphic Studies: 4th c. BCE – 8th c. CE). Adylov’s work is the first serious attempt to consider archaeological evidence from all of the Bukhara Oasis but only as a means to approach the question of urbanization. There is little concern about rural life outside of the context of urban formation. Quite significant in this regard is V.I. Shishkin’s *Varakhsha* published in 1963. This book limits itself only to Shishkin’s excavations at Varakhsha and its western rural hinterland including the Bashtepa group of sites that are discussed below. However, Varakhsha was likely only a garrison from the

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992 Lo Muzio 2009.
Seleucid through post-Hellenistic periods and all sites around it were either smaller satellite garrisons or veritable rural settlements. Thus, while it is limited in scope, Shishkin’s book cemented an idea that was already known but not substantiated—that the western Bukhara Oasis was a rural agricultural landscape in antiquity that lived in the shadow of military garrisons. Adding to Shishkin’s work was a 1983 publication edited by M.E. Filanovich *Kul’ tura Drevnebukharskogo Oazisa III-IV vv. n.e. (Culture of the Ancient Bukhara Oasis, 3rd-4th c. CE)* but written by A.R. Mukhamedzhanov focused on the northwestern area of the oasis with particular emphasis on rural settlements at Kyzylkyr, Setalak, and the Dīvāri-Kanpirak fortification wall.

Quite important for the question of the early history of the Bukhara Oasis is Paikend, an ancient city 45km southwest of Bukhara. Paikend is mostly known for its early Medieval history when it was entwined with the politics of the Kushano-Sasanian empire but was most importantly one of the main Sogdian cities of commerce situated along converging European, Middle Eastern, and Chinese trade routes.993 Since 1939–40 the city has been routinely excavated in collaborations mostly between the State Hermitage Museum in St. Petersburg and first the Uzbek Committee for the Protection of Monuments of Antiquity and now the Institute of Archaeology of Uzbekistan. These works have exposed a veritable “Pompeii” of Central Asia in which one can walk the streets of the final Medieval phase of the city, experience excavated homes and shops, and otherwise get a real sense of the urban fabric of the city. However, the city is long recognized as predating Bukhara as the administrative center of western Sogdiana.

993 Omel’chenko 2019: 204-05.
possibly since the 4th–3rd century BCE.\footnote{Semenov 1998; Omel’chenko 2019.} Unfortunately, this work awaits a new synthesis that updates the site’s only monograph (1988), *Gorodishche Paikend: k probleme izucheniya sredne-vekogo goroda Srednei Azii* (*The Paikend Settlement: the problem of studying the Medieval city of Central Asia*). Otherwise, technical reports were annually published in the series *Materialy Bukarskoi Arkheologicheskoi Ekspeditsii*.\footnote{Семенов и Мирзаахмедов 2005; 2006; 2007; Торгаев и Мирзаахмедов 2008; 2009; 2011.}

The earliest periods of Bukhara’s archaeological history were explored in tandem with broader efforts to understand the development of the agricultural oasis and especially anthropogenic irrigation. Serious archaeological inquiry across and between the Bukhara and Kashkadarya Oases and the Karakul Oasis southwest of Bukhara was already underway from 1950–70 under the direction of Y.G. Gulyamov. This work culminated in his 1966 work *Pervodytnaya Kul’tura i Vozniknovrnie Oroshaemogo Zemledeliya v Nizov’yax Zarafshan* (*The First Culture and Origin of Irrigated Agriculture in the Lower Zerafshan*), co-authored with U. Islamov and A. Askarov. Gulyamov was interested in tracing the earliest development of irrigation networks and hydrology of the lower Zerafshan, restricting his study to the Neolithic through late Bronze Age. It is in this work that one finds the most comprehensive synthesis of excavations of the anomalous Bronze Age Zamanbaba culture, who once resided along the Makhandarya before it dried up. Gulyamov’s work only partly considered the internal development of Bukhara Oasis hydrology and settlement and nonetheless did not concern itself with the 1st millennium BCE through present day. This would change only a decade later with the work of A.R. Mukhamedjanov, who published two detailed monographs on
the irrigation history of the actual Bukhara Oasis: first in his 1978 book *Istoriya Storiya Orosheniya Bukharskogo Oazisa* and his earlier (1972), slightly different, *History of Irrigation in the Lower Zarafshan Valley* (in Uzbek). Both works are still the backbone of our understanding of the irrigation history of the Bukhara Oasis. Since the history of irrigation is critical for understanding settlement history the work is critical for tracing the archaeological heritage of sedentary agriculturalists living in the region.

Mukhamedjanov was not the first to tackle the question. In fact, the general paucity of written sources and archaeological investigation in regions such as the northern and western regions of Bukhara make us more reliant upon information about irrigation history (rather than settlement or political history).996

By necessity the remainder of this subchapter is divided geographically. First, I approach the difficult question of the city of Bukhara’s earliest history and the historiographic tradition of strictly archaeological approaches to this question. Within this framework I also discuss the evidence for Paikend’s Hellenistic occupation, evidence that has only recently emerged through deep excavations of the city’s citadel.997 I also consider sites within the immediate environs of both places. From Bukhara I briefly discuss rural settlements that emerged in the 4th–3rd century BCE in the northeastern area of the Bukhara Oasis and its connection with sites around Navoi, west of Kala-i Dabusia. Within the context of northern connections I dedicate some evidence for Hellenistic period interconnectivity with Chorasmia, Chirik Rabat (lower Syr Darya), and steppe nomads in the northern reaches of the Bukhara Oasis. Finally, the bulk of this subchapter

996 Мухамеджанов 1979: 69-70.
997 Omel’chenko 2019.
is given over to a systematic treatment of the western area of the Bukhara Oasis. I discuss the development and importance of agriculture in this zone in the formation of a rural culture that has been identified in the southern Kyzylkum. It is here that I introduce new evidence for a rural settlement during our excavations at Bashtepa from 2016–21 and consider this material within the micro-regional and chronological context of the region.


Bukhara city is one of the most researched areas of ancient Sogdiana. Most of this work has been to understand the historical periods of the city and its environs from Late Antiquity through the present day. Given the large number of archaeological investigations in this historic city, only projects worth that shed light on the earliest antiquity of Bukhara are mentioned here.

Serious archaeological investigation of the Bukhara Oasis began in 1934 under the direction of A.Yu. Yakubovsky who was the first to document sites located only in the eastern area of the oasis with a particular emphasis on the late Antique and Medieval Oasis wall, the Kampyr Devor near the town and archaeological site of Kyzyltepa. However, early investigations in this region are largely associated with the work of the Soviet archaeologist V.A. Shishkin, whose work from 1934–56 was responsible for some of the most notable finds of the century and laid the groundwork for the projects of all later generations of archaeologists. Around Bukhara Shishkin explored the urban archaeology of Bukhara city, Varakhsa, among the Bashtepa group of sites, and along

998 Якубовский 1940.
the Khitfar at Kauraltepa. All of these areas were explored in addition to his previously discussed work at Afrasiab.

In the 1930’s, Shishkin primarily focused his attention to the western oasis region along the Khairabbad darya, Samjan, and Khifar rivers (discussed at length below). In the late 1940’s Shishkin turned his attention to Varakhsha and documented one of the most significant sites for understanding the oasis in Late Antiquity through the Islamic conquest of Bukhara, published in his seminal work *Varakhsha* (1955).\footnote{Шишкин 1955.}

Within Bukhara, V.A. Shishkin’s excavation inside of the Magoki-Attori Mosque east of Lyabi house and south of the Medieval shakhristan produced ceramics dating from the 1\textsuperscript{st}–4\textsuperscript{th} centuries CE (AMCAA 1046).\footnote{Шишкин 1955: 20.} However, this material might indicate earlier aspects of the social life of the early city. Importantly, the mosque is also located approximately 50m from the Shakhrud canal, among the city’s oldest. This is significant for the following reason recognized immediately by Shishkin himself.\footnote{Шишкин 1955.} In the Islamic historian Abu Bakr Muhammad ibn Jafar Narshaki’s *History of Bukhara* actually mentions the canal and mosque site by name, indicating that the mosque was constructed over an earlier temple to the Sogdian moon god. This earlier temple was famously situated in the location of a bazaar where terracotta figurines were sold.

From 1968–75 excavations were undertaken in the areas around and between the Arc, the Kaylan Mosque complex, Taki-Zargaron market, Tim-i-Abdulakhan, and the Abdulazizkhan madrasah by the Bukhara detachment of the Institute of Archaeology of

\begin{footnotes}
\item[999] Шишкин 1955.
\item[1000] Шишкин 1955: 20.
\item[1001] Шишкин 1955.
\end{footnotes}
the Academy of Sciences of the Uzbek SSR (AMCAA 1197). The area is now an open park for tourists along one of Bukhara’s central shopping areas for craftwork. A 50m x 50m trench was opened in the area prior to the construction of this park. When virgin soil was able to be reached in these areas it was only after excavating through some 15–18m of cultural layers. Another excavation was opened by the Bukhara archaeological expedition of the Institute of Archeology from 1977–1980 under the leadership of A.R. Mukhamedzhanov near the Mir-i-Arab Madrasah, in the same area as the Akhrarov and Usmanova investigations. Mukhamedzhanov’s explorations largely supported the chronology of the earlier excavations.

A trench 6m x 4m laid near the Zindan prison museum in the Arc revealed in the earliest cultural strata small assemblages of pottery dating from the 5th–3rd centuries BCE (AMCAA 1193). Aside from substantial Medieval architectural layers, no early architecture was found in either area (i.e. dating to the second half of the first millennium BCE). There was, however, an abundance of pottery documented on the virgin soil layer that represented typical forms of the early Hellenistic period (flat bottomed bowls with red engobe and some Yaz III cylindro-conical forms and cauldrons that allowed Akhrarov and Usmanova to speculate on an Achaemenid date for the city. However, we should be cautious about their dating since these same forms persisted into the Hellenistic period and their presence alongside early Hellenistic forms is quite a good indicator of a phase that is transitional from Achaemenid to Hellenic (Seleucid) rule in Sogdiana.

1002 Адылов 1987а: 8. The members of this detachment were G. Dababaev, R.K. Suleimanov, I. Akhrarov, P. Valiev, A.R. Mukhamedzhanov, D.K. Mirzaakhmedov, and several others.
1003 Ахаров и Усманова 1978.
1004 Адылов 1987а: 8; see also Akharov 1973; Ахаров и Усманова 1978.
On the Arc, a trench was excavated from 1970–74 under I. Akhrarov in the central area in the northeast corner of the previous excavations (AMCAA 1184).\textsuperscript{1005} The trench began at 6m x 6m and proceeded in a stepped fashion to the virgin soil under the ark, where charred remains of shrubs were taken to reflect the tugai vegetation before the area became settled. It is just above this tugai layer that the earliest evidence for human settlement comes in the form of a dense brown layer intermixed with burnt clay, coals, ash, and the bones of small cattle. Ceramics date from the 4\textsuperscript{th} – 2\textsuperscript{nd} centuries BCE. Adylov suggested that this layer was the foundation for the first walls of the Ark, built of pakhsa, as the structure contained ceramics of the same period as the previous layer. This could be the case but we should consider both the composition of the soil actually described in this earlier and the ecofacts which coexist with the ceramics. The soil is described as a “dense heterogeneous layer of brown earth and loamy structure” that is intermixed with cattle bones. While we could do with more description of the soil composition (i.e. was it greasy, dry, etc.) this is the type of layer one might encounter in areas where animals were kept for prolonged periods of time. The presence of cattle bone indicates that some degree of pastoralism in the form of cattle-rearing was practiced in this area in the early Hellenistic period. Thus, it cannot be discounted that this layer was one of activity and not merely of a foundation for the later citadel walls. It is clear that the earliest walls of the Arc are also Hellenistic and built entirely of pakhsa. A layer of windblown sand separates the first wall phase from the second and it is in this second wall phase that there is only ceramics of the 4\textsuperscript{th}–5\textsuperscript{th} century CE. The Hellenistic

\textsuperscript{1005} Адылов 1987а: 16-17.
fortification of Bukhara was a brief event that did not persist into the early first millennium CE, only revived in late Antiquity.

At Paikend (AMCAA 638), 45km southwest of Bukhara, the Hellenistic origins of the city’s citadel were already detected in the 1970’s–80’s.\textsuperscript{1006} The city is not hydrologically part of the Bukhara oasis, instead being watered by a single long-reaching branch of the Kashkadarya River in antiquity. This came in the form of ceramics found in a deep trench at the foot of the citadel, initially thought to be restricted to the 3\textsuperscript{rd}–2\textsuperscript{nd} century BCE, and traces of fortification walls built of square format bricks (34–50cm x 34–50cm x 8–12cm). Access to these early levels has been difficult on account of the mass of accumulated cultural deposits stratigraphically above them, mostly with the massive construction of the citadel’s fortifications in the 3\textsuperscript{rd}–4\textsuperscript{th} century CE. However, excavations from 2011–2015 targeting the early fortification finally produced more significant data. We now know that the Hellenistic fortification was square in plan (72m x 72m) with walls 1.5–1.6m thick and repeatedly plastered over time. These walls were built on a 1.6m high platform, which (perhaps significantly) is partly built of plano-convex bricks similar to those from pre-Achaemenid Koktepa and Afrasiab. These Hellenistic layers are located 14.4m below the site’s datum.

Deep stratigraphic trenches were also set into the courtyard of Paikend’s pre-Islamic Zoroastrian fire temple. Several floor layers were reached that produced pottery dating to as early as the mid 3\textsuperscript{rd} century BCE and corresponding with the transitional phase between Afrasiab IIA and IIB.\textsuperscript{1007} This indicates that sacred architecture was

\textsuperscript{1007} Omel’chenko 2019: 211.
already present at Paikend as early as this period and reflects a key aspect of Bactrian and Sogdian urbanization, the establishment of a cult center within or near fortification walls (Er Kurgan, Padayaktepa/Uzunkir/Sangirtepa, Ai Khanoum, Takht-i Sangin).

Significantly, Omel’chenko’s careful stratigraphic excavations confirms a theory already suspected in Sogdian archaeology.\textsuperscript{1008} The earliest phase of the Paikend fortification (now Paikend 1) corresponds with the assemblage excavated at Saratepa 2 outside of Afrasiab (Afrasiab IIA). This period is characterized by very limited (but not totally absent) Hellenistic influence on the form, but not slip, of only a few pottery types. Yaz III pottery continues to be produced simultaneously before gradually disappearing over the 3\textsuperscript{rd} century BCE. This is completely in line with our own observations of early Hellenistic materials excavated at Bashtepa from 2016–21. This confirms a distinct pottery assemblage across Sogdiana that follows the conquest of Alexander but pre-dates or only briefly coincides with the ascendency of Seleucid rule in 280 BCE. This does not imply that Paikend was founded by Alexander, or even Macedonians, but instead could be attributed to the migration of Sogdians from the Middle Zerafshan Valley because of Alexander’s campaign of terror against local populations.\textsuperscript{1009} In this scenario, fortifications at Paikend, Ramish, Romitan, and presumably Bashtepa would be part of this mass migration with the implication that these groups briefly carved out an enclave in western Sogdiana. The chronology revision now has broad implications for our dating of all “late Achaemenid” and early Hellenistic sites within the oasis, and here I alert the reader that this will alter the dates of some sites included in the AMCAA (recalling that I

\textsuperscript{1008} Omel’chenko 2019.
\textsuperscript{1009} Omel’chenko 2019: 220-221.
have taken recently-reported dates at face value and not attempting my own new interpretation).

These previous explorations culminated in a view that Paikend was the administrative center of the Bukhara Oasis in antiquity, with no significant settlement yet in the location of Bukhara. However, current rescue excavations directed by S. Stark and Dzh. Mirzaakhmedov now indicate a more complicated settlement history for Bukhara and its relationship with Paikend. The exposure of the southwest corner of a monumental wall built of large square format bricks renews the possibility of a substantial Hellenistic settlement in the center of Bukhara (AMCAA 1047). The site is located approximately 250m southeast of the Arc. Its presence indicates the possibility that the Arc was not the main settlement zone of Bukhara during the Hellenistic period and that a more substantial settlement was located under one of the oldest urban residential areas of the city, which is now densely packed with apartments. It is worth reiterating that the Akharov and Usmanova excavations at the base of the Arc and west of the Abdulazizkhan Madrasa both indicated swampy areas that would have reflected the environmental conditions immediately outside of the ancient settlement. However, this data is very early and needs much clarification.

We have only limited evidence for settlements of the Hellenistic and post-Hellenistic periods immediately on the outskirts of Bukhara. Two kilometers southwest of the Chor-Bakr Mausoleum west of Bukhara was a large tepa, Mokhitabontepa (AMCAA 1048), which has been destroyed since it was investigated by R.A. Abdiramov

1010 Stark, Mirzaakhmedov, Mirzaakhmedov, and Torgoev 2021.
in 1982. Only a small 11m deep sondage was made in this square mound measuring 70m x 65m, giving a stratigraphic column dating from the 4th century BCE-12th century CE. The lowest tiers of the excavation produced ceramics of the 4th century BCE-2nd centuery BC but Abdiramov does not tell us which forms. There is a gap in occupation at the site from the 2nd century BCE-3rd century CE until occupation resumes with the construction of a pakhsa wall of some greater structure followed by continuous habitation. This material needs to be revisited considering A. Omel’chenko’s new chronology for Bukhara.

Surveyed material can be summarized as the following: Khama 12km south of Bukhara (AMCAA 656; mid-3rd century BCE-1st century CE with a resumption of activity in the 3rd century CE), Khujada, 35km west of Bukhara in the village of Jingon (AMCAA 652; early 2nd century BCE, 3rd-4th century CE). I also note that there is an increase in settlements as early as the 3rd century CE, slightly later than settlement expansions already observed in the Middle Zerafshan, oasis of Panjikent and inner mountains, and Kashkadarya. These are the following sites: Warka, 20km east of Bukhara near Kogon (AMCAA 657; 3rd century CE and later) and AMCAA 654, 26km northeast of Bukhara between Iskijat and the main city. A few sites emerge along the road between Paikend and Bukhara when both cities undergo rapid urbanization. These are: AMCAA 653, 25km southwest of Bukhara, and the 7.5 ha site at Khunbun, 30km southwest of Bukhara (AMCAA 651).

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1011 Абдиримов 1983: 469.
1012 The following data is extracted from Rante 2019. Rante sees all sites as having 2nd c. CE occupations, which cannot be correct given that this is a of known decline in this oasis (Naymark 2001: 58-59).
4.5.b. Northern Bukhara – Navoi and the inner Kyzylkum.

Between Kala-i Dabusia and Bukhara is the micro-oasis of Navoi and its northern narrow offshoot of Kenimekh, a region that is perhaps more integrated with the Bukhara Oasis than the Middle Zerafshan. This narrow strip is tucked between the Malik desert steppe at the south and the western spurs of the Nuratau mountains to the north. Like the Middle Zerafshan Valley it is bisected by the Zerafshan River on an east-west axis and is irrigated by the same. This region shares with Bukhara a general lack of evidence for late Iron Age settlements. This is now apart from a single site which dates from the 5th-3rd century BCE, Karnab (AMCAA 1240), that technically falls out of the oasis as it stands alone to the south along the westernmost ridge of the Zirbulak Mountains. Like around Bukhara, settlements most emerge at the end of the 4th-early 3rd century BCE within Navoi proper. This might reflect a nomadic or pastoral landscape before Alexander’s very brief incursion into the area. Only a single site, Kuzimontepa (AMCAA 683) suggests an Achaemenid date for its foundation, but as noted elsewhere above, it is now accepted that some Yaz III ceramics shapes (the foundation of the site’s dating) continue into the Hellenistic period. It is very likely that Kuzimontepa is later and that we are left with a Navoi micro-oasis devoid of archaeological material until the Hellenistic period.

1013 Alimov, Boroffka, Buryakov, Cierny, Lutz, Parzinger, Pernicka, Ruzanov, Shirinov, and Weisgerber 2007; Sverchkov 2009. Note that these dates are still unresolved.
1014 Stark 2016: 134.
1015 Omelehenko 2019.
As mentioned, there is only minimal evidence for late Iron Age / Achaemenid occupation in and around Navoi. Overall, the oasis was most likely that this was nomadic or entirely pastoral territory however there is at least one indication of other activities. The clearest evidence comes from Karnab (AMCAA 1240) along the westernmost spur of the Zirbulak Mountains 30km southeast of Navoi. In all phases Karnab was probably associated with tin mining from these same mountains. The earliest phase dates from the 5th-3rd century BCE (possibly even later, although calibrated radiocarbon dates produced a date of 905-775 2σ BCE) with a second phase dated from the 1st BCE - 4th centuries CE. The late Iron Age at Karnak is represented by at least three pit-houses, which the excavators associated with Afrasiab II type pottery. These houses were rectangular and installed into the eroded layers of mountainous limestone with at least one house measuring 2.5m x 4m. One pit-house has an anomalous architectural feature that the excavators describe as a platform set into the western half of the house, behind which there was a small semicircular niche containing ash. After this and the other houses were long abandoned a mudbrick building and the site’s first fortification wall were built in the 1st century BCE.

A late Iron Age / Achaemenid date given to Kuzimontepa (AMCAA 683) now seems very unlikely. This site does have very limited evidence for a rural settlement here as early as the late 4th–early 3rd century BCE. This site was a large–fortified settlement

with a citadel and shakhristan located in the Navoi District. More precisely, it is located 8km north of modern Navoi, 5km north of the Zerafshan River, and otherwise close to the foothills of the southern foothills of the Nuratau mountains. The earliest layers of the site date from the 4th–2nd century BCE (specifically Bukhara I, see below) and the latest date to the early Middle Ages after which habitation of the site ceased. Only parts of the fortification wall survive, in some areas up to 7m in height. At its peak the site consisted of a rectangular fortification wall with a citadel (1.5ha) and a shakhristan that has long since been plowed over for cotton cultivation. The shakhristan was round in plan and approximately 12ha. Ceramics from the walls of the fortification wall and shakhristan point to a Medieval date for these features but the citadel might be earlier. Other undisturbed small hillocks dot the immediate landscape around the site and might also have early origins.

Kuzimontepa was excavated in 1976 as part of the Bukhara Archaeological Expedition of the Institute of Archeology under the leadership of A.R. Mukhamedzhanov. The effort was part of a wider survey of Bukhara’s archaeological sites from 1976–1982. These Hellenistic layers are rather uncharacteristic, as no architecture was found in the two trenches that reached these depths. Only bits of pakhsa associated with Hellenistic pottery point to the presence of architecture here. What is clear is that some type of settlement was established as early as the 4th century BCE in an area that would have been accessible to natural river flow, which is indicated by riverine deposits in the virgin layer. There is no indication that the area was fortified at this time.

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Another site is Burkuttepa (AMCAA 649), dating from the mid 3rd–mid 2nd c. BCE and 1st – 4th centuries CE. The site is located along the northeast outskirts of Navoi in Karmana on the left bank of Zerafshan and was situated on a principal artery connecting Bukhara with Dabusia. Burkuttepa was first explored by Yu.P. Manylov in 1986 but only excavated from 2000–2001 when it was the subject of a renewed investigation by the Karmana Detachment of the Institute of Archeology of the Academy of Sciences of Uzbekistan led by M. Khuzhanazarov, A.A. Gritsina, and Dzh. Mirzaakhmedov. While the site would later emerge as a fortification, its earliest phase features a single round pit-house dug into virgin soil dating from the 3rd–2nd century BCE. After this, the nature of the site changed when fortification walls and a citadel were built that were functional into the Medieval period.

Only Burkkutepa has evidence for rural domestic architecture. The site has an area of 8ha, which certainly reflects expansion during the later phases. The earliest excavated phase of the site dates from the 3rd–2nd century BCE in a trench laid at the foot of the citadel. It was here that a single pit-house dwelling was found dug into virgin soil to a depth of 75–80cm. The house is round or oval in shape but was not completely excavated so the true size is unknown. This type of round pit-house is known from 3rd century BCE at Dalverzintepa (AMCAA 438) and Kyzylcha (AMCAA 480) in Surkhandarya but draws on a tradition common among early Iron Age Burguluk

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1020 Грицина и Хужаназаров 2005.
1021 Грицина и Хужаназаров 2005: 42.
1022 Rveladze 1978: 75, 146; CODE here above.
1023 Сагдулдаев 1987:
communities in eastern Sogdiana and the Tashkent Oasis. Walls are earthen and postholes located in the center of the room indicate support for a light framed roof. It is likely that the house was destroyed by fire based on observable traces of burning on the floor level, which was just under a layer of ashy organic humus mixed sediment. The floor is just above the modern water table, so it is likely that the house has been saturated many times during its history.

Finds from Burkuttepa are mostly limited handmade and wheel made ceramics except for a single quern that only tangentially reflects access to agriculture. Handmade vessels were limited to pots and jugs, as well as pans and cauldrons. While most cooking wares had evidence for burning, some cauldrons did not have evidence of burning and may have been used for storage. Some also had heat-resistant chamotte inclusions. Wheelmade vessels include table wares such as jugs, pots, bowls, and cups. Many finewares generally share a tradition with Afrasiab II but lack the Hellenistic types that are introduced in Afrasiab IIB.

Several sites emerged in the late 2nd–3rd century CE. As is now recognized, there is an inexplicable gap in evidence for habitation in the Bukhara Oasis during the 2nd century CE, so these sites probably date to the 3rd century CE. These sites are Kilichatatepa (AMCAA 755), Kaptarkhona (AMCAA 756), Vaskontepa (AMCAA 757), and Dzhambul’tepa (AMCAA 754), all documented by Manylov during a systematic survey of the Bukhara Oasis that remains unpublished.

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1024 Дуке 1982; Исамиддинов и Рапин 1999: 71, 75. Khuzhanazarov and Gritsina extend comparisons to Nurtepa, yet the dwellings of this site are not round, but dugouts set into terraced slopes.
Moving northwest of the Navoi Oasis is the narrow Kenimekh micro-oasis, which flanks the westernmost spurs of the Nuratau Mountains, there are two rural estates that were documented at Kumrabad I and II, which Mukhamedzhanov suggested were founded in the middle of the first millennium BCE, but are likely much later. These sites are situated along a branch of the Zerafshan that now discharges into the Ayakagitma reservoir—an area revisited briefly below—which is otherwise an important route to sites along the interior of the Kyzylkum desert. The area is notable for its association with flint extraction for the entire Bukhara Oasis and southern Kyzylkum during the Neolithic and Bronze Age. We can assume this was also the case during the 1st millennium BCE. Another site dating to the same period was documented at the Khazar gorge as well as a fortified site at Chordara. All of these sites were documented between 1973–1977 by Mukhamedzhanov in his survey of the irrigation history of Bukhara.

There are several Hellenistic sites between Bukhara and Navoi. Most significant is Khodzha-Bustan (AMCAA 684) near Kiziltepa, explored by the Bukhara archaeological expedition of the Institute of Archeology under the leadership of A.R. Mukhamedzhanov. The site is significant in that it is one of the only places to produce evidence for settlement activity in this area during the Late Bronze Age, after which there is a long break in continued activity. The area is resettled again at some point from the

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1026 Мухамеджанов 1979: 72.
1027 Касымов 1964.
1028 Мухамеджанов 1979: 72.
1028 Мухамеджанов 1979 gives no citation or indication who identified these sites during these years.
1030 Адылов 1987б; Mukhamedzhanov 1979: 72.
6th–5th century BCE\textsuperscript{1031} or 4th–2nd century BCE until the second half of the 4th – early 5th century CE. The chronology of the site is divided into four principal phases – Kodja-Buston I–IV (K-B I: 4th-2nd century BCE; K-B: 2nd century BCE-early 2nd century CE; K-B III: 2nd-3rd century CE; K-B IV: ca. 4th-5th century CE).\textsuperscript{1032} On the ancient route between Khodzha Bustan and Bukhara is Iskijat (AMCAA 643). This is an unexcavated, unfortified site that appears to have been established in the 3rd century BCE and persisted until the modern day.\textsuperscript{1033} Here we also add two more sites that appear only in the early 2nd century BCE 25km north of Bukhara. These are Rabatishan (AMCAA 658) and the nearly adjacent tepa AMCAA 655, just east of modern (not ancient) Romitan. Both sites seem to persist into the Medieval period. We should note however that the grounds for establishing these early dates for Iskijat, Rabatishan, and AMCAA 655 are not entirely clear from what has been published thus far.\textsuperscript{1034}

4.5.c. An interaction zone in the inner Kyzylkum north of the Bukhara Oasis.

There is a tendency among Western travelers to Bukhara to view the city and its surrounding oasis as a region untouched by change, be it a fossilized Soviet landscape or something earlier. This is of course a false and entirely colonialist narrative perpetuated by thrill-seeking Europeans (and occasionally Americans) who travel far from home to populate social media feeds with carefully curated, exoticizing images of Central Asia. As discussed in chapter one, this impulse has not escaped the way some scholars write

\textsuperscript{1031} Mukhamedzhanov 1979: 72 provides the earlier date for Khodzha-Buston without citation but is revised by Adylov in 1987 with Hellenistic period date.
\textsuperscript{1032} Адылов 1987а: 95-96.
\textsuperscript{1033} Rante 2019.
\textsuperscript{1034} Rante 2019.
about Hellenistic Central Asia. In reality Bukhara changes rapidly. One example is the recent, ongoing destruction of pre-Soviet bazaars and the rapid eastward expansion of the city currently underway. Beyond the city, one can look at the entire landscape of the Bukhara Oasis and the Kyzyl Kum desert. Both regions are as ecologically sensitive to climate change and anthropogenic factors as regions like Khwarezm and the Aral Sea.

Since the 1980’s much attention has been drawn to the man made ecological disaster of Soviet environmental engineering along the lower Amu Darya that has resulted in the annihilation of the Aral Sea. Less attention has been drawn to another ecological disaster north of the Bukhara Oasis and Nuratau mountain chain that has resulted in the destruction of thousands of cultural sites representing a former, habitable history of the southern Kyzyl Kum. This disaster is the 1969–79 formation of Lake Aydar which was the result of the poor design of the Chardara Dam system in the Middle Syr Darya. The once dry Aydar-Arnasay depression was designated the location of an overflow for floodwaters of the Syr Darya, but from 1969–70 several seasons of particularly heavy rains left no choice but to leave the Chardara Dams open, and the Aydar-Arnasay depression permanently flooded. The resulting lake is now the second largest water body in Central Asia with a water volume of roughly 44.3 km$^3$. Under the western zone of the Aydar Lake are the remains of the largest zone of Neolithic occupation in Uzbekistan at the former Lake Lavlaykan. The size of this new lake is large enough to occasionally increase rainfall in the inner Kyzyl Kum. While only a few families reside on this new coast, the lake is now a fishing destination.

The formation of Lake Aydar is a monument to how fast the ecological situation of the Kyzyl Kum can change. Seemingly uninhabitable, and uninhabited, the Kyzyl
Kum has hosted a variety of mobile, semi-mobile, and sedentary populations over the course of the Holocene. These populations have always adjusted to a rapidly changing ecology. In some places, such as at Besh Bulak, human habitation has continued seemingly uninterrupted deep in the Kyzyl Kum.

Aside from Besh Bulak, Iron Age sites are very rare despite the diversity in metals and minerals of various zones between the Bukhara Oasis and Syr Darya. Today the Muruntau mountains are the site of the largest open-pit gold mine with annual production estimated to be two million ounces of gold per year (roughly 4,630 standard, 400-troy ounce bars of gold). South and East of the Kul’dzhuktau mountains human habitation of this landscape was prevalent during the Middle Palaeolithic. Known Middle Palaeolithic sites of the Kyzylkum dating to as early as 30,000 BP are clustered around the foothills and steppe lowlands east of the Kul’dzhuktau mountains, most notably at the site Kyzylnura. As is the case in much of southern Central Asia there is a general lack of evidence for the Upper Palaeolithic and Mesolithic periods from secure contexts in the Kyzyl Kum.\footnote{Khudzhanazarov and Szymczak 2006. The authors attribute this wide evidentiary gap in habitation to a hypothetical “reservoir” that subsumed all of the southern Kyzyl Kum and Kara Kum deserts up to 200m asl. They argue that the Neolithic Djeitun culture sites of the Kopet Dagh formed the southern border of this great lake with Ayakagytma and the associated Kelteminar sites forming the northeast boundary. They argue that such a sizeable amount of water would have been dumped into the Turan Basin from melting early Holocene glaciers. Presumably this reservoir had entirely vanished by 8000 BCE. Yet one should note that if such a vast “lake” existed it would be larger than the Black Sea – assuming the Caspian Sea to be included in its vast coverage. Following their hypothesis, we should expect to find a fossilized aquatic ecosystem under the barchan dunes of the Kyzyl Kum, which of course there is no present evidence for whatsoever – especially at the sites excavated by these same authors. The idea seems completely far-fetched.}

Neolithic period sites appear rapidly in the southern Kyzylkum at the beginning of the 8\textsuperscript{th} millennium BCE. This is primarily known from the sites Utchashchi\footnote{Виноградов, Мамедов, и Сулержищий 1977.} and Ayakagytma.\footnote{Szymczak and Khudzhanazarov 2006.} The site of Ayakagytma is particularly important, dating 131 to 1036 BCE.
from about 8000 – 4400 cal. BP and located just southwest of Kyzylnura.\textsuperscript{1038} Locally the name of the depression is translated as “do not go there, because you will never come back,”\textsuperscript{1039} which speaks to the inhospitable nature of the landscape. While the region is desert today, during the Middle Palaeolithic through Neolithic an arm of the Zerafshan flowed northward toward the Kul’dzhuktau mountains and watered this area, now the dried up Dariasai palaeochannel.\textsuperscript{1040} Today there is a small lake that is about 20 km² and rich in fish that is watered by an artificial canal running from the Bukhara Oasis. A small village Ayakagytma is located along the northern lake shore and the entire lake is ringed by seasonal shepherd stations at roughly 3–7km intervals. Excavations from 1995–2003 by a joint Polish-Uzbek expedition lead by Karol Szymczak and Mukhiddin Khudzhanazarov at the Ayakagytma depression uncovered a long-term camp site that is materially related to the Kelteminar culture of Khwarezm but reliant entirely upon cattle and sheep breeding and without the agricultural package of their northwest relatives.\textsuperscript{1041} In the earliest phase dating to roughly 6000–5000 BCE individuals here were already butchering domesticated and tamed animals (33.3% domesticated, 56.9% tamed) such as cattle, sheep, pig, and dog while also hunting wild auroch, deer, water buffalo, and turtle (> 10% wild).\textsuperscript{1042} As one would expect, there is a gradual increase in stock-breeding of cattle, horse, and camel over the course of the Neolithic.\textsuperscript{1043} Stable C4 isotope ratios of

\textsuperscript{1038} Fontugne and Szymczak 2006: 26-27.
\textsuperscript{1039} Szymczak and Khudzhanazarov 2006: 11.
\textsuperscript{1040} Виноградов, Мамедов, и Сулержицкий 1977.
\textsuperscript{1041} Khudzhanazarov and Szymczak 2006: 125.
\textsuperscript{1042} Lasota-Moskalewska, Piatkowska-Małecka, Grezak, and Szymczak 2006: 211.
\textsuperscript{1043} Lasota-Moskalewska, Piatkowska-Małecka, Grezak, and Szymczak 2006: 212.
charcoal samples from the site indicate that the climate around the Kyzyl Kum was characteristic for a dry and warm steppe environment.\textsuperscript{1044}

Inhabitants of the Kyzyl Kum north of the Bukhara Oasis generally maintained Neolithic traditions as the rest of the Zerafshan valleys entered the Bronze Age, so to speak. Pastoralists continued to inhabit the steppe lowlands east of the Kul’dzhuktau mountains, but now at lower elevations around the Lyavlyakan Lakes, where there is abundant evidence for late Neolithic/Bronze Age encampments. A staggering 800 to 1,000 Kelteminar and early Bronze Age sites have been documented in the region stretching from Ayakagytma to the Lyavlyakan Lakes.\textsuperscript{1045} At Lyavlyakan 26 remains of a Neolithic above ground dwelling were excavated in 1966 by a joint expedition between S.P. Tolstov’s Khorezm expedition and the Department of Geography of Tashkent State University. The site was also an active turquoise processing center in the early 2\textsuperscript{nd} millennium BCE, although by this time cultural traditions exemplified through ceramic production had broken Kelteminar traditions and an independent, local industry of production emerged.\textsuperscript{1046} By the first millennium BCE an increase in the salinization of Lyavlyakan made it impossible for residents to live around the lake as in previous millennia. By the end of the first millennium, ideas about landscape usage inevitably changed as sites such as Lyavlyakan 26 became the location of several kurgans dating to the end of the first millennium BCE.

The mountainous zones of the Inner Kyzyl Kum are known particularly as the location of many surface mines for turquoise extraction; that is, at Kul’dzhuktau,

\textsuperscript{1044} Fontugne and Szymczak 2006: 26.
\textsuperscript{1045} Виноградов и Мамедов 1975:
\textsuperscript{1046}Виноградов и Мамедов 1975: 231-232.
Auminzatau, Tamdyktau, and Bukuntau. Mines at these locations have been known since the mid-19th century and were surveyed by Vinogradov, Lopatin, and Mamedov in the early 1960’s. However, this survey was unable to produce any evidence for Bronze or Iron Age exploitation of turquoise, only finding evidence for extraction in the late Neolithic and 12th–14th centuries CE.\textsuperscript{1047}

Yet, while evidence for Kyzyl Kum turquoise mining during the Iron Age is currently unclear, at least some of these mines were likely worked in the Bronze and Iron Age. North of the Tamdyktau mountain range in the inner desert valley of Djomonkul, a 1955 survey at Besh Bulak led by N.N. Vakturskaya for a detachment of S.P. Tolstov’s expedition to Khorezm uncovered evidence for continuous habitation from the Neolithic through the end of the first millennium BCE (AMCAA828).\textsuperscript{1048} Although there is a very small village here even in the present day, this very remote site is primarily known as a substantial Kel’teminar outpost. Notably, however, Besh Bulak turned out to be one of the only sites in the inner Kyzylkum to produce significant amounts of pottery from the late Bronze Age, early Iron Age, and importantly, the late first millennium BCE. Unfortunately, none of its remains are stratified, being restricted to surface finds. Substantial amounts of copper slags, finished and unfinished turquoise beads, and stone tools for various productive activities clearly indicate that the site was a production center at various points during its existence. Ceramics of the late first millennium indicate strong ties to both Khorezm and southern Kazakhstan, which is a continuation of ties established earlier, given the relationship of Besh Bulak to Tazabag’yab and Andronovo

\textsuperscript{1047} Виноградов, Лапотин, и Мамедов 1965.  
\textsuperscript{1048} Вактурская 1959.
traditions of the late 2nd millennium BCE. These late first millennium ceramics are round, burnished red engobe vessels typical of Chorasmia, Sogdiana, and Bactria during the Hellenistic period as well as extremely coarse, handmade pots with flat but grooved-handled known as “Barbarian ware,” common to Khwarezm. Other examples of this so-called “Barbarian ware” exhibited notched-rims, nubbed adhesions on the shoulders, and a thick, crude engobe which is known to the lower Syr Darya. Two other pottery types are noteworthy. The first is a vessel with a zoomorphic handle analogous to those found at “Kaunchi” sites of Khwarezm. The second is a remarkable crucible-shaped squarish cup that is similar to forms found in the Sarykamysh delta.

While very little is known about Besh Bulak during the late first millennium BCE, two conclusions are drawn from its existence. The first is that the Inner Kyzyl Kum was not only inhabited, but that its inhabitants were in communication with communities far beyond the margins of the desert-steppe as well as sharing new ideas about pottery production. The second is that in producing turquoise beads, to whatever degree that may have been, the local economy exceeded basic subsistence living. It is easy to imagine this site as a stopping point for long-distance travelers traversing the Inner Kyzyl Kum, as was the case at the same site during the later Afrighid period as much as today. Besh Bulak represents a rare example of human inhabitation of the inner Kyzyl Kum at the end of the first millennium BCE and a veritable interaction zone between the societies that encircle the Kyzylkum. Crucially, it is a reminder that no landscape is truly empty, even if an “absence of evidence” leads us to believe otherwise.

Вактурская 1959: 45-46.

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4.5.d. The western Bukhara Oasis.

The western zone of the Bukhara Oasis and southern Kyzylkum was culturally distinct from the Middle Zerafshan valley and Kashkadarya from as early as the beginning of the 2nd millennium BCE. This remains during for the first millennium BCE. This zone is also ecologically distinct from the rest of the Bukhara Oasis in that the entire history of human habitation along the western oasis is characterized by a tension between people and their environment caused by periods of late Holocene aridification. These processes regularly caused the gradual encroachment of the Kyzylkum desert from the west onto the alluvial watershed of westward distributaries of the Zerafshan River and surrounding steppe landscapes. Settlement patterning from the Neolithic (5th-4th millennium BCE), the Bronze Age (3rd millennium BCE), late Iron Age (a period that is somewhat mysterious), and the Hellenistic and post Hellenistic periods (4th century BCE – 1st century CE) regularly adjusted depending on which Zerafshan distributary river was functional over time and how far into the desert.

Life in the western Bukhara Oasis was characterized by long-term adaptation to environmental sensitivity. This issue persists into the modern day, as agriculture is now only possible at the western border of the oasis due to the sustained maintenance and expansion of artificial canals. The steppe landscape that once encircled alluvial zones has now disappeared and one immediately finds themselves in the Kyzylkum upon exiting the oasis to the west.

These unique ecological conditions are not ideal for human habitation, but they are excellent for the preservation of archaeological sites and landscapes. As noted above, the borderlands between the Kyzylkum desert and present oasis are a uniquely preserved
relict landscape within which one can trace the progress of micro-regional environmental collapse by moving across a horizontally stratified landscape. Closest to the oasis are dozens of Medieval manor houses contained within the Late Antique Dīvāri-Kanpirak oasis wall 10km west of the oasis border.\textsuperscript{1050}

The archaeological potential of these anomalous preservation circumstances in the western Bukhara oasis has been recognized for some time.\textsuperscript{1051} However there has not been a systematic characterization of shifts in settlement patterning and the role of microregional ecology in lifeways over the long durée. There are very few characterizations of settlement patterns in the region anyway and these are generally restricted to specific periods, particularly the Hellenistic period. Therefore, the wider impact of the environment on settlement patterning and the emergence of rural life has not been considered. This is an important line of inquiry because out of these considerations we are well positioned to understand the significance of sedentary life that existed in this zone at the end of the 1\textsuperscript{st} millennium BCE.

As noted, life in the western zone is made possible by a network of distributaries of the Zerafshan River that now exist as dried up palaeochannels. These are the Makhandarya in the south and the Vabkentdarya in the north. Particularly important are two distributaries of the Vabkentdarya around which life in late Iron Age, Hellenistic, and post-Hellenistic periods was particularly dependent. These are the Vabkent distributaries are the Khitfar River to the north and the Romitan-rud to the south.\textsuperscript{1052} Beginning near the village of Kharkhur, the Vabkentdarya continues to water fields

\textsuperscript{1050} Мирзаахмедов, Штбтк, Мирзаахмедов 2018.
\textsuperscript{1051} Адылов 2002; Cerasoulo 2009; Мирзаахмедов, Штарк, Кидд, Кривоного, Мирзаахмедов 2016.
\textsuperscript{1052} Suyunov, Aslanov, Rakhmonov 2020: 2956.
within the oasis until it becomes an endorheic river in the north, whereas the Romitan-rud and Khitfar were west flowing rivers and are now completely dried up. We know from stratigraphic cuts into canals served by the Khitfar river that the entire system was prone to spells of drought and flooding in antiquity. The Makhandarya is the southernmost outflow of the Zerafshan, long dried up, which watered cultural zones during the Neolithic and Bronze Age. Settlement became impossible along the Makhandarya already by the end of the 2nd millennium BCE and remains so today. Neolithic and Bronze Age sites also exist along the Romitan-rud and Khitfar, but are either ephemeral, anomalous grave sites, or as yet poorly understood major settlements deeper into the Kyzylkum Desert.

The clear distinction between Neolithic and Bronze Age life along the Makhandarya and 1st millennium BCE sites along the Romitan-rud and Khitfar allows me to trace the development of settlements in a straightforward manner. First, I will briefly describe our evidence for Bronze Age life along the Makhandarya and new evidence from the Romitan-rud before providing a far more detailed presentation of 1st millennium BCE settlements along the other palaeochannels in the same arrangement as previous subchapters. The following section will present our best evidence for rural settlement architecture in the Hellenistic and post-Hellenistic period around the Romitan-rud and Khitfar and groups of sites known as the “Bashtepa group” (Romitan-rud) and the “Kyzylkyr-Setalak group” (Khitfar). Both groups of sites are interlinked and I will consider the archaeological evidence for rural settlements in tandem, presenting the results of my excavations of a post-Hellenistic rural settlement at Bashtepa.

1053 Мухамеджанов 1979: 75.
We owe our knowledge of this region’s deep antiquity to several expeditions under the direction of Ya.G. Gulyamov, who undertook a series of investigations along the Makhandarya and Khitfar from the 1930’s–late 1950’s. From 1934–35 Gulyamov sought to establish a general understanding of the chronology of settlements within this part of the desert. This survey initiated decades of research by this same scholar in an arc that covered the Makhandarya, northern Karakul, and Karshi steppe to the east of Bukhara. Then from 1961–63 Gulyamov addressed questions of hydrological and environmental change through a survey of the zone between the Makhandarya, Karakul, and Amudarya, taking note of Neolithic, Bronze Age (Zamanbaba and Gudzhaili cultural assemblages), then Medieval sites.

Expeditions under Gulyamov’s direction culminated in several published volumes that are geographically and chronologically specialized. The first is a work co-authored with U. Islamov and A. Askarov *Pervobymnaya Kul’tura i Vozniknovenie Oroschaemogo Zemledel’ya v Nizov’yakh Zarafshana* (*Primitive Culture and the Emergence of Irrigated Agriculture in the Lower Zerafshan*, 1966) pertaining to the Neolithic and Bronze Age periods along the Makhandarya. The second book is an edited volume by M.I. Filanovich *Kul’tura Drevnebukharskogo Oazis III-VI vv. n.e.* (*Culture of the Ancient Bukhara Oasis, III-VI c. CE*, 1983) which dealt with Khitfar sites from the Neolithic through Late Antiquity—a book that was mostly written by A.R. Mukhamedzhanov judging by its contents.

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1054 Шишкин 1963: 129.
1055 Гулямов 1965.
The earliest evidence for the human activity in this western zone is an assemblage of Mesolithic flint tools found at Laylakhur, a Medieval tepa 5km south of Varakhsha along the Romitan-rud and within the present bounds of the oasis. Likewise, late Neolithic flint tools from both Kyzylkyr and Varakhsha demonstrate clear connections with late Kelteminar traditions of Khwarezm opposite the Bukhara oasis to the northwest. At its peak the Khitfar irrigated roughly 20–25 thousand hectares of cultivable land. This microregion has a long habitation history. Humans first settled along the Khitfar during the Neolithic (ca. 4th–3rd millennium BCE) at an unnamed site half a kilometer northeast of Kyzylkyr-I, 28km northwest of Romitan. Here Gulyamov documented a flint workshop over an area of 120–150m² dating to the Neolithic period, which included the production of tools such as scrapers, hammers, and knives as well as the manufacture of items of adornment with precious stones. This flint was almost certainly supplied from the Nuratau mountains in the north. It is assumed that populations here were culturally related to Kelteminar traditions of hunting and fishing in regions of the Kyzylkum that were once marshland. At the end of the 2nd millennium BCE the site was used for the burial of an individual with a funerary kit typical of Tazabagyab traditions. Zamanbaba type ceramics dating to the Bronze Age were also found in small quantities at Kyzylkyr-II but there is not the same quality of evidence for

1056 Гулямов, Исамов, Аскаров 1966: 85.
1057 Мухамеджанов 1979: 72.
1058 Касымов 1964.
habitation here as along the Makhandarya.\textsuperscript{1060} Bronze Age ceramics were also found in deep strata at Varakhsha.\textsuperscript{1061}

At present our best evidence for Bronze Age occupation in the oasis comes from sites identified by Gulyamov along the Makhandarya, a river that we now know ceased functioning around the end of the 2\textsuperscript{nd} millennium BCE.\textsuperscript{1062} The most significant Bronze Age site of Western Sogdiana is Zamanbaba along the Makhandarya. The site is situated in the southeastern reaches of the Kyzylkum in a desert pocket between the Karakul and Bukhara Oases. Zamanbaba represents a distinct, isolated Bronze Age cultural group that lived along the Makhandarya, generally dated to the early 2\textsuperscript{nd} millennium BCE, although this remains a poorly researched area of Central Asian archaeology.\textsuperscript{1063} This community was genetically linked to the Tazabag’yab traditions of Chorasmia but is also considered a branch of the Bactria Margiana Archaeological Complex of the Murghab Delta.\textsuperscript{1064} Life was structured around agriculture, sedentary pastoralism and cattle breeding, fishing, and hunting. Cultivars included wheat and barley. At least one entire well-preserved domestic space was excavated, revealing that these people lived in cigar-shaped pit-houses that resembled longhouses. I will return to this architecture in my analysis of rural domestic architecture in this zone.

After the ecological collapse of the Makhandarya in the late 2\textsuperscript{nd} millennium BCE there is very limited evidence for settlements west of Bukhara for most of the Iron Age. As indicated above, we have a very narrow understanding of life in the Bukhara Oasis

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\textsuperscript{1060} Мухамеджанов 1983: 6.
\textsuperscript{1061} Шишкін 1963.
\textsuperscript{1062} Мираахмедов, Штарк, Кидд, Кривоного, Мираахмедов 2016: 39.
\textsuperscript{1063} Гулямов, Исламов, Аскаров 1966: 119; Fouache, Cez, Andrieu-Ponel, Rante 2021: 89.
\textsuperscript{1064} Avanesova 2021.
\end{flushright}
during the late 2nd – early 1st millennium BCE. There is a very ephemeral continuation of activity at Zamanbaba in the form of only a few sherds.\textsuperscript{1065} This is hardly representative of continued habitation. One inhumation of a disarticulated skeleton was found at Kyzylkyr I dates to this period and is the earliest phase of that site. North of the Nuratau Mountains near Lake Aydar a dense assemblage of domestic Tazabagyab pottery and artifacts was excavated by Gulyamov in an area of 120m x 100m, which was interpreted as the remains of a deflated house.\textsuperscript{1066} If so, this would not be a pit-house (like Zamanbaba or contemporary Burguluk homes of Chach) but a light-frame above-ground structure such as a yurt or post and reed framed house. What we know is that from the 13\textsuperscript{th}–8 centuries BCE there is a drastic shift to a mobile lifestyle and an increase in cattle-breeding as the main economic activity and a reduction of agriculture.\textsuperscript{1067} It is by this time that some palaeolakes, now in desertified, became totally dried and inner basin was occupied. There was also a drastic reduction of fishing. The landscape was certainly utilized for its rich pasturage and perhaps even agriculture, if this aspect of Zamanbaba life continued, yet we simply do not know enough at this stage.

Our evidence changes drastically in the Late Achaemenid and especially early Hellenistic period. The Makhandarya had long ceased to function and there was a major intensification of settlements along the Romitan-rud and Khitfar Rivers further north. Likewise, the Romitan-rud was already in retreat as its endorheic terminus slowly retracted towards the modern limits of the oasis.

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\textsuperscript{1065} Гулямов, Исламов, Аскаров 1966: 224.
\textsuperscript{1066} Гулямов, Исламов, Аскаров 1966: 225.
\textsuperscript{1067} Ibid: 228.
As is shown below, settlement structures from the Bashtepa and Kyzylkyr-Setalak group of sites in the Hellenistic and post-Hellenistic periods indicate a type of rural architecture that is more like rural non-elite housing of Bactria and Chorasmia than of the Middle Zerafshan Valley. Yet even within these similarities, we now know from Bashtepa that rural architecture was of a completely different order in this region compared to everywhere else in southern Central Asia. To this we also add settlement structures overall, with evidence for rural cultic architecture that is not reflected in the rest of Sogdiana nor Bactria, but probably is in conversation with traditions of Chorasmia. However, rather than this evidence being entirely divorced from the cultures of Bactria and the rest of Sogdiana, these sites represent a distinct micro-regional variation of wider trends in rural life. It is also the only systematically excavated evidence for non-elite rural housing for the period.

Now considering settlement patterns in this region with more granularity, the Khitfar distributary branched from the Vabkentdarya and terminated in the Kyzylkum northwest of the Bukhara Oasis, formerly supplying water to sites like Khodja Parsan (AMCAA 644) the Kyzylkyr-Setalak group. This group of sites was notable for their remarkable preservation although they are now threatened by modern agricultural practices Kyzylkyr then and now). Khodja Parsan is located approximately 18km northwest of the modern village of Romitan and is situated directly along the A380 highway that links the oasis to the inner Kyzylkum and ultimately Khwarezm. The site is a roughly square fortified mound of up to 60m x 55m but within a wider archaeological zone that is approximately 1.4 hectares. Shishkin’s own survey of the area noted that the site dated to at least as early as the post-Hellenistic period, although the pottery described
suggests the possibility of an earlier Hellenistic date.\textsuperscript{1068} The site was abandoned only in the 19\textsuperscript{th} century CE. Approximately 1km to the northwest there is another site sharing only the Hellenistic and post-Hellenistic dates with Khodja Parsan (AMCAA 883).

West of Khodja Parsan is Kyzylkyr I (AMCAA 1199), Kyzylkyr II (AMCAA 1200, 1201), and Kyzylkyr III (AMCAA 1202), collectively taking their name from Kyzylkyr I which is a local name among villagers because of the reddish color of the mound.\textsuperscript{1069} Kyzylkyr I is a monumental complex that had a domestic and possibly cultic function. Kyzylkyr II is two large pit-houses that are representative of non-elite rural housing within this group. I will describe the architecture of these buildings in more detail below.

Setalak I is follows a cruciform-rosette plan that is known among fortifications among Chirik-Rabat culture settlements, as well as in Chach and Ferghana. Given the later date I will not dwell on this site but it attests to a further development of local west Sogdian cult practice. Mukhamedzhanov interpreted the structure as being dedicated to a solar deity based only upon the plan of the building. We have no clear understanding of the site other than it was religious in nature. We should also rule out the possibility that this temple and the cult center at Kyzylkyr I were Mazdaean-Zoroastrian. Remarkably, both buildings feature inhumation burials under the entrance ramps. At Kyzylkyr I, a biologically female skeleton in clothing decorated with gold stripe patterns was found buried beside a ram’s head and a bronze mirror.\textsuperscript{1070} At Setalak I biologically male skeleton was also found at the foot of the structure’s ramp but without any grave goods.

\textsuperscript{1068} Шишкин 1963: 145.. \textsuperscript{1069} Мухамеджанов 1979: 79. \textsuperscript{1070} Мухамеджанов 1983: 119.
These burials are inconceivable as part of Mazdaean-Zoroastrian cult practice and might be associated with a local tradition that emerged out of later nomadic rule in Sogdiana and Ferghana. However, as noted in my discussion of Sangirtepa, a burial was also found under northern architecture of that cultic site and there seems to be a rare parallel tradition of buying dead under the floors of houses, such as at Tamoshotepa in Bactria.

I now move on to settlements located along the ancient Ramitan-rud palaeochannel. The Ramitan-rud extends for 19km in a westerly direction into the Kyzylkum (Figure 58). It once supplied water as far as the alluvial micro-oasis which constituted the “Bashtepa Group” of sites and thus fertilized this region. It once provided water for between 75–100k hectares of agricultural land.\textsuperscript{1071} An ancient branch once also connected to the Makhandarya but it is not clear when. Remnants of this irrigation system are clearly visible on panchromatic satellite imagery and are even evident on takyr surfaces although these are likely associated with Late Antique and early Medieval agricultural activities.

Explorations of sites along the Ramitan-rud began with the aforementioned expeditions of V.A. Shishkin at the Bashtepa group of sites and then ultimately at Varakhsha. In the 1960’s the fortifications of Ramitan and Ramishtepa were investigated by Suleimanov and Urakov.\textsuperscript{1072} The goal of this expedition was to develop a reliable stratigraphic column for the western part of the modern Bukhara Oasis. Adylov. Despite the work of Shishkin, Suleimanov, Urakov, and Adylov, the need for a reliable stratigraphic column remains an issue for the western parts of the Bukhara Oasis.

\textsuperscript{1071} Мухамеджанов 1979: 72.
\textsuperscript{1072} Сулейманов и Ураков. 1977; Ураков. 1975; 1978.
recognition of this need was integrated as a core objective of the recent work of our own expedition to this same region, discussed below.

Bukhara and Paikend were the main control points for rulers in the region from as early as the late 4th century BCE. Yet these were not the only places where there was significant investment. Excavations at Romitan, Ramish, and Varakhsha have confirmed the presence of fortifications west of Bukhara and within the modern oasis.\textsuperscript{1073} V.I. Shishkin seemed to suggest the same possibility for Kala Mallabek (AMCAA 1198), 1.5km west of the modern village of Dalmun.\textsuperscript{1074} At any rate, sites and fields between Varakhsha and Kala Mallabek and in lowlands around Lailakhur produce pottery dating from at least as early as the 1st century CE.\textsuperscript{1075}

A substantial fortified settlement likely existed at Ramish (AMCAA 647) during the Hellenistic period. This is a 10ha site that was explored by B. Urakov under the direction of R.Kh. Suleimanov in 1973 and 1975–76. It is one of the few sites likely to have preserved its ancient name, since it is named in Narshaki where it features heavily in the political history of pre-Islamic Bukhara and is noted as once being a local Zoroastrian religious center.\textsuperscript{1076} The evidence from this site is mostly ceramics, which was used to establish an early chronology for dating western Bukhara Oasis, Ramish I-VII.\textsuperscript{1077}

Ramitan (AMCAA 641) is another location with substantive habitation by the end of the first millennium BCE. The modern town of the same name has moved roughly

\textsuperscript{1073} We should note that the extent of the modern oasis is artificial. When these sites were investigated from the 1930’s-1950’s they were in the Kyzylkum desert, i.e. before Soviet land reclamation in the 1970’s and 1980’s.
\textsuperscript{1074} Шишкин 1963: 129.
\textsuperscript{1075} Шишкин 1963: 129-133.
\textsuperscript{1076} Narshaki pg.?.
8.5km east of the ancient site. Ancient Ramitan is now only extant as four mounds of varying sizes, bisected by a heavily trafficked road and the Khozha Ali Rometanii Mosque. The largest mound is in the northwest, measuring 325m x 300m, and preserved to a height of no less than 12–15m. The second largest mound is at the northeast and measures 175m x 175m, followed by a southwestern mound of 225m x 150m, and finally a small mound partly destroyed by a modern canal is oblong and roughly 80m x 85m. However, Shishkin noted the presence of what appears to be Hellenistic period pottery in the wider vicinity around the site, especially in the village of Atfar to the south.\(^{1078}\)

Varakhsha is one of the most significant sites in the Bukhara oasis alongside Bukhara and Paikend, especially for understanding political control and power dynamics in western Sogdiana (AMCAA 646, 884, 885, 886). Narshaki makes it clear that Varakhsha was the summer residence of the Bukharkhudas from as early as the 5\(^{th}\) century CE and was the stage for significant political events during the Islamic conquest. Varakhsha’s famous wall paintings of the inner reception rooms are a testament to both the power of the region’s new Islamic rulers and the efforts of local rulers to subvert religious and political authority through artistic modes of symbolic resistance.

Archaeological investigations have confirmed the importance of Varakhsha. The site is roughly triangular in shape and features a raised citadel in its southeast corner and a large shakhristan encircled by a fortification wall. The citadel is flanked at the west by a large palace built only in Late Antiquity and significantly expanded and renovated after the Islamic conquest. Much of what we know is thanks to the intensive archaeological investigations of V.I. Shishkin from 1938–54 – the development of the site’s citadel,

\(^{1078}\) Шишкин 1963: 137.
palace, and shakhristan. The main fortification walls visible today only date to the 6th–8th centuries CE. Varakhsha’s citadel was built in the 5th century CE on a massive pakhsa stylobate that towers some 20m over the landscape (AMCAA 885).\textsuperscript{1079} If there is an earlier citadel it has yet to be found, with the likeliest location being somewhere to the northwest. It is in the northwest that the corner of a late Hellenistic fortification wall was exposed by S.K. Kabanov and remains visible to this day. We will turn to this wall in a moment. Under the stylobate of the 5th century CE citadel only pottery was found dating from the 1st century BCE – 1st century CE and apparently laying on virgin soil. Thus, we can speculate that at least in the area of the palace and citadel there was no earlier, Hellenistic, use which perhaps would have fallen outside of the area of the earlier fortification.

Approximately one hundred meters north of the citadel is a low mound in the center of the entire shakhristan. The mound was explored by A.R. Mukhamedzhanov, Dzh. Mirzhakmedov, and Sh. Adylov from 1977–1985, who laid a large 20m x 4m trench across this central mound (AMCAA 884).\textsuperscript{1080} While the mound is only a fraction in size compared to the wider site, it is still substantial at roughly 50m x 50m and preserved to a height of 12m above the oasis outside of Varakhsha. Like the citadel, this area produced only ephemeral evidence for land use in the vicinity as early as the 1st century BCE.

As noted, a Hellenistic fortification found in the northwest corner of Varakhsha dates to the 2nd century BCE and remained until the 1st–2nd century CE (AMCAA 886).\textsuperscript{1081} Excavations of this area were undertaken by S.K. Kabanov from 1953–54 as

\textsuperscript{1079} Адылов 1990: 28-29.
\textsuperscript{1080} Адылов 1990.
\textsuperscript{1081} Кабанов 1959: 123-140; 153.
part of a wider exploration of a 10th–11th century residential area that overlays the Hellenistic fortification and obscures its true dimensions. Only a round tower of the Hellenistic fortification wall has been excavated. A detailed analysis of this Hellenistic structure is not necessary for the present topic.

It is worth mentioning a Greco-Bactrian coin hoard found in Takhmactepa in the vicinity of Varakhsha. Since this feature is only a hoard unassociated with a settlement (or in fact any archaeologically verified context) it is excluded from the AMCAA. The hoard was found in 1983 by teachers from a local school during the demolition of Takhmachtpepa for the construction of a new canal. The hoard was said to have come from the digging of the canal ditch and was handed over only in a piecemeal fashion to the Bukhara State Art and Architectural Museum. The hoard contains 58 known specimens, featuring five tetradrachms of Diodotos, 43 of Euthydemus, two commemorative coins of Agathocles to Euthydemus, coins of Antimachus, and one of Heliocles. As A. Naymark has recently noted, the presence of this hoard in Sogdiana was likely evidence that the hoard was acquired by someone engaged in interregional trade with Bactria. The hoard is very close in composition to hoards found at Ai Khanou, plus silver tetradrachms were more suitable as interregional currency rather than local circulation. What is more, the presence of commemorative coins to Agathocles place this hoard after the during or after the 1st century BCE. That is to say, the hoard cannot possibly be associated with Bactrian Greek rule over the Bukhara Oasis.

1082 Stark, Kidd, Mirzhaakhmedov, Silvia, Mirzhaakhmedov, Evers, Naymark 2018: 255.
1083 Lo Muzio 2009: 44.
1084 Stark, Kidd, Mirzhaakhmedov, Silvia, Mirzhaakhmedov, Evers, Naymark 2018: 255.
Approximately 6–7km west of the modern oasis is the remains of a significant long wall system that enveloped the entire oasis. The wall, taking the name Dīvāri-Kampirak after the name of Kampirak tepa within the vicinity, dates as early as the late 4th century CE. However, this wall has substantial significance for our ability to recognize sites dating from the first millennium BCE as it is clear that the wall was built around the inhabited zone contemporary to its construction and excluded earlier, Hellenistic and post-Hellenistic sites that had since been abandoned. Only a single area near Tali-Surkh (AMCAA 667) and Chek-tepa (AMCAA 668) have evidence for a later occupation. Thus, the wall forms a real material cultural barrier preserving the ancient landscape to its west from later development from Late Antiquity into the present day. This cultural barrier has been recognized by many interested researchers, notably V.I. Shishkin, Zhukov, and Adylov, which in turn allowed for G.A. Koshelenko to later identify the potential of this relict oasis as a unique situation for our understanding of rural settlement strategies in Sogdiana from the 4th–1st century BCE. Over twenty tepas are visible in the landscape, referred to in archaeological literature as the “Bashtepa group” of sites. In reality nearly the entire zone is a single archaeological site, with surface ceramics scattered nearly everywhere, small tepas, and ancient field systems that are visible on the surface.

Shishkin remarked on the lack of modern habitation in the region with the exception of the occasional gazelle hunter. When Shishkin first traveled beyond the boundary of the Bukhara Oasis into the Kyzylkum he encountered a landscape filled with

1085 Шишкин 1963: 143.
1086 Кошленко 1985: 278.
1087 Шишкин 1963.
large barchan dunes, takyrs, and the occasional tamarisk bush. Much has changed here and in the broader inner Kyzylkum since the late 1930’s. The region is now devoid of such large sand dunes that only recently buried the main archaeological mounds and is an extremely flat desert landscape still covered with tamarisk, as well as with saksaul bushes that were deliberately planted in the region to control the encroachment of sand. Gazelle are no longer found in the region, now replaced by seasonal shepherds who live in tiny one room mudbrick huts or metal caravans. These shepherds have organized themselves into dispersed grazing lands in a network of stations that are at regular 5–8km intervals apart from each other. Many access water through recently dug wells that reach the water table roughly 50m below the desert surface. This water is primarily fed into troughs to hydrate animals, who are otherwise able to stay hydrated through chewing on saksaul plants that are great for retaining moisture before sunrise. These shepherds herd cattle, goats, and sheep, following a tradition that would have persisted here for thousands of years.

Within this ancient micro-zone are areas where there is evidence for even more limited occupation. These sites are Bashtepa (AMCAA 650), Urtatepa (AMCAA 664), “No name tepa 1” (AMCAA 665), and Ayak Tepa 2 (AMCAA 660). Bashtepa is the westernmost tepa and is the namesake of the Bashtepa group and is also the most substantial at a size of roughly 60m x 60m and 6–7m in height. However, each of these sites were certainly interactive with each other in antiquity and thus it is incorrect to consider each mound as a separate entity. For example, Urta Tepa is close enough to Bashtepa (300m) to have likely provided some sort of auxiliary function for the main site or as a small farmstead. Ayak Tepa 2 is only slightly smaller than Bashtepa at 45m x 40m.
and 5–6m in height (Figure 67). It differs slightly from Bashtepa in that two low tepas are adjacent to the east at a distance of 300m, both unnamed (AMCAA 662 and 663), only one of which was observed by Shishkin (663). In reality there were probably other such adjacent buildings surrounding the larger sites that have been lost in time. For example, the entire area west of Bashtepa (AMCAA 879) is littered with surface pottery dating from the Hellenistic and post-Hellenistic periods with a particularly heavy concentration to the northwest. Yet some areas of dense ceramic scatter that seem to be low level mounds can misdirect us. Only 100m to the north of Bashtepa is a very small hill that is covered with dense pottery on the surface. I attempted to excavate this mound in 2021 laying a 5m x 5m trench in the northwest corner. After two hours of clearing the area, not a single sherd was found under the surface, which was otherwise sterile sand and layers of ancient takyr surfaces that had been buried. If the surface pottery here was the remains of an ancient habitation, then that habitation has long deflated.

All sites in the group are along ancient endorheic arms of the Romitan-rud. It is clear to us that the entire region was covered by agricultural fields in antiquity. This is largely on account of the presence of relict field systems visible on the surface immediately to the northeast of Bashtepa but also around Ayak Tepa 2 and others. Mukhamedjanov suggests that the structure of irrigation networks of the Bashtepa, Kyzylkyr, and Varakhsha groups of sites most reflect patterns observed in ancient Khwarezm, in that canals tended to be associated with at least one fortified site.¹⁰⁸⁹

¹⁰⁸⁸ Шишкин 1963: 140.
¹⁰⁸⁹ Мухамеджанов 1979: 74.
However it is not clear yet what form artificial irrigation took in the southern Kyzylkum, nor especially who controlled them (if anyone).

Beginning 4.5km to the southwest of Bashtepa is a massive zone with relict field systems clearly visible in panchromatic satellite imagery (N 39.876813°, E 63.879777°). While this area falls far to the west of the Dīvāri-Kampirak we should not rule out the possibility that these fields are later in date. There are substantial canals present in the area of the Medieval wall, which are rare within the Bashtepa group and seemingly concentrated to far south of the mound. In earlier Bashtepa reports we noted the unlikelihood that canals were installed from the Romitan-rud in the Hellenistic and post-Hellenistic period. However, I do not think this should be entirely dismissed for several reasons. First, canals are visible from surface inspection of the area and may still date to an earlier period. Second, we now know that Bashtepa had connections with Afrasiab in terms of ceramics, but even more so with Chorasmia. These are both regions that had quite substantive knowledge about advanced hydrological infrastructure by the end of the Hellenistic period. It is unlikely that these ideas were not at least known in western Sogdiana and perhaps implemented to some degree the local ecology gradually started to shift towards a more arid environment in the early the first millennium CE.

V.I. Shishkin spent some time in the area under discussion, noting that the pottery in this area largely corresponded with that around the Bashtepa group.\textsuperscript{1090} Within the eastern part of this agricultural zone, Shishkin documented the presence of several low mounds when revisiting the area in the 1950’s that were not seen in his 1937–38 explorations. These mounds (AMCAA 880) should be located around 39.889222°,

\textsuperscript{1090} Шишкин 1963: 142-43.
63.917353° which is to the southwest of the major site at Choklytepa-2. On one mound, which Shishkin refers to as “No Name 2,” (AMCAA 88) he documented a single pit-house structure that he interpreted as modern but otherwise filled with the same pottery found at Bashtepa and Ayak Tepa 1 and 2 as well as branches of kamysh.\(^{1091}\) The pit-house reinforcement walls were built of mudbrick, which as we will see is in line with techniques of the late first millennium BCE. Shishkin also noted an above-ground structure with pottery dating to the first centuries CE roughly 1km to the west of the pit-house (AMCAA 881).\(^{1092}\) This should be present at 39.889175°, 63.905754° although we did not encounter it again. This building would have almost certainly served as a farmhouse in antiquity, an identification supported by the presence of stone querns found on the premises. Roughly 800m to the east of No Name 2 (AMCAA 880) is another group of low mounds with surface pottery dating to the post-Hellenistic period (AMCAA 882).\(^{1093}\) It seems from panchromatic imagery that these mounds are located directly along another arm of the Romitan-rud or even a canal (Figure 58, inset). The remains of small buildings are also evident from satellite imagery and are possibly associated with field systems oriented along an east-west axis.

The eponymous site of the Bashtepa group, Bashtepa was founded as either a watchtower or a small fortification with the purpose of overseeing agricultural activities within the oasis, monitoring traffic between Merv and the Bukhara Oasis and between the Bukhara Oasis and Chorasmia. It would have also served as a minor defense against nomadic incursions, although it is difficult to see how effective it would have been given

\(^{1091}\) Шишкин 1963: 143.
\(^{1092}\) Ibid 143.
\(^{1093}\) Ibid 144.
its small size. There are two substantive occupation phases at Bashtepa. The first is a period of rapid expansion of the fortification system to the site’s maximum dimensions of 60m x 60m with further periodic construction events from the 3rd century – early 2nd century BCE. The second substantive phase, for which I was responsible, dates from the late 2nd century BCE – 1st century CE, when the mound is used by new occupations who engaged in agriculture, pastoralism, and lived in a complicated structure of agglomerated pit-houses. I will return to my excavations of this settlement in the following section.

In previous publications we proposed an early 3rd century BCE foundation for Bashtepa’s fortification system based on three criteria: a radiocarbon date from within the wall, the square format of this wall’s construction, and an analysis of associated ceramic assemblages. Based on our most recent season (2021) a late 4th century BCE date for the fortifications here seems most likely. Approximately six meters below the mound surface we exposed an inner fortification wall with mudbrick sizes that correspond with architectural practice of the late Achaemenid period of southern Central Asia. A prevalence of Yaz III period jars mixed with very early Hellenistic types is indicative of a transitional period for the site although even a slightly earlier, late Achaemenid date cannot be ruled out for layers deeper than what we exposed (i.e. the foundation trench of the late 4th century wall). This early date seems to correspond with observations made in the wider agricultural oasis where Yaz III pottery was found dispersed in the wider area of the Bashtepa group of sites, albeit in small quantities, but nonetheless seems to

1094 Stark, Kidd, Mirzaakhmedov, Silvia, Mirzaakhmedov, Evers, Naymark 2018.
1095 The following results have not yet been published.
1096 Мирзаахмедов, Штарк, Кидд, Кривоногов, и Мирзаахмедов 2016.
validate the idea that the structure was founded to perform some sort of monitoring task.\textsuperscript{1097}

Now considering later settlement patterns in this same zone, in the first centuries CE new sites also emerged closer to the limits of the modern oasis than the Bashtepa Group. At Burantepa (AMCAA 878) between Bashtepa and Kyzylkyr V.I. Shishkin reported evidence for a substantial pottery production center 300–400m in the lowland off the mound dating to the post-Hellenistic period.\textsuperscript{1098} Burantepa itself is a square mound of roughly 100m x 100m. However, the majority of the pottery here is Medieval so it is unclear what status this site had in earlier periods, if any.

The processes that led to the gradual abandonment of settlements and agricultural viability along the Romitan-rud at the end of the 1\textsuperscript{st} millennium BCE. remains an open question. Gradual aridification seems to be the main culprit. Francfort and Gardin have argued that environmental determinism is not an appropriate framework for describing change in the mid-2\textsuperscript{nd} millennium BCE in Margiana and Bactria. This is despite a gradual process of Holocene aridification already underway by that time. This might be the case then, but we are faced with a problem by excluding the role of climate change in human-environment interactions at the end of the 1\textsuperscript{st} millennium BCE with the gradual abandonment of parts of the western Bukhara Oasis. A more reasonable position is that climate change and anthropogenic responses (or failures to respond) were both responsible for the declining ecological conditions here.

\textsuperscript{1097} We can also consider a similar phenomenon in the Dasht-I Qala Plain. (Fortification in the north overlooking the plain of Shortughai).
\textsuperscript{1098} Шишкин 1963: 134.
We have to consider what precisely we mean when invoking the term “environmental determinism” and whether or not one means to imply a complete lack of human agency. We can explore climate change as a sole factor, which would be a natural environmental deterministic event. Yet we can also talk about anthropogenic environmental determinism in terms of overexploitation within the Bukhara Oasis—a factor that is currently unexplored by scholarship on the inner region but seems unlikely when compared to such processes that occurred in ancient Chorasmia. In this second instance humans are the motivators of environmental collapse of the natural environment, and harm themselves in the process. Yet ecologically sensitive zones like Bukhara and Chorasmia require environmental curation to sustain life. For example, we know from later periods that canals need to be kept clean to prevent sedimentation that affects the water supply. Similarly, the creation of too many irrigation networks will impact the hydrology of already cultivable zones and cause tension between farmers.

Nonetheless, the result is the same in that the relationship between people and their environment is not as simple as cause and effect. The gradual abandonment of fields in Western Bukhara (and particularly the lack of maintenance of canals and rivers) would allow for natural processes of aridification to finally take hold if such processes were being delayed by human intervention. While this is not environmental determinism, it is anthropogenic ecological determinism in that a decrease of labor investment in maintaining the landscape for large-scale agricultural subsistence (and thus higher populations) makes it difficult to reclaim the landscape for such production in later generations. We can think in terms of the Soviet failure to convert parts of the Bukhara Oasis in the 20th century, whereas other parts, such as around Varaksha and Romitan,
remain cultivated because they are regularly maintained and intensely exploited for most months of the year.

To drive this point further, we can consider the agricultural landscape of this same region during the Medieval period, which extended beyond the Dīvāri-Kampirak wall only sporadically after the 4th century CE and in very limited locations such as at Tali Surkh and further west around Ak-Rabat 2. The lack of agricultural extension beyond the walls was almost certainly a decision made to balance several known issues: the physical security, land use rights with nomadic peoples utilizing the Kyzyl Kum for pastoralism, the preservation of internal agricultural viability through the control of water from the Zerafshan. Yet we can add to this the sheer labor investment required to restore ancient Hellenistic field networks that had been overtaken by the desert. The effort would have been to essentially start from scratch, whereas had these efforts been undertaken, say, only in the 3rd century CE, the labor effort may have been easier. At any rate, even the Medieval strategies failed to withstand the encroachment of the Kyzyl Kum as the oasis retreated to its early 20th century size, requiring the Herculanean efforts of the Soviet Union to reclaim even a small bit of land for today’s agricultural regime. This hydrological system will fail again the moment there is another crisis of abandonment in the western Romitan district.

4.5.e. Rural domestic architecture in the western region of the Bukhara Oasis.

Sedentary populations engaged in agriculture and local pastoralism in the western Bukhara Oasis since the early 2nd millennium BCE. On account of rare preservation conditions, we have an excellent window into Bronze Age life in this area thanks to the explorations of Ya.G. Gulyamov and his colleagues from 1950-53 and again in 1961–63.
along the Makhandarya.\textsuperscript{1099} The discovery and excavations of a Bronze Age settlement and entire graveyard at Zamanbaba have established that this region was a unique cultural enclave with genetic links to sedentary communities of the Murghab Delta as much as to nomadic tribes in the north. However, the inhabitants of Zamanbaba were also entirely sedentary and structured their life around agricultural production, hunting, fishing, and animal-based pastoralism along the Makhandarya.\textsuperscript{1100} Most important for this section is their domestic architecture, which might have set forth a dwelling practice that persisted into much later periods.

The Zamanbaba settlement was a carefully chosen site situated between the river to the south and a naturally elevated area of the northwest that sheltered the site from wind and sand.\textsuperscript{1101} As noted previously, inhabitants lived in long, cigar-shaped pit-houses and small above-ground light-framed huts. The entire settlement was surrounded by an earth and gravel fence of up to 3.5m in height, which was likely to mitigate wind and keep in animals and children rather than a defensive purpose.\textsuperscript{1102}

The main house of Zamanbaba was Dwelling 1, a cigar-shaped structure of staggering size at 23.5m x 9m dug into the earth to a depth of 0.8m–1m. The building is situated along a northeast-southwest axis with a total residential footprint of 170m\textsuperscript{2} (Figure 59).\textsuperscript{1103} A slight lip surrounded the entire building to withstand flooding. The interior walls of the pit were earthen without any clear reinforcement but they were

\textsuperscript{1099} Гулямов 1956; Гулямов, Исамов, и Аскаров 1966.  
\textsuperscript{1100} Гулямов, Исамов, и Аскаров 1966: 171.  
\textsuperscript{1101} Ibid: 129-130.  
\textsuperscript{1102} Ibid: 134, 138.  
\textsuperscript{1103} Ibid: 130.
probably plastered.\textsuperscript{1104} The superstructure of the house was a light frame post and reed gabled roof. Post holes dug at an oblique angle were found around the circumference of the house; postholes within the house were found at regular intervals and were vertical. The building was entered by way of a slope that gradually descended towards the northeast for 20m. The entrance itself was 50cm wide. Outside of the entrance was a large, round communal hearth 52cm in diameter and 22cm deep.\textsuperscript{1105}

Unlike later, smaller pit-houses, four hearths in Dwelling 1 were located around the walls of the building interior.\textsuperscript{1106} Three were located along the southeastern wall and one in the northern area of the northwestern wall. This implies that there were periodic ventilation shafts around the roof-gable and it is remarkable that the whole structure was fireproofed enough to not face the effects of rising embers. Alongside these hearths, economic storage pits also encircled the structure as well as the entire exterior surface around the longhouse.

The Zamanbaba pit-house was likely a communal space for the village or the dwelling of a large family. It is most likely that there was some communal structure centered around the long pit-house. It is unclear whether the pit-house itself was a private residence or a communal space for cooking, socializing, and planning. The presence of such a large hearth outside of the building at the entrance implies at least some communal feasting function.\textsuperscript{1107} Looking outward, there is evidence of long-distance trade in stones. The former is likely because pit-houses were not the only mode of domestic architecture

\textsuperscript{1104} This much is not indicated in the report.
\textsuperscript{1105} Ibid: 139.
\textsuperscript{1106} Ibid: 132-133.
\textsuperscript{1107} Ibid: 131.
at the site. Gulyamov excavated two surface level areas that indicated the presence of huts (shalashy) or yurts. These areas were characterized by oval-shaped trampled earthen areas with especially dense scatters of pottery, domestic artifacts, and agricultural implements such as stone sickles and hoes, flint blades, bronze blades, and mortars and pestles. One hut was 7.8m x 6m in plan, and another was larger and rounder with an area of 160m². A massive hearth was found at the center of the latter as well as numerous postholes.

While the excavators repeatedly refer to the site as a locus of cattle-breeding, they simultaneously note that just as many goats and rams were confirmed as cattle and that people at Zamanbaba were not as dependent on cattle as northern Andronovo populations. Unidentifiable animal bones were openly assumed to be the remains of cattle. From the assemblage of farm implements including sickles and hoes the agricultural basis of the economy. However, flint arrowheads and bone awls were also found in a communal pit-house also illustrate the importance of hunting. Zamanbaba was also a place where ceramics and textiles were locally manufactured. Regarding textiles, loom weights are reported throughout the site in small quantities. Two open kilns surrounded by ceramic wasters were documented external to any of the structures, one of which being a pear-shaped kiln measuring only 90cm x 60cm. The chamber of the hearth supported a clay basin 30cm in diameter and 19cm in height.

Flint was almost certainly acquired from the Nuratau, over 100km northeast of the settlement, where it is otherwise known to have been processed and distributed from the

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1108 Ibid: 134-137.
1109 Ibid: 171-172.
1110 Ibid: 133.
Neolithic through Bronze Age.\(^{1111}\) Beads made of semi-precious stones were also found such as turquoise, agate, limestone, carnelian, lapis lazuli, serpentine, jasper, and marble.\(^{1112}\) Turquoise almost certainly came from the mountains of the inner Kyzylkum. Marble was likely acquired in eastern Kashkadarya, the only known marble source in southern Central Asia as noted above. Lapis lazuli, of course, comes from Badakhshan. Given that these are only rare finds at Zamanbaba, these beads were probably acquired through interactions with better connected craftsmen.

The best evidence for Hellenistic and post-Hellenistic rural life in western Sogdiana is found within the Kyzylkur-Setalak complex of sites along the Khitfar palaeochannel and the Bashtepa group of sites along the ancient Romitan-rud channel (Figure 58). Both microregions are culturally entwined with each other but also share in sedentary agricultural traditions that were already known to the area in the Bronze Age at Zamanbaba along the ancient Makhandarya, notwithstanding a long gap of Iron Age pastoralism. While both regions have long succumbed to aridification, in antiquity both were fertile alluvial plains along the rivers and steppe outside of the watershed. This unique ecological situation meant that both agriculture and pastoralism could be practiced in tandem without a necessity for mobility or transhumance.\(^{1113}\) This is even reflected today among pastoralists currently living on the outskirts of the Bukhara Oasis. While these shepherds spend several months each year living in simple mudbrick huts or metal wagons, they regularly travel to their permanent homes closer to Bukhara to visit friends and families, trade animals at the market, and gather supplies. What is more, shepherds

\(^{1111}\) Ibid: 153.
\(^{1112}\) Ibid: 153.
\(^{1113}\) Kidd and Stark 2019: 177-78.
living in these conditions can be quite wealthy within the standards of the local economy—something not readily apparent from the basic, subsistence level living conditions they undergo during grazing months. This is hardly a transhumant lifestyle as is practiced elsewhere. I suspect a similar situation defined the sedentary agro-pastoralism of communities at the end of the first millennium BCE.

There is a long gap in our knowledge of life along the rivers west of Bukhara after life at Zamanbaba became untenable. It is likely that settled populations moved inward towards the oasis simultaneously to a period of decline. Their settlements are perhaps still buried under the dense loess of the Bukhara Oasis. It is also likely that the end of the 2nd millennium BCE was a period in which there was a shift to a more pastoral based economy in steppe zones, perhaps by nomads. Nonetheless, when evidence for settlements reappears at the end of the 4th c BCE they share some characteristics with the economy of Zamanbaba. Within this context I now move to a discussion of sites in the area of that period.

As noted above Bashtepa is a fortified site that emerged at the end of the 4th century BCE to oversee major trade routes between Chorasmia, Sogdiana, and Margiana as much as it would have had a monitoring function over the rural hinterland. While it is most likely that Bashtepa was incorporated into Seleucid efforts to secure frontiers and trade routes,\textsuperscript{1114} the circumstances around the site’s foundation are murkier. It might be part of efforts to carve out a fortified enclave in western Sogdiana by eastern Sogdian indigenous migrants fleeing systematic violence against communities by Alexander the

\textsuperscript{1114} Stark \textit{In press}. 
Great.\textsuperscript{1115} Whatever the circumstances, these newcomers encountered a landscape that was already cultivated in the late Achaemenid period, if this is indeed what scatters of Yaz III pottery found by palaeochannels within the western Bukhara Oasis indicate.\textsuperscript{1116}

There is a wider intensification of sedentary life in the entire western area of the Bukhara Oasis in the early Hellenistic period, a fact that is well established by 80 years of exploratory work in the region.\textsuperscript{1117} Noting its archaeological potential, exploration at Kyzylkyr I, II, and III began in 1953 under the direction of Ya.G. Gulyamov who focused limited excavations at the center of the mound and exposed evidence for a substantial building complex. Excavations at Kyzylkyr were taken over by Nil’sen in 1955, after which a series of articles appeared dedicated to fieldwork there throughout the 1950’s and 1960’s. These reports were reconsidered in a final publication of the site by Mukhamedzhanov who gave much later dates for the site than Nil’sen.\textsuperscript{1118} However, Mukhamedzhanov’s basis for later dates is not entirely clear from his analysis and seems to compress the phasing of the site into the 3\textsuperscript{rd}–5\textsuperscript{th} century CE. This would make all Kyzylkyr sites contemporary with Setalak I and II, neatly forming a single community along the Khitfar.

Mukhamedzhanov described the Kyzylkyr-Setalak group as a settlement area comprised of different types of sites.\textsuperscript{1119} The most common are low mounds or surface features such as the barely recognizable contours of dwellings, open hearths, and in some

\begin{footnotesize}
\begin{enumerate}
\item Omel’chenko 2019.
\item Мираахмедов, Штарк, Кидд, Кривоного, Мирзаахмедов 2016.
\item Шишкин 1963; Мухамеджанов 1975; Адылов 1987а; 1995; Мухамеджанов и Мирзаахмедов 1990; Cerasoulo 2009; Мираахмедов, Штарк, Кидд, Кривоного, Мирзаахмедов 2016.
\item Мухамеджанов 1983.
\item Мухамеджанов 1983: 6-7; 1979: 77.
\end{enumerate}
\end{footnotesize}
cases manor houses—all of which were covered with ceramics, architectural fragments, and other small finds as one would expect. The second type of site are small, fortified tepas that are roughly 50m–80m x 50m–80m and range in height from 3–10m depending on preservation.

Kyzylkyr I is a monumental building that likely had a dual cultic and residential function. There are three phases of development at the site where new rooms were gradually added to earlier structures. Excavations at Kyzylkyr-I were opened by Gulyamov in 1953 at the center of the mound. At that time the southern corridor of what would eventually be identified as a large, monumental building was exposed.

Gulyamov’s results were not published but instead reported by V.A. Nil’sen in 1959, who in 1955 began his own excavations at Kyzylkyr as part of the Makhadarya Archaeological Expedition alongside the Bukhara Museum.1120 Nil’sen began his excavation expanding that of Gulyamov to expose the extent of the monumental building and clarify its dating, which Gulyamov had impossibly dated to the 7th–6th century BCE.1121 Nil’sen’s excavations revealed not only a near complete plan of this structure but also that of a large annex to the south and east of a later period. This allowed Nil’sen to make more significant remarks about the stratigraphy of the Kyzylkyr-I mound and its significance for the development of life in the Bukhara Oasis. Based on ceramic evidence, Nil’sen dates this entire complex from the 1st century BCE – 1st century CE.1122

The walls of this complex were preserved up to 3m high but unfortunately without a clear indication of floor levels. These walls were also quite thick, with outer

1120 Нильсен 1959.
1121 Шишкин 1955: 102.
1122 Нильсен 1959: 77-78.
walls approximately 2.4m thick and inner walls only slightly slimmer (2.2m) and made of mudbricks measuring 42cm x 42cm x 10cm. Nil’sen observed that the paste of the mudbricks has a greenish and rust colored hew, indicating that the local source of clay was probably a marshy area. Its general plan features a central, rectangular room that is ambulated by four non-communicating corridors. Each corridor measures 2.75m x 13.7m and such regularity confirms deliberate planning. The entire structure was entered from a single entryway in the form of a gatehouse room attached to the southwest wall but itself entered from an east-facing external corridor. Internal access to each corridor radiates from the southwest entryway or “lobby”. The western corridor is accessed directly from the lobby. The southern corridor is itself part of the lobby. At the end of the southern corridor a doorway gave access to the easternmost corridor. During the life of the building, a door in the eastern wall of the eastern corridor led into another part of the building (or a point of egress). Finally, the northern corridor was accessed by way of another door from the southern corridor, passing through a smaller interior hallway, and concluding at the northern corridor. This northern corridor is the most private room of the structure. The interior hallway was also the only access point leading to the central room. The central room is clearly the heart of the building where its main functions were carried out, because at its earliest stage a sufà (couch) lined the eastern wall. The roof of the building was constructed using beams laid over the upper walls with a plastered kamysh finish.

While finds from the early monumental building of Kyzylkyr-I were insufficient for precise dating there are strong indications that the structure dates to the late 2nd

\[1123\] Нильсен 1959: 65.
century BCE. This date was proposed by Nil’sen in correcting Gulyamov’s assertion that the building was a mid-Iron Age structure.1124 Nil’sen’s dating relied upon the presence of a few fine, wheel made ceramics with red-fabric and engobe found within the structure as well as a local imitation of Euthydemus of Bactria in circulation in Sogdiana during the 2nd century BCE. Finally, the building is stratigraphically earlier than the southern complex that is more securely dated to somewhere between the 1st century BCE – 1st century CE. We can add that the construction technique and brickwork also lend itself to a Hellenistic date for the building. As mentioned, the building was built of a durable mix of pakhsa and mudbricks with a size of 42cm x 42cm x 10cm. As noted earlier, square mudbricks of this size only appear in Sogdiana during the early 3rd century BCE. The technique of wall construction also suggests a Hellenistic date when compared to our recent excavations of the central “platform” at Bashtepa. Pakhsa and mudbricks alternate in the walls of the Kyzylkyr-I building with at least 50cm layers of pakhsa, a common stabilizing technique in early Central Asian architecture.1125

At some point at the end of the 2nd or early 1st century BCE the monumental structure was destroyed by fire and left in ruins. It was only during the 1st century BCE that the building was resuscitated and reoccupied, evidently as a large domestic structure or animal keep. The southern corridor of this building was transformed into a keep for animals, as indicated by the installation of a trough and sealing of the doorway between the southern and eastern corridors.

1124 Нильсен 1959: 77-78.
1125 Лебедева и Ширинов. 1997.
However, Nil’sen found a second substantial complex dating at least to the first century BCE south of the monumental structure. At that time, at least three new buildings were added and each with different functions. The first was a house where six excavated rooms were interpreted as domestic, based on finds of burnt cooking wares and large khums, one of which was buried into the earth. A second structure, also with six excavated rooms, was found immediately to the south of the house and separated by a narrow corridor.

The third building was located to the west of the second (and south of the monumental building). It is the only structure to share a party wall with the monumental building—particularly with the gate house. Here eight rooms were exposed, only five of which were excavated completely. Like the monumental complex, this building features a central room surrounded by corridors. However, the corridors in this building are far more irregular and poorly made, and are otherwise not with the standardized sizes observed in the monumental building. The central room is accessed directly from the corridor room to its west and thus somewhat less private than that of the earlier structure. Internally, the central room is quite interesting in that all walls were equipped with sufa benches encircling a central hearth. A bronze brazier ornamented with the stylized heads of rams was found left in the hearth, an iconographic feature regularly found in the form of figurines and on pottery within the complex. This led Nil’sen to speculate on a “totemistic” cult here. Rather, we can simply accept a cultic function for the building without referring to such dated language. However, we should generally be cautious. This room could just be a central living space.

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1126 Нильсен 1959: 74..
The only architectural predecessor for this type of complex is the first phase monumental building at the same site. The complex follows no known pattern outside of this site and there reflects a completely local form of cult architecture and spatial distribution. Otherwise, the irregularity of building construction techniques, wall widths, and awkward passages reflects a type of planning in which strictly rational planning was essential. Instead, the building was probably built somewhat *ad hoc*, as is observed at Bashtepa (albeit in the construction of pit-houses). For example, Nil’sen reports that walls are made of mudbricks measuring 42cm x 42cm x 10cm, but some whole and some broken. We note that this is precisely the same size of mudbricks utilized in the monumental building, which could have been in ruin at the time of the construction of the cult complex. It is possible, even likely, that bricks used in the later phase complex were spolia from the earlier construction phase. This would explain the use of broken mudbricks in its construction and again is a practice observed at Bashtepa, where the northern wall of pit-house ON 29 was clearly made of bricks taken from earlier Hellenistic structures.

A nearly identical building, Kyzylkylr III was excavated 1.3km southeast of Kyzylkylr I but has hardly been published.\(^{1127}\) This building is smaller than Kyzylkylr I, 57m x 57m, and has two phases separated by a conflagration event. We should note that a fire also divided the first and second phases of Kyzylkylr I and these events could be related. The building was built of square format bricks measuring 42cm x 42cm x 10cm with walls measuring 1.1m in the east and 2m in the west. Like Kyzylkylr I, all internal

\(^{1127}\) Мухамеджанов 1983: 53.
rooms are ambulated around a central room only here measuring 4m x 4m. Otherwise all that is reported is that ceramics were identical to those of Kyzylkyr I (but of what phase?) with the addition of large handmade khums with flat cuffed rims and convex bottoms as well as egg shaped jugs with short necks. Mukhamedzhanov implies that this structure dates to the 3rd–4th century CE. This site should be revisited with a small sondage set into one of the structure’s unexcavated corners to obtain a new ceramic column for the site and radiocarbon dates from the fire after the first phase. Since Kyzykyr I is now obliterated Kyzylkyr III could serve as a proxy for better situating the previous site.

Excavations at Kyzylkyr-II indicate an entirely different relationship with the settlement and landscape than Kyzylkyr I. From 1951-59 exposed two square pit-house dwellings 100m west of Kyzylkyr I, “House 1” (AMCAA 1200) and “House 2” (AMCAA 1201) that were taken as proxy sites for the types of dwellings observed dug into the surface of the wider area. This wider area was a slightly raised takyr with a total area of roughly 600m². Mukhamedjanov suggested that the contours of similar dwellings might also be found at the nameless tepa labeled Object 6 2.2km northeast of Setalak. This is a low mound measuring 72m x 78m and covered by querns and pottery, but the date of the assemblage was not reported.

Houses at Kyzylkyr 2 were dug into the virgin takyr surface and are much larger than individual pit-houses excavated at Bashtepa. House 1 measured 7.3m x 5m with a depth of 70cm and faced south. The second house measured 7.8m x 4.6m with a depth of 50cm and faced east. Both houses had rounded corners, which is a characteristic that

1129 Ibid 8.
seems to be unique to Kyzylkyr and Bashtepa (and likely of all pit-houses in this western zone). The second house was evidently dug into the earth with no subsurface mudbrick reinforcement walls. This practice is known from the entire west wall and lower half of the east wall of pit-house ON29 at Bashtepa (see below), and like the Bashtepa pit-house was probably plastered. Plaster bits of up to 6–8cm thick were found mixed with branches and kamysh within the collapse of the structure. The superstructure of house two was supported by at least ten wooden posts of 12–15cm thickness that circled the lip of the lower pit and with at least one central internal post. Surface level walls were made of branches and kamysh interwoven into upright posts and coated with plaster on the outside.

Hearths at Kyzylkyr-II were located outside of the pit-houses on the surface. While we cannot rule out the use of portable hearths for indoor use, this indicates that domestic life largely took place outdoors. Some 25 pear shaped hearths were exposed in the excavation that cannot be contemporary and therefore reflect periodic return to the settlement over some time. Nine rectangular and round economic pits were found circumambulating the housing units, following a pattern known not only from contemporary pit-houses at Bashtepa but also earlier pit-houses at Tamoshotepa in Tajikistan, but also in all phases of earlier above ground farmsteads like at Dingildzhe in Chorasmia. One dwelling displayed evidence for household cult featuring two carefully placed deposits: one goat head set on crossed hooves buried in the northwest

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corner of the room, and a bull head also set on crossed hooves buried near an area
presumed to be the entrance.\footnote{Мухамеджанов 1983: 48.}

Ceramics from in and around the pit-houses are domestic and utilitarian in nature:
wheelmade cups, bowls, jugs, flasks, pots, and kumchas in red and black engobe as well
as handmade pots for cooking. Other materials for food production such as iron knives,
pestles, mortars were found—the latter indicating an agricultural foundation with access
to grain. Animal bones represent the consumption of both wild and domesticated animals.
Domesticates include goats, sheep, and cattle (large and small). Wild animals include
birds and boar. The presence of large cattle also suggests dairy consumption since they
were allowed to grow old before slaughter. Somewhat surprisingly, no khums were
found at Kyzylkvr-II whereas khums were common in similar contexts at Kyzylkvr-I and
Bashtepa. Likewise, there were no querns which are often found as surface finds in the
vicinity of Bashtepa group sites. A clay pendant from Kyzylkvr II is perhaps important
for understanding life at the site. The pendant is in the shape of a bunch of grapes which
might indicate a wider interest in viticulture within the region. Another significant find
from the infilling of House 2 was a silver coin of Hyrcodus (d. 13m, wright 1.5g), a ruler
who was local to the Bukhara Oasis who likely ruled in the 1st century CE and might
have minted coinage in the northeastern area of the oasis.\footnote{Naymark}

As indicated above, the best evidence for a non-elite rural settlement in Sogdiana now comes from Bashtepa along the Romitan-rud. From 2016–21 I had the responsibility of excavating a rural settlement of closely agglomerated pit-houses dating from the late 2nd–late 1st centuries BCE (Figure 61). These houses are dug into the Hellenistic fortification architecture of the site as well as a massive infilling of organic and cultural deposits that raised the level of the mound. There are varying interpretations of the “infilling” at the site which will have major bearing on the overall interpretation of the site and its surrounding landscape. I am inclined to believe that this infilling deposit of several meters and spread over an area of roughly 25m x 25m cannot possibly be the result of natural processes. It is from this infilling that produced all of our elite Hellenistic fine wares, including several Megarian bowls, but also substantial amounts of debris associated with agricultural and textile production. This infilling features dozens of brown and red microlayers, filled with organic material, charcoal, entire layers of seeds, and animal bones. All of this material would have had less than 100 years to accumulate between the abandonment of the fortification and the setting of the first pit-house into this same layer. This is important to state at the outset because in my mind it is possible that this deposit was gathered in the agricultural zone off the mound and used to raise the level of the site, a technique we already know was employed with different materials from other phases of the site as well as much later phases at Setalak 1. If this is the case then the fill of Bashtepa is a palimpsest deposit representative of late 3rd–2nd century BCE rural activities immediately adjacent to the fortification.

With this issue aside, I will focus on Bashtepa’s later rural settlement. It was only during our final season in 2021 when I recognized that several structures identified in
previous seasons were a single large farmstead, the first pit-house farmstead discovered in southern Central Asia. Pit-houses were detected in all expeditions that pre-date the current Uzbek-American Expedition. V.I. Shishkin encountered pit-houses at Bashtepa during his 1938 explorations at the site.\textsuperscript{1133} At that time Shishkin excavated only a small room of 3m x 1.5m, which was likely a corridor of the pit-house complex. Unfortunately, Shishkin’s trench has not been confidently located because the plan he provides of his work does not match with the areas exposed from 2016–2021. Only a single room of the pit complex works as a candidate on account of its location, but Shishkin’s reported “L-shaped” dimensions do not correspond with any rooms of the complex, which otherwise were filled with cultural deposits. At any rate, the room excavated by Shishkin was reported as more occupation at the mound. His assumption was that the room was infilled later with ancient debris from the surface. However, no later material was found in this room, nor was any material later than the 1\textsuperscript{st} century CE found in any of the many rooms we excavated. Shishkin’s assumption resonated enough with Zhukov who also encountered pit-houses at Ayak Tepa 2 and similarly interpreted those as recent on the same grounds as Shishkin. I will suggest otherwise below.

When surveying the area south of Bashtepa, Adylov pondered the existence of a landscape full of houses that are now desiccated.\textsuperscript{1134} This follows Mukhametzhanov’s observations about the Kyzylkyr-Setalak sites along the Khitfar, habitations that overlap with those at Bashtepa/ During the “residential period” as Adylov calls it, new inhabitants utilized a number of innovative constructing techniques for the construction of a

\textsuperscript{1133} 
\textsuperscript{1134} Адылов 1995.
community of pit-houses. Our excavations have underscored the nuances of this vernacular building method that have not been appreciated by excavators of other pit-houses in Central Asia. In fact, it was an appreciation of these nuances that set this dissertation project in motion.

Our discovery of a more substantial settlement at Bashtepa provided a rare opportunity to systematically excavate a typical non-elite rural farmstead and compare this data to what is known about rural life in Central Asia in the second half of the first millennium BCE. Because this data is new, I will present a lengthy account of our excavations here but with a caveat that much of this information still needs further research and elaboration as the wider project comes to a close.

*The pit-house complex at Bashtepa.* The post-Hellenistic settlement at Bashtepa was largely concentrated at the center of the mound with a dense agglomeration of adjacent pit-houses installed into the earlier Hellenistic architecture and infilling of the site. Other pit-houses were built radiating out from this center, giving clear indication that the site was a small village community at the end of the first millennium BCE. The main structure was the aforementioned pit-house complex.

The pit-house complex is characterized by a series of interconnected semi-subterranean rooms situated around a central external, surface level courtyard (Figure 61). While we excavated several rooms associated with the structure, many were exposed to get a general sense of the plan but were deliberately left unexcavated. From what was exposed by us, the core area of the structure was a series of five rooms and corridors with the eastern wall of each room sharing a uniform alignment along a north-south axis. Importantly, the installation of the pit-house would have involved one great cut of 25.5m
(ON438) along this alignment that apparently disregarded the earlier Hellenistic architecture and infill. From north to south the order of rooms and corridors is as follows: room 217, corridor 265, corridor 288, room 263, room 362, room 366, and room 416. Room 263 seems to have been the northeast corner of an enclosed space delineated at the east by 362, 366, and 416. West of 263 is another small corridor, 264, that is possibly V. Shishkin’s trench from 1938 (we found very few ceramics in this space, which is uncharacteristic). All of the aforementioned spaces share party walls in some way. To the west of 264 is another room, 419 (unexcavated). West of 366 we documented half of a standalone room, 401 (unexcavated). Southwest of room 416 is 421 (unexcavated) which clearly extends further to the west than we were able to document.

Note that our plan indicates another room to the west of 362, however this room (395) is earlier than all other pit-houses of the complex. This is clear on account of a near-surface level ancient walking horizon (389) that was exposed by our work and enclosed by 419, 264, 263, 362, 366, 416, 421, and with 401 (Figure 65). This walking horizon was clearly an exterior space that served as the main access point for each of the pit-houses in the complex. This exterior walking horizon 389 completely covered 395. It is likely that the walking horizon for this earlier structure is located under 389, but we only exposed this surface and did not continue. A single economic pit was identified in the corner between 362 and 366 but unexcavated for lack of time.

As mentioned, pit-house 217 cut directly into earlier Hellenistic period architecture for the installation of this room. This cut was directly into the northeast corner of the early Hellenistic donjon. The inner walls of the house were then built of rammed clay material up to 10cm thick and set against the earlier architecture in the
north, west, and east but used as a free-standing division between this room and 265 to the south. The southern wall of 217 was capped with a layer of mudbricks.

The two corridors between 217 and 263 remain somewhat of a mystery until our analysis of all available material is complete. These corridors are 265 and 288 which are divided from each other by a mudbrick wall (285). It is at least clear that in the earliest phase of the pit-house complex corridor 288 and room 263 were a single, L-shaped unit. This is because it was clear to us that the mudbrick and rammed clay wall that now divides the two rooms (286) is a later addition.

The block of rooms directly to the south of the corridors is somewhat different from the spaces to the north. These are rooms 263, 362, 366, and 416. Quite remarkably, these rooms share a single eastern wall, ON46, that extends for 13.1m along the great cut of the overall complex. The wall is uniformly 10cm thick. While at least rooms 263 and 362 utilized wall 46 as a single retaining wall against the soft Hellenistic fill that it was set into, the construction of rooms 366 and 416 to the south involved the setting of a second, inner layer of reinforcement wall to retain wall 46. The inner retaining walls of 366 and 416 both encircled each of these spaces and served as the main walls. Rooms 263 and 362 (and corridor 288) were installed as a single unit but without the use of corner joins, which is a technique that differs from all other pit-houses at the site. The plan of both rooms taken together indicates two rectangular rooms with east-west orientation. Both 263 and 362 share a common western wall (267) and a party wall haphazardly dividing each space (wall 349). The southern wall of 362 is likewise a freestanding wall made of rammed clay (wall 365). This is interesting because where there was an opportunity to create a party wall with the next room to the south, 366, it
was not taken. Instead, rooms 366 and 416 change orientation and are aligned along a north-south axis.

Clear indications of functional activity were only found in room 362. A rectangular cooking hearth was found in the northeast corner of this room measuring 1m x 0.67m and preserved to a height of 10-20cm. Hearth construction involved a base layer utilizing sherds of khums forming a platform and surrounded by fired brick walls (Figure 64). The bricks were mostly square in shape, roughly 10cm x 10cm but not uniform. Most bricks were broken. The hearth had collapsed towards the south with broken mudbricks and khum fragments spilling out for approximately 20cm towards the southeast corner. Within the hearth was an oval ash basin measuring 40cm x 17cm and abutting the north wall. This was apparently the same type of hearth encountered by V.I. Shishkin in Trench 2 of his 1938 excavation\textsuperscript{1135} but was also noted by Zhukov during the excavation of Ayak Tepe 2, a more elaborate manor house that was contemporary with this pit-house complex.\textsuperscript{1136} While it is possible that the hearth of room 362 was used only for heating, the artifacts associated with the cultural layer of the room point to substantial cooking activities. Most ceramics from the floor of 362 were sherds of cooking vessels, frying pans, cauldrons, khums, korchags, and many drinking goblets typical of the 1\textsuperscript{st} century BCE – 1\textsuperscript{st} century CE. Several pieces of oven hinges for hanging cauldrons were found in the cultural layer as well as in the upper infilling of this room.

The walls and floors of rooms 217, 263, 362 were all smeared with a plaster material that was preserved exceptionally well in most areas. This plaster material was

\textsuperscript{1135} Шишкин 1963: 139.
\textsuperscript{1136} Шишкин 1963: 140.
likely a gypsum wash intermixed with reed, not unlike the outer walls of modern homes in the rural countryside of the Bukhara Oasis. While this plaster material is soft to the touch as excavated, it was surely a harder material when applied in antiquity. There was no evidence of plastering in room 366. Instead the floor and walls of this room were covered with a thick layer of clay, for reasons that are not clear to us.

We are only to make some initial remarks about the internal phasing of the pit-house complex at this time. It is clear that the massive north-south cut (438) indicates an intent to install several adjacent rooms as a single unit, particularly evident by the single-phase packing of wall 46 up against the underlying fill into which it was cut. Rooms 263, 288, and 362 were almost certainly built as a single unit with internal subdivisions following in short order. Likewise, rooms 366 and 416 are contemporary to the northern rooms but installed as a separate phase within the same construction event.

At some point room 362 fell out of use, underwent some degree of collapse, and was filled with garbage. The fill of this room was densely packed orange-brown material with animal bones and ceramics that included large storage vessels, goblets, and crockery. The implication of this decision was that the main cooking area must have shifted to another space (i.e. a room left unexcavated by us) or moved outdoors. Room 263 also underwent a period of abandonment. At some point part of wall 46 collapsed into the space and trash was allowed to accumulate up to 30cm over the collapsed wall. At a later time, the room was reoccupied and a new plaster floor was installed over the debris. Wall 46 was repaired with handmade mudbricks (Figure 62). There are no indications that there was a gap in occupation or abandonment in room 366.
It is important to note two other pit-houses at Bashtepa that were likely contemporary to the pit-house complex and in some ways a part of it. These are pit-houses 29 and 420. Pit-house 420 was only partially excavated by us in 2017 before our focus moved elsewhere. The room was installed directly to the east of 366 and 416. There are indications that yet another pit-house exists to the south of 420, but we only visibly observed the faint contours of a southwest corner wall. Since the full dimensions of 420 are not known, this remains an open question.

Pit-house 29 was carefully documented from 2016–2018. This house is located 2.7m east of the pit-house complex (Figure 61). No trampled walking horizons were extant between the complex and this single unit indicating that the area was not the locus of heavy anthropogenic activity. This space is roughly rectangular in form and measures 5.5m (north-south) x 3.5m (east-west). It is preserved to a depth ranging from 1.3–1.5m. The room was accessed by two earthen steps located in the northeast corner of the room which gave way to an elongated, south-sloping ramp covered with plaster.

The house underwent two construction phases although it is unclear how much time elapsed between each phase. It is only clear that the room was smaller in the first phase by about one meter on its north-south axis. Remarkably, room ON29 features four different building techniques for each wall (Figure 66). The northern wall of the room was built of well-made mudbricks in a square format (40cm x 40cm x 10cm) that were almost certainly spolia from the Hellenistic fortification wall or platform. The wall served as a divider between rooms ON22 and ON29. Its western wall (now lost) was almost entirely earthen, utilizing only the somewhat compact earlier period fill within which the house was set. Only a later phase southern extension of the entire room indicates that the
west wall may have been reinforced with handmade mudbricks by its final phase (although not a single one of these bricks was found in our excavation). This southern wall is built of small, poorly packed handmade bricks (10cm x 7cm x 4cm). The eastern wall of pit-house 29 features yet another building technique. Here the lower quarter of the wall utilized the earthen cut into the mound’s fill with a mudbrick retaining wall built above. Like the northern wall, these mudbricks were likely robbed from the earlier Hellenistic fortification. The southeast corner of the room was part of the same later extension mentioned above. All walls were whitewashed with a well-mixed gypsum and reed plaster, which was found preserved on the floor of the room at the south.

Table 20. Dimensions of pit-house rooms at Bashtepa.

<table>
<thead>
<tr>
<th>Room Number</th>
<th>east-west</th>
<th>north-south</th>
<th>depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>3.5m</td>
<td>5.5m</td>
<td>1.3-1.5m</td>
</tr>
<tr>
<td>217</td>
<td>2.88m</td>
<td>4.24m</td>
<td>0.8m</td>
</tr>
<tr>
<td>263</td>
<td>2.64m</td>
<td>2.1m</td>
<td>1.31-1.45m</td>
</tr>
<tr>
<td>362</td>
<td>2.72m</td>
<td>2.1m</td>
<td>1.12-1.32m</td>
</tr>
<tr>
<td>366</td>
<td>2.4m</td>
<td>3.76m</td>
<td>0.87-1.4m</td>
</tr>
<tr>
<td>395</td>
<td>unknown; at least 0.76m</td>
<td>2.77m</td>
<td>unexcavated</td>
</tr>
<tr>
<td>401</td>
<td>unknown; at least 1.6m</td>
<td>2.19m</td>
<td>unexcavated</td>
</tr>
<tr>
<td>416</td>
<td>3.31m</td>
<td>2.17m</td>
<td>unexcavated</td>
</tr>
<tr>
<td>419</td>
<td>1.6m</td>
<td>2.95m</td>
<td>unexcavated</td>
</tr>
<tr>
<td>420</td>
<td>2.82m</td>
<td>unknown; at least 1.47m</td>
<td>unexcavated</td>
</tr>
<tr>
<td>421</td>
<td>1.94m</td>
<td>unknown; at least 3.1m</td>
<td>unexcavated</td>
</tr>
<tr>
<td>441</td>
<td>2.62m</td>
<td>4m</td>
<td>1m</td>
</tr>
</tbody>
</table>

In addition to houses, several economic pits of varying sizes and dating from the late 2nd century BCE through 1st century CE were observed. Most pits were excavated, but some were left untouched on account of time constraints. Economic pits tend to surround the settlement and were built into or near the Hellenistic fortification wall. The most substantial of these pits were found in the eastern part of the settlement with the
largest measuring from 1.6m x 0.6m and with a depth of up to 0.7m. However, at least one pit was identified adjacent to pit-houses within the complex, ON392, which was not excavated.

Pit-house construction at Bashtepa is characterized by a surprising variety of building techniques. We are clear that by pit-house “construction” we mean a process of material extraction, subterranean wall reinforcement, and the building of an above ground superstructure. No pit-houses at Bashtepa are entirely subterranean. Contrarily, no pit-house was shallower than 0.8m in depth. Pit-houses are found at Bashtepa with walls using the following range of techniques: utilizing the material into which the pits are dug, mudbricks either made for retaining walls or bricks stolen from earlier phases for the same purpose, walls made of packed clay, walls dug directly into underlying pakhsa from an earlier period, and walls utilizing the walls of earlier phases altogether. Many techniques prevalent here are known to other parts of Central Asia but no other site indicates such variety in a single place, let alone one roughly contemporaneous phase.

The majority of pit-house walls utilize the packed clay method set against the earthen walls of the pit. This method resulted in walls that were almost uniformly 10cm thick when utilizing this technique. This is very similar to the single pit-house structure excavated by A. Omel’chenko at Padayaktepa.\textsuperscript{1137} As discussed in chapter four, a Hellenistic pit-house was dug into the fortification wall of an earlier structure that shares many characteristics with pit-house construction at Bashtepa and with walls also of 10cm thick rammed clay.

\textsuperscript{1137} Омельченко 2003; 2004.
The superstructure of houses at Bashtepa would have been made of post and reed materials. Eight postholes were documented in room 366 but with no clear patterning to discern the nature of roofing. Substantive reed material is regularly found preserved on the floors of pit-houses, especially in house 29 where this layer was exceptionally thick (up to 15cm in the south). Rooves of Central Asian pit-houses would have either been lean-to, conical, or gabled and it remains an irresolvable question as to which of these techniques were used at Bashtepa.

_Ayak Tepa 2._ The pit-house complex at Bashtepa can be considered within the context of contemporary rural settlements of the Bashtepa Group of sites, particularly the above ground rural manor house exposed at Ayak Tepe 2 (Figure 67; AMCAA 661). Ayak Tepe 2 is located 2 kilometers southeast of Bashtepa along a separate endorheic arm of the Ramitan-rud. The site was subject to excavation by V.D. Zhukov in 1951 and 1952 as part of the Uzbekistan Archaeological Expedition for the Institute of History and Archaeology in the Academy of Sciences of the UzSSR.\(^{1138}\) Like Bashtepa the site is preserved to a height of 7–8m and is roughly the same size (60m x 60m). Zhukov’s exploration of Ayaktepa 2 involved the setting of trenches along the northern and western slopes of the mound as well as a large trench set at the base of the mound in the northwest. A very small (less than 1m x 1m) sondage was made close to the center of the mound. Zhukov’s work is immensely important for understanding architectural strategies at the end of the first millennium BCE. Zhukov’s excavation strategy was restricted to the outer contours of the mound to get a general external plan of the structure. This strategy hinders our understanding of the architectural relationship between the pit-houses at

\(^{1138}\) Жуков 1956.
Bashtepa and the manor house at Ayak Tepe 2. This is quite unfortunate because the phases at both sites are contemporary, or at least nearly so.

The earliest phases of Ayak Tepe are unclear but in the 1st century BCE a monumental stylobate was built to support a mudbrick manor house. This platform was predominantly built of pakhsa interspersed with layers of mudbricks, a technique that clearly draws upon earlier construction principles from Bashtepa. This architectural strategy of building such a substantial pakhsa platform with interior layers of mudbricks was almost certainly implemented to stabilize the entire structure in a marshy, riverine environment. An above ground monumental manor house was built on top of the pakhsa stylobate. From what was excavated, it seems that this house is of a somewhat irregular form that merely followed the mound contours with rooms accessed by corridors featuring prominently at the edge of the stylobate. We can say, however, that the presence of two varied but contemporary types of rural architecture in such proximity illustrates how little we know about rural life in Sogdian antiquity. It is possible that the individuals living at Ayak Tepe 2 were lords of the agricultural zone and that those living at Bashtepa were those working in the surrounding fields. However, this remains purely conjecture. The presence of substantial relict fields among the Bashtepa Group of sites already indicates that sedentism was a necessity for communities living in this ecological zone. The presence of two rural farmsteads of such varied construction qualities and in close proximity at Ayak Tepe 2 and Bashtepa suggests to us that there were significant differences in subsistence practice and sedentary living strategies underway within the oasis. This may or may not have been on account of an economic imbalance between the owner of the manor house at Ayak Tepe 2, who clearly had access to more formal
architectural resources than those at Bashtepa. At Bashtepa, the installation of the large pit-house complex required the coordination of much labor but the building techniques were more fluid and *ad hoc*, suiting the immediate needs of the local community.

Finally, the agricultural basis for life at Bashtepa is established for at least the 3rd century BCE – 1st centuries CE. Large round stone querns are the most commonly encountered artifacts across the entire Bashtepa group landscape after ceramics. Relict field systems are visible on the *takyr* surface 200m to the northeast of the mound as well as a cone of roughly 2ha to the west of the fortification. The western zone is densely covered with pottery that is characteristic of all phases of Bashtepa but with higher quantities representative of the later phases. Arms of the Romitan-rud pass the site to the immediate north and south which would have provided an adequate water supply without the need for irrigation. During the 2017 field season we obtained and floated 300 L of cultural sediments from secure contexts (i.e. no local bioturbation) within the central mound infilling (ON 75) and from contexts associated with pit-house ON 29. A large quantity of samples was also obtained in the 2018 and 2021 field seasons. Only preliminary results from the 2017 season have been published thus far, with the remainder to appear in the final excavation publication. However, we have established that within Bashtepa’s immediate environs barley (*Hordeum vulgare* var. *vulgare*), wheat (*Triticum aestivum*), legume, and especially grapes were cultivated. This picture has not changed in more recent seasons despite our sample size growing exponentially. From the field I noted that most recently obtained seeds from floor contexts of the pit-house

1139 Stark, Kidd, Mirzaakhmedov, Wang, Spengler III, Mirzaakhmedov, Silvia, Pozzi, Rakhmonov, Sligar, and M. Sultanova 2020:
complex trended towards barley and grape, but this was only an excavator’s observation. The final results will better of course be the final characterization of these economic activities. In terms of animal agriculture, animal bones were the most frequently collected ecofact. Bashtepa produced an enormous amount of animal bones, all of which await analysis. From my own observations in the field sheep and goat were the most common animals from the mound infilling (ON 75) and all pit-houses, especially in the form of broken sheep and goat jaws. Cattle bones were also prevalent but not encountered as often as sheep/goat. At least one camel bone was found in ON 75, which certainly would be *Camelus bactrianus* rather than dromedary. I am not versed enough to identify horse bones, but horse and horse/rider figurines were regularly excavated from pit-houses. Bird and fish bones were regularly encountered within the pit-houses. One rare deer antler was excavated from a floor at the base of the Hellenistic platform ON 23.

While our fieldwork has concluded at this site, our investigations are ongoing and will no doubt clarify some of the issues surrounding this anomalous example of Central Asian rural architecture. Future explorations of the Bashtepa and Kyzylkyr-Setalak groups of sites and landscape should utilize low-altitude multispectral imagery with an eye towards thermographic methods. Traditional near-infra red (NIR) and visible light multispectral sensing methods prove difficult for this region given the similarity in reflectivity of subsurface mudbrick architecture with its external soil matrix. Thermography might be one way to circumvent this issue if such a methodology were undertaken at a high-resolution scale for the simple fact that the mudbrick and pakhsa used in ancient construction is extremely dense compared to the loose soil that currently encases it (and in some cases that such structures are dug into).
4.5.g. Conclusions.

In this chapter I attempted to treat all evidence for Hellenistic and post-Hellenistic rural settlements as comprehensively as I was able. In treating each region of Sogdiana I emphasized that our evidence for rural life at virtually every known site indicates a sedentary lifestyle structured around agriculture and local pastoralism. I treated this material in such depth for four reasons. First, most of this material is unavailable in English. This satisfies a utilitarian function of this dissertation in guiding students of Hellenistic Central Asia towards Russian language archaeological literature and to move away from colonialist emphases on elite, Greek material culture. It encourages a move towards an inclusive approach to Hellenistic Asian archaeology that judges the status of colonized populations equally to that of colonizers and other elites. Second, I wished to stress that rural life in Hellenistic and post-Hellenistic Central Asia was the part of a sedentary agricultural tradition traced over several millennia. While this analysis was not perfect, I believe that it is a step in the correct direction in countering narratives that strictly rely upon models of migrations and nomadism to explain cultural change. Third, I intentionally did not engage my evidence with political histories of Hellenistic Central Asia. Written evidence for Sogdian life in ancient Mediterranean sources is written in favor of Greek rule over indigenous Sogdians. This ancient emphasis has modern implications as a motivator for research questions about Hellenism in Central Asia. I sought to define rural life during this period within entirely “Central Asian” terms without emphasizing tired narratives. Finally, I wished to challenge assumptions made about pit-house living that suggest a one-to-one correlation between nomadism and pit-house architecture. As is indicated from my presentation, I think this narrative is false.
Recent excavations of a pit-house complex at Bashtepa seem to clinch the idea that pit-houses were the simple non-elite structures of rural communities. They even exist within “elite” settlement contexts such as at Afrasiab and Padayaktepa in the Hellenistic period. Within both the Bashtepa and Kyzylkjr-Setalak group of sites they are juxtaposed with above ground elite architecture (Bashtepa / Ayaktepa; Kyzylkjr 1/ Kyzylkjr II). In the next chapter I address the significance of this pattern considering material also known from Bactria. I also explore several lines of inquiry about pit-house life, the relationship of inhabitants to their landscape, and comparative evidence for pit-house living across the Old World.
Chapter 5. Reconsidering Rural Housing and Settlement in Hellenistic Central Asia.

5.1. Introduction.

At the start of this dissertation, I posited three basic questions about Hellenistic and post-Hellenistic Central Asia that motivated my research:

- Where did rural populations live in relation to the wider environment (i.e. their landscape and ecological setting)?
- How did people live within that environment?
- In what ways were the lifeways of these communities one aspect of a longer traditions of sedentism and pastoralism? In what ways do they break with these traditions or reflect a slow evolution of traditions?

The preceding chapters engaged these questions through the lens of only half of Central Asia’s rural populations from the 4th century BCE – 1st century CE, sedentary farmers. Yet the specter of other people who lived beyond urban zones (and it should be clear by now that there were not so many cities) persists throughout my presentation. These are the nomadic and transhumant, semi-nomadic populations that occupied the same landscape as sedentary populations in Bactria and Sogdiana. In part they lurk because any specialist reading this work will know that almost all of the regions under discussion here featured landscapes of kurgan burials which fall somewhere chronologically within my period of interest and are a quintessential marker of nomadic presence.

However, my work here started from genuine confusion that emerged while excavating a rural settlement of pit-houses at Bashtepa in Uzbekistan, explored at the end of the previous chapter. While at Bashtepa, my academic understanding of rural lifeways in Central Asia matured. Yet I could never accept the remarks of other scholars about the type of rural settlement architecture I spent so much time excavating. These are scholars who see a direct relationship between pit-house structures and nomadism or semi-
nomadism. As I think the evidence presented in previous chapters shows, there are strong indicators that pit-houses were the most basic, non-elite domestic structure for anyone living in Bactria or Sogdiana in the first millennium BCE. If this is indeed the case then there are other issues that should be addressed analytically, which I aim to do in the present chapter.

To be clear, I would not argue that nomads or transhumant populations did not live in pit-houses. I think it is perfectly reasonable that they would have. The problem for me is the a priori typological association of pit-houses with these groups because of what is perceived as architectural ephemerality. From a jump to nomadism comes a jump to questions about ethnic identity and some have tried to make claims that associate pit-house use with specific ethnic groups (who are conflated with archaeological cultures, which is of course an entirely different thing). Interestingly, these adherents fall into the same traps that scholars working on Greek ethnic identity in colonial conquests often make – the classic trope that the formal characteristic of material culture are somehow linked to the social and experiential complexities of confronting ethnicity. While it is true that certain ethnic-presenting individuals might enjoin themselves in a specific materiality of ethnic self-representation, many do not. Yet for archaeologists who associate certain aesthetic objects like Megarian bowls with the physical presence of Greek people at a site, or conjure the pointed-cap Saka off of the Behistun reliefs and into a pit-house, there is a conceptual relic of the tired “pots equal people” thinking – and only for the crime of digging one’s home into the earth as opposed to risking tectonic security for resource taxing mudbrick homes.
This chapter seeks to bring some unity to the wide-ranging data presented in chapters two and three in light of the dataset brought together by the Archaeological Map of Central Asia in Antiquity and excavated contexts. By necessity this is done thematically according to issues that I think are particularly pertinent for our understanding of rural settlements and architecture in a Central Asian context. In most sections my own observations from excavating a rural pit-house settlement at Bashtepa guide my interpretations of selected themes, since this is now the most scientifically excavated settlement of these types of houses.

The first theme addresses some methodological problems I faced with interpreting this dataset. Two aspects are addressed that each speak to a different methodology. The first considers my own methodological approach to a GIS based settlement archaeology that draws together such a large corpus of legacy and modern data. As I noted several times earlier, I ultimately had to abandon the urge to create a neat settlement typology based on size and standard features. I could not find a way around the fact that settlement size from non-excavated contexts can only represent the settlement at its largest size, which will often be the most recent. Many sites included within the AMCAA here had later Medieval period occupations which drastically increased the area of settlement as reported in Soviet and post-Soviet literature. This was compounded by a similar problem, an inadequate way of creating a meaningful typology of sites based on architectural or spatial features. Like the previous problem, saying that a site which was inhabited from the Hellenistic through Medieval period was fortified with a citadel and moat had all of those features in its earliest layers would be very misleading. In fact, some excavated
fortifications show just that, such as at Kindiklitepa in Kashkadarya, Dal’verzin in Surkhandarya, or perhaps even Afrasiab. I explore this issue below.

This leads to a similar methodological problem faced when excavating one of these rural sites. Here I focus on the application of a household archaeology approach to my own excavations at Bashtepa and talk about why I feel that some of the expectations dealing with such granular exposure was not ultimately met. To me it seems that I faced similar methodological problems that others have also grappled with, such as the range of problems with accepting a floor as a primary context, or the sediment above a floor as not. When considering my own excavations comprehensively for this dissertation, I found myself continually drawn to what is most durable and comparable to other excavated rural sites - architectural practices.

The previous chapters demonstrate the wide diversity of ecological contexts where non-elite, rural populations made their homes and structured their lives. In most cases they did so living in pit-houses. Yet one theme that emerged from this observation was the lack of standardization among pit-house types in terms of materials used to build a house and pit-house shape. In my opinion this reflects a degree of flexibility afforded to living partially in the earth versus above ground. However, one factor that has never been considered is the architectonics of a pit-house. We are accustomed to remarks about the ephemerality and lack of durability of pit-houses. Yet is this true? As I suggest in one section below, there is good reason to consider that many pit-houses were just as structurally durable as above ground architecture. Therefore, I address this issue briefly by considering some observations of pit-house units encountered across this dissertation and consider the variety of strategies employed to keep the house a home.
One other consideration is a promising observation that emerged from my analysis of Sogdiana. This is evidence for rural ingenuity in terraforming landscapes. In chapter three I stressed the significance of U. Eshonkolov’s observation about the appearance of the lateral *khorez* in Panjikent. In the oasis of Samarkand this might be evident in the construction of the Dargom canal if we accept a theory that the structure was built cumulatively and on local initiative. Likewise, terracing projects at Nurtepa sought to terraform the landscape to increase the habitability of an otherwise difficult terrain. Each of these aspects become more prevalent in the Kushan period with the emergence of what can be called a “delayed return economy” in which rural populations begin to invest in their own future success through anthropogenic landscape interventions. Exploring this idea further sheds light on how important this is for the Hellenistic period in Sogdiana, which seems to be thought of as somewhat of a backwater compared to Bactria.

Finally, I return to the issue of sedentism and pit-house use. In this section I offer an in-depth comparative analysis of pit-house settlements outside of Central Asia to consider how archaeologists and specialists in rural vernacular architecture consider these forms, and in particular, how they differ. In looking outside of Central Asia I am able to draw attention to the fact that very few nomadic or transhumant societies actually used pit-houses anywhere. Outside of Central Asia in places like the Levant or northern Black Sea coast pit-houses are just one form of architecture among others. In some cases such as at Hellenistic Berezan in Ukraine they are packed enough that their situation elsewhere seems similar to sites like Takht-i Sangin. There is even textual evidence that attests to their existence in the Classical Greece mainland. And on the textual evidence, Bactrian
pit-houses were documented by several ancient Mediterranean authors reporting on Alexander’s campaigns, and who found no need to associate their use with mobile tribes.

5.2. In defense of the splitters: flaws in working with Soviet settlement typologies.

As archaeologists we are fascinated by classifying things. Creating a typology of objects found at a site is one of the single most important tasks of any project. Typologies bring order to big datasets. They allow us to create statistical models of the amount of wheelmade and handmade vessels at a site, the help us determine the primary economic and consumption activities in areas such as rooms of households, but most importantly typologies allow us to undertake seriation. This in turn is how we ask our data from whence it came based on comparisons with similar objects from other sites that have also been seriated. It is on account of typologies and seriation that we know that certain chunky wine goblet found across southern Central Asia only spread after the middle of the 2nd century BCE and that the same form would eventually evolve into an exquisitely fine goblet found by the end of the 1st century CE. If we find this goblet in the same context as a Megarian bowl, we might share in a bit of stress over the dating of our strata.

Taking pottery as an example to push the basic exercise further, typologies guide us in reconstructing the spread of human knowledge about production and social beliefs about object aesthetics. Pottery made on a wheel represents knowledge about mass production and artisanal experience with managing a wheel, a tool that not everyone had access to. Therefore, wheelmade pottery, while often locally made, was nonetheless more likely to be an object of trade. Handmade pottery can be made anywhere and is often viewed as crudely functional even if handmade vessels can sometimes be quite beautiful in their artisanry. Handmade pottery is far more likely to be produced locally and thus by
artisans within a given community. It is entirely reasonable to suggest that basic pottery production skills were a necessity for any household. The point here is that home production requires home knowledge. There must be at least one person in any given community, from every single generation, that can pass knowledge about production onto the next generation – the very basis of communal tradition. When new forms of pottery are introduced and then produced by a community it can only be through two means – external diffusion into that community, or invention. Examples of outright invention of a new pottery form are rare. Most new forms will be introduced into a community from somewhere else as objects of trade or the arrival of someone new with the requisite prior knowledge. This very fact led M. Khasanov to emphasize the overlooked role of exogamy on the introduction of new vessel shapes.\textsuperscript{1140} Grappling with the very problem of a broad typology of vessels found at Kurgancha and Kindiktepa featuring influences from virtually everywhere within and outside of Kashkadarya, his suggestion was that the gradual, multi-generational process of exogamy – from one region, to another, then to another still – was the cause for such broad typological diversity at any given archaeological site.

Ceramic typologies reveal quite a bit of information about human behavior. Naturally, we are inclined to classify every aspect of archaeological evidence according to typologies. This includes settlements, which in both Western and Russian scholarship have a very long tradition of typology production. As a concept, settlement archaeology emerged as a way of classifying what was perceived to be distinctively proto-Germanic settlements, identified only through comparing material culture found in museums and

\textsuperscript{1140} Khasanov 1990.
not in the field, by G. Kossinna in contrast to settlement types of anyone else. Thus, there was an *a priori* assumption by Kossinna that settlement typologies had a direct relationship to bounded ethnic entities.\(^{1141}\) The artifacts which emerged from these sites were also bounded within that cultural-historical type for the creation of what was essentially a super typology of an ethnic culture. Kossinna’s ideas about settlements within a broader cultural-historical approach were famously adopted by V. Gordon Childe who rejected Kossinna’s ideological claims about culture-history (Germanic supremacy) but otherwise accepted the principle as sound archaeological methodology. This move had a profound effect on the development of archaeology in Europe, and especially the Great Britain where the method was crystallized as “social archaeology” – an archaeological approach that centered the form and structure of societies that were nonetheless still perceived as bounded cultural entities whose “archaeological kit” could be compared to that of another society with all aspects of the movement of goods explained in terms of the diffusion of one object to another group, who then would adopt or reject said object while the broader ethnic whole remained in-tact.

Childean culture-history was largely rejected in American archaeology by the 1960’s with the “processual” archaeology of Lewis Binford and his students. Binford saw archaeological sites in entirely different terms than the tradition that emerged from Childe. For Binford archaeological materials were politically neutral and open to scientific autopsy. It was in this era that statistics became a powerful tool for archaeology and especially in modelling artifact typologies (especially ceramics) but particularly in the analysis of settlements. In the 1970’s, processualists like J. Cherry sought to come up with

\(^{1141}\) Kossinna 1911.
with a general theory of settlement hierarchy that could be read into the archaeological record of any place on earth. The primary factors were settlement size, proximity to other sites, and topography which were mathematically modelled into Thiessen polygons best on set parameters of how these data interacted with each other.

The whole effort was subsumed into similarly processual network analysis and “world-systems” models that likewise claimed to have a theory of everything for the development of all global settlements. One pervasive, still practiced, assumption that emerged from network analyses is the idea that large settlements exert cultural control, if not political and economic, over smaller sites. Sites according to these models are defined by their size, as a rule. In prioritizing size, the actual cultural aspects of sites, such as a religious or political center, are ignored because power is correlated to the size of a settlement. Small settlements beyond that center have no choice but to fall in line with the “core.” These small settlements are described as peripheral to a core site that is usually some city. In human terms, the assumption is that all peripheral activities would be directed to that core and that these peripheral communities would have also accepted their own status as on the “fringes,” “frontiers,” or “borderlands” of an administrative center. Since these so-called peripheral settlements also tended to be rural, urban biased scholarship justified itself in determining non-urban material elements at rural sites to be less than that of urban counterparts – merely crude imitations or folk knowledge lacking sophistication.

For R. Adams settlement typologies were seen as a quintessential way to assess early land use and human landscape interactions in the heavily irrigated zone of the
Diyala basin in southern Mesopotamia.\textsuperscript{1142} Adams expressed admiration for the Soviet method of broad, landscape based methods practiced by S.P. Tolstov as they informed typological classification of sites – even if he regretted that he could not read Tolstov’s work. In the Soviet Union similar efforts to develop a general theory of settlement typologies was also underway by the 1960’s and 1970’s.\textsuperscript{1143} Archaeologists in the Soviet Central Asia, perhaps the locus of Soviet archaeological theory, were more prone to survey and excavate rural hinterlands of urban zones for the purpose of understanding the complexity of human-landscape interactions during any given period of inquiry.\textsuperscript{1144} Tens of thousands of archaeological sites across southern Central Asia alone were documented and at least incorporated into archived survey reports at institutes of archaeology,\textsuperscript{1145} if not published in one of hundreds of formal reports. In conducting surveys and targeted excavations of rural hinterlands but intensive excavation of cities, Soviet archaeology perceived rural agricultural zones and urban centers as in a dialectical relationship that was not necessarily antagonistic, but nonetheless binary. Unlike the core-periphery biases structured into American and European archaeology, Soviet scholars did not see provincialism and a lack of sophistication in rural settlements. Instead, rural sites were taken at face value with the materiality of such sites merely presented at face value.

With a perspective that set urban and rural centers in a dialectical opposition, Soviet scholars sought to say something meaningful about the development and structure

\begin{footnotes}
\item[1142] Adams 1965.
\item[1143] An excellent historiography of Soviet era typologies of rural settlements in Sogdiana is Буряков и Аскаров 1997.
\item[1144] Якубов 1988 for an in depth historiography of Soviet typologies in Central Asia.
\item[1145] UCLAAL’s database of heritage sites has swollen to over 50,000 sites at the time of writing. Tim Williams, personal communication.
\end{footnotes}
of societies locked in this binary relationship. To explain social relationships and
dialectical change the works of Engels and Marx were engaged on account of the
ideological priorities of Communism, but nonetheless an ideology that was truly accepted
as meaningful and reflecting historical reality. It is the interplay of this ideology with a
genuine interest in a particularly Soviet approach to social archaeology that formed the
basis of Soviet efforts to establish settlement typologies. Typologies of settlements,
especially rural settlements were set up a means to understand the functional purpose of
settlements as a whole.\textsuperscript{1146} The thinking was that the shape and most prominent features
of a site were regular enough to be categorized and assigned a single functional role in
relation to other rural settlements and cities. Rather than acknowledged as sites inhabited
by many people with competing priorities and understandings about their own
relationship with the wider community, critical factors in tracing the natural development
of an archaeological settlement over time (and not accounting for destruction), sites were
viewed as having singular priorities designated by their architects at the outset and
subsequently locked in a spatial and temporal stasis with other sites in their vicinity.

Settlements cannot be classified in the same manner as objects beyond the first
groundbreaking at any given site. For one, sites are very rarely completely excavated (nor
should they be) and so basic data such as settlement size are limited to proxies, such as
the spread of surface pottery. However, as I mentioned briefly in chapter three, surface
finds do not always imply the presence of settlement per se, as I learned when excavated
a particularly attractive small, square tepa covered in dense pottery…which turned out to
be a very fine sand dune. Objects, unlike settlements, are static in that (barring decay)

\textsuperscript{1146} Буряков и Аскаров 1997: 88.
they reflect the moment of their creation which can be taken as a singular idea about production, function, aesthetic, and desired consumption. Settlements are the results of far more complicated processes and the vicissitudes of time.

As Suleiamanov observe that “ancient architects and builders…thought not so much in types as they did in a complex of typical techniques for solving architectural and construction problems, which together constituted a single tradition of building and architectural art of their era.”

1147 Carrying his critique of settlement typologies further, Suleimanov anticipates a fundamental problem identified by theorists of ecological phenomenology:

In the typological classification of multilayered sites, one has to bear in mind that a settlement, which is itself a complex, dynamic system among categories of immovable culture, slowly changed as it developed. With favorable circumstantial coincidences [the settlement], grew into a city, and this maturation process of the city from settlements could often alternate with periods of decline, abandonment, and regression. Here, in essence, the main stages of a settlement are classified. Large ancient settlements were usually built over and the [fortification] walls thickened, new rows of walls could be erected, but the structure of the old part of the city did not change.

1148 Suleimanov here describes the natural processes of settlement restructuring and decay as much as the role of cultural memory in negotiating urban development (ie. The old part of the city…). When selecting sites as a unit of analysis, typologies are built on a snapshot of the site’s existence that does not reflect the reality of the lived experience of that city. A typology based on size assumes that the settlement was always that size. A typology built on the presence of fortification walls assumes those walls have always been there. A typology built on the presence of a citadel privileges the functional role of the citadel over, say a produce market. All sites were once living entities, a fact that sets

what is gleaned from rigorous stratigraphic control against the over-generalizing effects of typology construction. Here Suleimanov anticipates the perspective of T. Wilkinson, whose own approach to settlement archaeology did not involve settlement typologies, but instead focused on human-landscape interactions and settlement ecology to achieve a more holistic picture of ancient life.1149 However, unlike Wilkinson, Suleimanov still followed tradition in developing a typology that was too varied to work as a classificatory model.

R.Kh. Suleimanov’s typology was created for the expressed purpose of bringing order to his large database of archaeological sites detected through survey. His sites were measured and carefully inspected visually for evidence of elements such as central depressions that indicate courtyards, corner towers, fortification walls, a central or cornered citadel, and many more. Icons were assigned to each so they could be indicated in the accompanying maps of *Drevnie Nakhshab*.

Table. 21 Sites with two components: fortified settlements, castles, complex settlements.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>A rectangular site in plan with a fortification (citadel) in the center.</td>
</tr>
<tr>
<td>2.</td>
<td>An ancient town or settlement, enclosed by a square or rectangular wall with a citadel in the corner.</td>
</tr>
<tr>
<td>3.</td>
<td>A castle or an amorphous manor house in the form of a fortified tower and adjacent buildings</td>
</tr>
<tr>
<td>4.</td>
<td>A castle with a rectangular plan or a fortified manor with a rectangular adjoining area.</td>
</tr>
</tbody>
</table>

Table. 22. Sites with one component: individual estates or settlements.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Square or rectangular structure or settlement.</td>
</tr>
<tr>
<td>6</td>
<td>Oval shaped site that likely reflects the deflation of a rectangular structure or settlement depending on the size.</td>
</tr>
<tr>
<td>7</td>
<td>Figure eight-shaped site. These are two adjacent hills, adjoining at the base.</td>
</tr>
<tr>
<td>8</td>
<td>Teardrop-shaped site. Most often a fortified estate with adjacent farm buildings.</td>
</tr>
<tr>
<td>9</td>
<td>Round shaped site, especially at the base. Most likely a heavily deflated square structure.</td>
</tr>
<tr>
<td>10</td>
<td>A group of small tepas.</td>
</tr>
<tr>
<td>11</td>
<td>Settlement with a fortified entrance at one corner.</td>
</tr>
</tbody>
</table>

Suleimanov frequently refers to these categories as having real value in determining settlement hierarchies. This is despite blatant contradictions structured into the typology. For example, it is difficult to see why a group of small tepas is indicated as being a one component settlement rather than a multi-part settlement, how a settlement with a fortified entrance at its corner is a single component site, or how a single castle or manor house with an adjacent courtyard is a two-component site. Perhaps most important is that this typology compresses time. While Suleimanov cautions against typologies for the very reason that they present a false and static image of individual site development, this statis is still reified within the arrangement. There are important changes to settlement structure that already appear by the early Islamic period with the gradual abandonment of large-fortified estates and settlements built over pre-existing tepas that commanded the landscape. Instead, there is a general process of rural sprawl accompanied by an intensification of irrigation regimes in previously uncultivated areas that gave rise to the unfortified towns and villages that places like Kashkadarya and the Bukhara Oasis have inherited in the present day.
Each numerical category was determined by sizes determined through statistical calculations of total areas in conversation with the presence or absence of fortifications, towers, and citadels. These parameters are used to categorize Kashkadarya sites further. Special categories of sites not included in the 11-type arrangement were described as “complex large cities” (Er Kurgan, Kalai Zahoki Maron, Shulluktepā/Nessef, Kunafasli) and “other settlements with a complex structure” (Kindiklitepā, Babakentepā, Yalpaktepā, Kul tepā, Khoja Rumas, Koshtepā, Teshliktepā, etc.). Suleimanov then went on to assign surveyed settlements into the remaining 11-type scheme, where he immediately ran into problems. I will only address a few categories to illustrate the methodological futility shared with each type. Suleimanov’s “Type 1: A rectangular site in plan with a fortification (citadel) in the center” was further subdivided into three categories based on size: small settlements that are 120-150m on each side with a citadel of 40-50m, medium sized settlements that are 180-250m per side with an 80-100m citadel, and large settlements with sides of 250-300m and citadels of 120-130m per side. Yet as noted above this Type was already meant to factor in a larger size than the other categories and with a citadel. Here we have three arbitrarily subdivided sites by size that are unified only by having at least two components (walls and a citadel). For “Type 11 – a group of small tepa” we are faced with an entirely misleading situation. Grouped as a “site with one component” that are individual settlements or estates, we are led to believe that we are dealing with a dense cluster of very small mounds in a small area. However, when comparing Suleimanov’s map to satellite imagery it becomes clear that these clusters are spread over wide areas. For example, a “site” labelled 346, is given a single

cluster designation. However, the mound cluster is actually seven small mounds spread over an area of 500ha (AMCAA 774, 775, 776, 777, 778, 779, 780), suggesting quite different settlement dynamics than a single small mound cluster would.

Here in lies the problem, settlement typologies fundamentally based on size and the presence or absence of a fortification have led many to delineate very large areas as urban even if they have no archaeologically attested urban character whatsoever – such as Kalai Zahoki Maron. Likewise, large rural sprawl of what is otherwise a single interrelated settlement must be split into smaller units, so these sites do not look urban from a statistical perspective. Otherwise, a small mound cluster spread over 500ha would be coded as urban by a lumper’s standards. They force every other aspect of the site into a regimented categorization of features that seems to disintegrate upon scrutiny. This is not a condemnation of Suleimanov’s findings. In fact, what Suleimanov’s typology unintentionally demonstrates is the complexity of settlements overall that ultimately defy categorization.

Settlements grow out of a complex matrix of accident as well as planning. Typologies imply that observed phenomena were by design first and only organically second because the typology itself is by design, requiring rigid decisions intended to make complex processes tangible for ourselves. There are many instances where there is alignment between our typological categorizations and the role of human agency behind the observed, categorized object. Pottery is a good example since vessels are formed in a single moment and with intent. Even aspects like variations in clay sources for otherwise similar or same vessel types only add to the anthropological value of the object. Settlements are rarely formed ex novo. While this does happen, like at Ai Khanoum and
Kalai Zahoki Maron, settlements are nonetheless always under the strain of rapid
development and decay from which human experience becomes an agent, affect, and
respondent. These already extraordinary, complicated circumstance become even more of
a problem when one factors matrices of meaning, identity, access, aesthetic, control, etc.,
influence the ways in which any given sector of a population sees itself in relation to the
built and natural world. In this respect aligning oneself to a settlement typology has real
political power in cultural erasure, assuming that one sector’s engagement with a city (i.e.
a ruler who values the real estate of their palace and with the power of eminent domain)
has more of a role in settlement development than another (i.e. a migrant population
forced from their homeland and settling in or around a city, altering its fabric but without
care or need for the institutions in place). These social aspects fuel settlement
development and are one of many causes for limitless settlement structures observed in
the archaeological record.

We are not at a stage as archaeologists of Central Asia where meaningful
typologies of Hellenistic and post-Hellenistic sites can be developed. For one, these
typologies would imply a sort of psychic unity of ancient minds in settlement planning,
which negates the more likely scenario of slow growth and organic settlement expansion.
What is more, while I have presented a great deal of evidence for rural life in Hellenistic
Central Asia in the preceding chapters, we still do not fully comprehend the scale of the
settlements we have nor the ones that have been lost. In his own critique of rural
Medieval typologies, Yakubov notes the intrinsic problem of developing typologies
based off unexcavated datasets.\footnote{Якубов 1988: 28.} It is quite difficult to build a model about individual
versus agglomerated sites when sites of both types can be quite ephemeral, buried under massive amounts of alluvium, deflated, or outright not published when they are encountered.

5.3. Household archaeology in Hellenistic and post-Hellenistic Central Asia.

From 1953-60 M.G. Vorobeva excavated a rural farmstead at site called Dingildzhe along the eastern Akchadarya tract distributary of the Amu Darya River in Khorezm.1152 Overall Dingildzhe is a palimpsest of archaeological sites dating from the Achaemenid through Afrigid periods; no less than 53 sites dated to the late Iron Age alone. The project was undertaken as a detachment of S.P. Tolstov’s wider Khorezm Expedition, which at that time with what seems like unlimited funding was employing an army of archaeologists, ethnographers, hydrologists, geologists, aerial surveyors, topographers, and art historians to document relict ancient landscapes in the Amu Darya delta by the Aral Sea.

Vorobeva’s work at Dingildzhe was exceptional (Figure 13). The farmstead chosen for complete excavation was excavated according to principles we would now consider as within the bounds of “household archaeology,” a method of exposure that centers homes over monumental architecture but doing so according to very a meticulous excavation strategy that documents the position of every artifact and ecofact on an ancient surface. This method did not appear in Old World archaeology until very recently. Not only were ancient homes typically ignored in favor of temples,

1152 Воробева 1973.
administrative buildings and mortuary contexts (places with sensational finds), these contexts were considered as having no heuristic value. A 1982 article by R. Wilk and E. Rathje title “Household archaeology” initiated the study of the home as a valid avenue of inquiry in western archaeology. It did not immediately catch on in Old World archaeology, as it did in Mesoamerican archaeology, but by the 1990’s the study of households was established alongside a rise in post-processual considerations in Classical and Near Eastern Archaeology.

The Soviet contribution to the field is not recognized. For these archaeologists what was most important was excavating a variety of context types to develop a characterization of stages of Marxian historical evolution, something that could not be done through only a focus on elite contexts. This is why many of the sites I explored in the preceding chapters had such great coverage, albeit if it can be a be dry and detailed to read. Yet it is also striking to consider the difference of Soviet approaches to Hellenistic and post-Hellenistic household contexts to that of Western archaeologists operating in Central Asia. For example, we can look at the recently published results of the Ai Khanoum houses. Only occasionally do the authors within offer precise stratigraphic information about objects left in situ nor is there much by way of comparison with local, non-elite materials. There is no consideration of the way in which objects were deposited.

Soviet era archaeological research in Central Asia did better to approach a the household than Classical and Near Eastern Archaeology. For archaeologists trained in the West it was only B.A. Ault’s dissertation Classical houses and households: an

1153 Wilke and Rathje.1982
1154 Lecuyot 2014.
architectural and artifactual case study from Halieis, Greece that opened the doors for studying the social life of the house in the Classical world.1155 Prior to Ault’s work on the topic, ancient Greek houses were approached with less intensive excavation strategies to get the relative plan of a house from which the social life of houses gleaned from ancient Mediterranean textual sources could be applied.1156 The archaeological record passively “staged” the activities described in texts (typically plays, philosophical dialogues, or Homer for Bronze Age houses). This remains a popular approach in Classical Archaeology. Ault’s work was innovative in that the archaeological record drove the narrative for interpreting social life at a site.

I should note that ancient Greek houses had been excavated in great detail before Ault’s work. D.M. Robinson’s work from 1928-38 at Olynthos remains the largest exposure of ancient Greek houses for the entire ancient Mediterranean even though his focus on households was unintentional, finding himself lacking monumental architecture but with a committed excavation permit. As L.C. Nevett has noted, the tendency over the latter half of the 20th century was to instead develop house typologies to which terms used by Vitruvius could be applied,1157 such as the pastas courtyard house that we find used as a descriptor for Ai Khanoum’s mansion houses and farmsteads (Tepe 97). We can also add to this the classificatory idea of the “Megaron” house often found in Bronze Age homes of the eastern Mediterranean. The tendency was to bring order to the wide variability demonstrated by excavated house units through selecting key architectural features from which a synthesis could be made. From there arguments could be built of

continuity of specific types over centuries while the aspects which made individual houses unique fell by the wayside.

It was only the work of W. Hoepfner and E.-L. Schwandner in the 1980’s and 1990’s that recognized the importance of household variability in that activity areas did not remain static even if certain architectural features did (and often they did not either). They also recognized that these changes could be linked to wider social practices within a community. B.A. Ault’s own approach innovated on this idea in that the house itself could become a specific unit of study in which an archaeology of an internal household could be developed, tracking the importance of familial structures and social relations over time through the meticulous documentation of room stratigraphy. This approach was adapted by L.C. Nevett, who since Ault has applied this methodology to new excavations at Olynthos but with a more forceful suggestion that ancient texts should not drive our interpretations of Greek households. This led to the publication of an edited work that has been quite useful in this regard, *Ancient Greek Houses and Households* in which most contributors explored social aspects of a house from different angles and using actual archaeological evidence divorced from ancient Mediterranean authors.

The concept of rural household archaeology remains largely foreign to archaeological research in the Old World. Only as recent as 2020 was rural archaeology been given series academic attention in a special issue of *World Archaeology*. None of the articles within that issue approached a household archaeology of the rural home. Typically the question is taken on through settlement distributions, as I have done as in

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1158 Hoepfner and Schwandner 1994.
chapters two and three. Naturally, the opportunity to draw in approaches to household archaeology into a settlement context that I was primarily responsible for was very attractive. While working at Bashtepa this started as the careful documentation of a few pit-house installations to recently exposing the remains of a full pit-house farmstead. As LaMotta and M. Schiffer noted, this approach requires the broad exposure and meticulous documentation of floors. As they note, there are several erroneous assumptions that often emerge from those practicing household archaeology such as the idea that artifacts distributed over a floor context represent a single abandonment event (which I almost never the case) as well as the idea that human behavior can be reconstructed through a rigorous study of artifact distributions over floors. Instead, there are numerous depositional and post-depositional factors which leave artifacts in the state we find them in over floors.

In excavating households at Bashtepa, I found myself faced with a problem encountered by post-Ault/Nevett researchers as much as earlier Soviet scholars. It was often very difficult even with a meticulous, time-consuming methodology to associate actual household artifacts with the structures they filled. Only in specific cases did this seem appropriate, such as with terracotta figurines found sandwiched between two floors. Actual floor contexts were usually devoid of artifacts, indicate that houses were cleaned when were abandoned though intentional cleaning to scavenging.

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1159 LaMotta and Schiffer. 1999
With that said, it was also difficult to develop some degree of standardization between my own excavation and the other rural settlements presented in chapters two and three. While my descriptions of these sites draws out as much information as I could, the outcome resembles something like Kåre Fagerström’s *Greek Iron Age Architecture* (1988), the monograph version of that author’s dissertation. In that project the author sought to develop what was termed “Find Distribution Theory” to attempt to interpret human behavior and internal change within an Iron Age Greek house, which was really just a careful consideration of artifact distributions and depositions in a household context. However, the author brought together dozens of previously excavated contexts that did not care about stratigraphic scrutiny in quite the way required for such a comparative study. This resulted in a very basic presentation of architectural building techniques (that were interesting in their variability, but not the aim of the study), materials, settlement size and internal measurements (rooms, walls, thresholds, etc.), locations of hearths, and only very general statements about pottery distributions. When it came time to synthesize such general data only very general statistical analyses could be made that had to be supported by the texts of ancient Classical authors – two final approaches that I at least had the good sense to discard early on.

The result of my research meant that only a single excavated room within the pit-house farmstead could be reasonably considered a primary deposition and activity area, ON 362 (Figure ??). The presence of a permanent hearth installation in combination with dense layers of heavily burnt handmade cooking wares (pans and cauldrons) and oven fragments makes certain that this space was entirely for cooking (Figure ?). However, this was only for the first phase of the complex since in the second half of the farmstead’s
lifespan this room was completely filled with trash and likely closed off from the rest of the house. It is unclear where the main cooking area moved to.

5.4. Central Asian pit-houses as durable architecture.

A 1997 study by Lebedeva and Shirinov considered for the first time the development of unique architectonic engineering strategies in monumental and residential architecture across Bactria and Sogdiana.\footnote{Лебедева и Ширинов 1997.} Their study systematized aspects of rural and fortification architecture that have long been observed as strategies for mitigating seismic activity. This includes the use of thick pakhsa walls interspersed with unmortared layers of mudbrick to give the dense pisé room to expand and contract to avoid cracking. They also considered the tendency of above ground architecture to slope upwards into a truncated pyramid to insulate against shock. Pit-houses, being sunken into the earth, have a different relationship with seismicity than above ground architecture. What is more, subterranean dwellings have to contend with the weight of material they are set into pressing against the cut walls, which were often plastered or reinforced with mudbrick as a retainer.

There is an interesting commonality between the Bashtepa pit-houses and those excavated at Kampyrtepa. Houses in both settlements feature houses with inward sloping walls that are shaped like inverse truncated pyramids. The case at Kampyrtepa is particularly extreme, where pit-houses were up to 4.5m deep. In that settlement the upper, surface level width of the structure was 6.5m, but gently slopes inward to a room width of 2.5-3m (building 36).\footnote{Двуренческая 2012: 71.} In both instances the strategy helps mitigate the upward load of...
sediment that the structures are set into and distribute the weight of those materials. They seem to me to have the opposite architectonic requirements as above ground structures.

This is not to say there were not periodic cave ins. The pit-house complex at Bashtepa as well as ON 29 to its east both indicated collapse events with walls caving inward. While some walls that caved in in the pit-house complex were later repaired, others were not and were left to spaces that were no longer used. A wall that likely collapsed with ON29 was cleaned away and the remaining earthen wall was left to serve as one façade in a room that otherwise utilized mudbrick. This is perhaps the reason why the Bashtepa pit-house complex features one very long external wall (up to 25m). It was not so much the need to delineate rooms as to have a solid reinforcement for such a large structure.

Concerning the superstructure of pit-houses, I am not aware of a single instance where mudbrick or adobe above-ground walls were used with pit-house construction. The weight of mudbrick, even thin mudbricks would indeed be a major burden on the underlying foundation (which could be rammed earth, mudbrick, or just plastered earth). Therefore, post and reed with other vegetation was ideal for this type of construction as they were extremely lightweight and easily repaired. We should note that wooden frames are not documented in most areas of Central Asia on account of material scarcity in lowland valleys, steppe, and desert areas as much as it is an issue of preservation.

Turning now to round pit-houses, we see a different approach to the same problem of seismicity and ground instability. A point made by Z.A. Arshavskaya in relation to above ground circular fortification architecture applies to small pit-house
As she noted, the circular form was as much a work of pragmatic engineering as it was for defenses. In areas that are subject to seismic activity the round plan structure is superior to a rectangular building because the construction has the same strength and rigidity in all axial directions. However, when deciding on round or rectangular pit-house plans a decision must be made between sacrificing rational, convenient interior planning in favor of wall stability. This is the opposite of rectangular structures, which sacrifices wall strength for convenience. Circular pit-houses are less common in Bactrian and Sogdian antiquity than rectangular installations which means that aesthetic took precedence over function. This being the case what is perceived as a marker of ephemerality, a simple circular form, might actually be architectural pragmatism to prolong the lifespan of the house.

This brings me to my final point on this issue. Rational planning in pit-house construction led to very durable architecture. I do not agree that pit-houses are in any way ephemeral. In fact, they seem to preserve quite well for thousands of years, a point that is not just based on the unique preservation conditions of southern Kyzylkum. Among all examples of pit-houses I introduced across this dissertation only one (Tugai) was partly destroyed by a natural process – riverbank erosion. Others were heavily disturbed by anthropogenic activity (Pulad, Afrasiab). The architectonics of pit-houses also attest to their permanence. Rather than ephemeral, shoddy constructions, pit-houses were durable, easy to maintain, were not resource intensive, and malleable. They also would have been the antithesis to monumental architecture in their ability to blend into the landscape, not

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1162 Аршавская 1987: 92.
only as a security measure, but perhaps as representing an ecological respect for one’s presence in the landscape.

5.5. Challenging the mobility paradigm with some cross-cultural consideration.

Documented, durable manmade architecture for permanent dwelling dates back as early as 15,000-11,500 cal. BP in the late Epipaleolithic Natufian settlements of the Levant, and likely further to Palaeolithic Moravian sites of Dolní-Véstonice and Pavlov. The Natufian structures were semi-subterranean round houses that vary greatly in size and function, with the largest structures ranging from 50-150m² and smaller units of 2-4m². The larger of these structures suggest some communal use whereas the much smaller units were likely strictly dwelling rooms for sleeping. It can be assumed that daily life was predominantly experienced outdoors and ideas of private and public spaces somewhat foreign.

In Eastern Europe, pit-houses were the most common form of architecture during the Neolithic period (ca. 6000 BP) where they have been accepted as dwellings of communities experiencing the transition to sedentism and agriculture from hunting and gathering. It is estimated that Neolithic communities in Romania lived in single pit-houses on a semi-permanent basis, anywhere from a single season and up to ten years. These structures were built 0.25m – 1.5m into the earth, oval in shape, and utilized earthen walls and floors. When they were no longer needed, household trash was used to infill the rooms, sealing the spaces. When were first built, or rather cut (installed?),

1164 Gamble 1999.
1165 Bailey 2018.
crosses were incised into ceramics with pedestal bases and planted into the earth as foundation deposits that celebrated the establishment of a new pit dwelling.

Pit-house use is known in Central Asia as early as the mid-fourth millennium BCE at the large Botai culture hunting settlements of northern Kazakhstan and western Siberia. This Chalcolithic archaeological culture (not an ethnic culture) draws from a local Mesolithic and Neolithic tradition as well as Neolithic traditions of Kelteminar complex sites of the Aral Sea and Kyzyl Kum. Some of the documented settlements were large, up to 15ha. At Botai, the type site for this archaeological culture, some 158 pit-houses were uncovered. These houses were not uniform in shape, ranging from rectangular, ovoid, and polygonal. At Krasni Yar a similar phenomenon was documented. Broadly speaking, people at these sites were involved in the hunting of wild horses as well as gathering and fishing.

Omel’chenko has traced the long development of the pit-house tradition in Central Asia from the Neolithic period into the first millennium BCE. In his opinion, pit-houses arrived in Bactria and Sogdiana through diffusion by way of Bronze Age Tazabagyab, Karakum, and Zamanbaba cultures of cattle-breeders in the Eurasian steppe. Some of these connections were covered in the previous chapter. Omel’chenko did not, however consider that pit-houses were already present in Bactria at Neolithic Hissar Culture sites as I indicated in chapter three, which complicates this clean notion of north-south diffusion. Bronze Age pit-houses are also in the eastern oasis of Samarkand at the site of Tugai, which exhibits local connections with Sarazm but also Sintasha-Petroka in

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1167 Kislenko and Tatarintseva 1999.  
1168 Омельченко 2003: 63.
the north. Tazabagyab pit-houses are quite different from those found in later periods. Varying classificatory schemes in the field of vernacular architecture studies might not even disqualify Tazabagyab houses as true *polyzemyanki* since they are often only dug about 10cm into the ancient earth such as at Angka-5 and Kavat-3 along the Akcha Darya in Khorezm.

The appearance of pit-houses in Khorezm is often associated with the Amirabad culture as early as the 9th-8th century BCE, drawing from earlier influences in the lower Syr Darya such as at Chirikrabat. In the late bronze age Omel’chenko associates the spread of pit-houses with the Amirabad culture of Khorezm, Bourguluk and Chust pit-houses are known in Chirikrabat Culture sites of the Middle Syr Darya from the 10th-9th century BCE. A change in tradition from raw brick houses to pit-houses in southern Sogdiana has led some to suggest the movement of Iranian peoples in connection with broader questions of the movement of Indo-Iranian peoples. In the Pre-Sarygamsh delta Kuyusai culture oval shaped pit-houses and light framed post and reed structures with roofs supported by pillars are known. Others have associated pit-houses more generally as part of the Andronovo cultural package, which is somewhat unspecific given the diversity of Andronovo cultural traditions.

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1169 Аванесова 2015: 673-676.
1170 For example see the discussion of problems with pit-house terminologies in Noble 2014: 112-116.
1171 Воробева 1973: 86.
1172 Омельченко 2004: 63.
1173 Левина 1986: 24-25.
1175 Вайнберг 1979: 10-12.
1176 Benjamin 2018.
Several pit-houses are known at Dingildje in Chorasmia dating to the middle of the first millennium BCE. These are mostly small rural homes that oversaw lands possibly associated with the well-known “manor house.” The manor house was itself dug into the earth in the western half ranging from 2cm-30cm at various points into virgin soil. In the east a basement was dug under room 2 with an subsurface egress into the exterior eastern courtyard corridor, but this of course does not necessarily count as a pit-house. The point being, there are a range of architectural methods employed at Dingildje that include several ways of engaging the earth in house construction.

Central Asia is not the only region in which Greco-Macedonian colonialism engaged with pit-house users. This is also true for the island Berezan off the coast of Ukraine, which I will discuss more in depth below. Omel’chenko notes that the outskirts of Hellenistic Olbia were dotted with semi-subterranean dugouts. These structures were pear-shaped complete dugouts and semi-dugouts with areas of 6-14m² and to a depth of 0.3-2m of light wattle and daub then plastered with clay. A central pillar upheld a conical reed roof covered in clay. Economic pits surrounded the homes. Here this building type followed a tradition originating the Bronze Age of the Northern Black Sea region. Apparently even Greek colonists of lesser economic means adopted this local style of domestic housing.

In Hellenistic Greece there are also indications that rural pit-house dwellers of Phocis would have understood themselves as part of a wider polis community. In

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1178 Кабанов 1981: 34-35.
1179 Солюлов 1999.
1180 Омельченко 2004: 66.
Pausanias’ *Guide to Greece*, the Roman era author’s description of rural Phocis seems to describe the dwellings of the “polis” Panopeas as living in these types of structures. He uses the term “στέγη κοίλος,” literally hollow chambers to describe a dwelling type that he compares to the houses of mountain dwellers (τὰς καλύβας μάλιστα τὰς ἐν τοῖς ὀρέσιν). This leaves open a question about whether Macedonians arriving in Central Asia would have been surprised by encountering people dwelling in the earth.

Another interesting case study is the pit-house settlements of Knyazha Gora near the village Kaniv in the Volga Region and the Plisne settlement along the upper Bug River, both in Ukraine. In an article by M.P. Kuchera, the layout and long-term occupation of these two sites were compared – challenging the notion that pit-houses were primarily seasonal dwellings. At Knyazha Gora in a phase dating to the 12th-early 13th century CE a community of pit-houses emerged, with eleven dwellings exposed in an excavation area of 50m x 15m. What is particularly interesting is the layout of the settlement (Figure ??). Houses were installed in a checkerboard grid fashion at regular intervals with entryways facing regularly sized courtyards (12m x 15m). It seems that the courtyard was of central importance to the community as part of a long-standing tradition. At the Plisne settlement twenty pit-houses dating from the 5th-11th century CE followed a similar grid structure. Initial dwellings were installed in what would be the corners of courtyards. Houses were added to the edges of courtyards that were in use over

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1183 Кучера 1999.

longer periods of time, respecting the courtyard space and thus maintaining the grid pattern.\(^{1185}\) In other words, both villages was clearly centrally planned. While one does not need to imagine a level of central planning that would emerge from a planning committee, it is clear that villagers here had some idea and knowledge of, and commitment to, limits on allotment size that one would expect from places where the scarcity of space was important – such as a city or suburb.

Semi-subterranean dwellings are among the oldest type of durable architecture in the history of settled societies. They come in various forms and are dug to various depths. The most common distinctions in semi-subterranean dwelling types are made between pit-houses and dugouts. Pit-houses are dwellings dug directly into the ground from depths as little as 10cm to several meters. As at Bashtepa, they might utilize architectural materials such as mudbricks to reinforce trench walls or merely use the earth itself, sometimes with plastering. It is more common to find a pit-house with strictly earthen walls and floors but a combination of both techniques within a single structure is known.

A related form of domestic architecture is the dugout. Pit-houses and dug outs are often confused with each other and the terminology is erroneously used interchangeably. They typically are built into sloping terrains such as hillsides or as part of terracing projects with at least two walls utilizing the cut-out area of the earth for walls. The rest of the structure is built of manmade or man-manipulated building materials such as mudbrick, stone, or timber. The earthen portions of the walls, like pit-houses, will utilize simple wall plastering over the earth or some sort of architectural retaining wall. Dugouts

\(^{1185}\) Likewise, at Volyntseve, a site near Putivl in the Seimas. See Кучера 1999.
are defined by their transitional nature as a pit-house and free standing above ground structures.

Both dwelling types are highly utilitarian but seem labor intensive. They both require an initial phase of extraction rather than construction. The extractive nature of pit-house creation challenges the notion of construction and adds nuance to theories of dwelling that focus on the built environment in place-making. It is difficult to generalize which construction type is more or less labor intensive. Above ground structures require resource extraction (sometimes at a considerable distance), resource processing (such as stone hewing, timber planking, or mudbrick molding), architectural planning, and finally construction.

Pit-houses require earth moving with spades or by hand with the main process of extraction, creating a negative space for dwelling, occurring on the spot of living. However, pit-houses also require materials in a labor chain that includes resource extraction (plaster and/or wall reinforcement materials, spolia from earlier architecture, timber and reed procurement, probably locally available), resource processing, reinforcement, and roofing. Architectural planning is somewhat less necessary since pits are dug to suit a minimum of domestic needs. If a room addition is needed, it is mined from the walls. Rather than accommodating all domestic needs, pit-houses seem to facilitate more communal living arrangements where substantial amounts of activities happen “outdoors.”

Dugout builders face a unique set of challenges for stabilizing these structures as they are more likely to be installed in topographically defined areas where there are natural elevations. At their most extreme they can be the most labor-intensive structure
type as they are sometimes accompanied by terracing systems built into the sides of steep hills. Such is the case at Nurtepa in Ustrushana as well as at Sariab in the western Badakhshan mountains. This requires a great deal of planning and labor, dealing with earth moving and sometimes even negotiating the limitations of bedrock.

As permanent fixtures installed into the earth, pit-houses and dug outs are sometimes interpreted as the homes of a society in transition from a form of mobility to sedentism.\textsuperscript{1186} However, this is not how they are interpreted by many researchers working in Central Asia, where they are sometimes seen as distinct markers of a mobile community. Among the most well-known pit-house settlements is the Early Iron Age community at Yakke Parsan II in Khwarezm.\textsuperscript{1187} This settlement features large pit-house dwellings that utilized a post and beam superstructure with reed roofing. Inhabitants practiced some form of agriculture and notably installed their own artificial irrigation system to facilitate crop production. This system involved the harnessing of unreliable waterflows through a series of dams.\textsuperscript{1188} Yet, the dwellings were considered by Vorobyeva to be the summer lodgings of semi-permanent, nomadic occupants.\textsuperscript{1189} Were these nomads transitioning to sedentism? Or were they actual seasonal occupants. It is entirely possible that they were fully sedentary, yet the issue has not yet been completely worked out for pit-houses in Central Asia. In fact, the sedentary versus nomadic architecture issue hasn’t been fully worked out anywhere around the globe and interpretation often seems to be guided by assumption.

\textsuperscript{1186} Noble 2014: 116. 
\textsuperscript{1187} Итина 1963. 
\textsuperscript{1188} Ibid: 108. 
\textsuperscript{1189} Ibid: 115.
One problem that remains unaddressed in the analyses of pit-houses is that pit-houses tend to be constructed in areas where outdoor living was more physically comfortable than indoor living at certain times of the year. For example, the summers in western Uzbekistan are phenomenally hot. This sentence is being written in Uzbekistan in early August. It is currently 40 degrees Celsius and I have experienced even hotter temperatures while working in this region. While I write from a dacha, it is far too hot to work inside on most days and sleeping is entirely outdoors for the much of the summer. This is a standard sleeping arrangement in the Bukhara Oasis and we should consider that our own expectations of comfortable, indoor living and sleeping are simply not possible in places without air conditioning. Returning to pit-houses, we should think more dynamically about the entire use of a landscape, in and around the houses themselves. Stratified micro-deposits within a house or immediately outside might indicate seasonality at a glance, but reality might be somewhat more complex as the use of landscape and environs of a living quarter can change drastically even if a site is permanently occupied year-round.

Complicating matters is comparative evidence for pit-house use in other corners of the Hellenistic world. Soviet, Ukrainian, and Russian scholars of the northern Black Sea region have made a unique contribution to the study of ancient pit-houses and dugouts based on the study of a vast pit-house dwelling community which emerged with 7th century BCE Greek colonization on the island of Berezan off the coast of ancient Olbia. While pit-houses were in use in the Early Iron Age, it is not until the 4th century BCE that they almost entirely replace above ground dwellings on the island. Among that

1190 Solyovlov 1999
scholarly community there is lively debate over how to deal with this phenomenon and questions of ethnic identity are at the forefront of everyone’s minds. There has been much disagreement about who utilized pit-houses here – indigenous populations or ethnically Greek settler “pioneers” from Miletus. The indigenous occupants camp suggest that the simplicity of the pit-house type in the face of purely above ground structures is representative of an indigenous population contesting with colonization by sophisticated above-ground dwelling makers – Greeks. Those advocating the pioneer theory advocate for a hardy, utilitarian Greek population planting roots on the island for a future Milesian colony. A third camp was introduced by Solyolov in 1999, who argued that pit-houses must be interpreted through a purely ethnic lens. In summarizing the debate he adds:

The first, earlier, point of view held that dugout buildings served as dwellings for the local, indigenous population of the Lower Bug region, which had found itself in or been drawn to the trading area of the Greek colony on Berezan (Kaposhina 1956; Stitelman 1956). Supporters of the second point of view looked at dugout construction as an activity of the Greek colonists, who found themselves in a new and unfamiliar cultural and natural environment (Lapin 1966, 156; 1978, 116-34; Kryzhitskii and Rusyaeva 1978; Rusyaeva 1979; Kryzhitskii 1982, 29). Without going too deeply here into polemics on the issue of Greek colonization in the northern Black Sea region, it is still important to note that both approaches remain more or less equally unconvincing in regard to the question of the form and particulars of dugout construction. To a significant extent this may be explained by the fact that the small amount of specific scholarship which has been done in this field is frequently offset by opinions and judgments of a rather general type. However, even following the logic of basic study, it should not be forgotten that a dwelling-place is always a reflection of the everyday culture of an ethnos. In this way, dwellings may be seen not only as a type of structure characterized by a certain set of formal indicators (principles of volume and layout, building methods, materials, construction, and so on), but also as a relatively stable model of human activity, or as an ethnocultural tradition. Of course, in both instances the basis of the difference between building types may be explained by the different methods used by people to create living space under varied environmental conditions. The difference may also lie in the phase of social development attained by the Greek world and by the indigenous peoples on its periphery; forms of dwellings and the overall specific character of construction are to a significant extent shaped not by the physical and
geographical conditions of a colonized region, but by the social and economic, political and cultural features of a specific people. As Berezan’s internal chronology (based on pottery) artificially follows the periodization of ancient Greece: Archaic, Classical, Hellenistic, and Roman. As Solovyov noted, changes to pertinent pottery styles at Berezan do not reflect those of mainland Greece (and in particular, the Athenian-centric model that the ancient Greek chronology adheres to). The nomenclature reveals the raison d’etre for Berezan as an object of archaeological interest by Classical Archaeology. The involvement of “Greeks” with perceived “indigenous” populations establishes a bifurcated view of identity around Olbia during Greek colonization that reflects the very issues I identified in my introduction when Classical Archaeology is applied to a Central Asian colonial context. Greeks are afforded an ethnos, interestingly as Greek rather than specifically Milesian (as we knew them to be and as these populations likely would have identified), whereas indigenous populations remain amorphous entities whose role in the narrative is to serve as a control point for intervening material culture of a foreign authority.

It should be clear that we cannot make assumptions about a community’s ethnic identity or lifeways based entirely on the presence of a pit-house, or any specific type of architecture. This treats architecture as it as a “compartment” bearing essential aspects of an identity while doing a disservice to the full context of a site’s true archaeological identity. The true archaeology of a site is that imperceptible and wholly unattainable complete material record that we all think about before a sigh and a sip of coffee. A site’s true archaeology is something that exists – everything that was once there remains there.
or somewhere else in some material state or transformation. The problem is that we are limited as archaeologists on several fronts to decipher the record, not least of which is the present state of our knowledge how to do so. When materials leave a site, they are most likely gone for good. But it is out there, somewhere, ingested into the material record of that place but existing as some representative of the connectivity of both places.

When dealing with past architecture that is particularly ephemeral, its true archaeology is more likely to be obscured to us. Bearing this in mind, assumptions about the ethnic-bearing weight of an architectural form can only be conjectural based on a limited record, and the simple fact that anyone can build or live in a pit-house. Likewise, a pastoralist is as likely as a nomad, is as likely as a farmer to also conceive of such a house type. Traditions and interconnectivity also play a significant role. Instead, we absolutely must take the context of the entire site to heart. When utilizing reports of past excavations and think critically about the presented data, but especially how that data is synthesized and interpreted.

For interpreting pit-houses it is crucial that archaeobotanical and faunal remains are kept and analyzed for evidence of food production. An approach that considered the types of seasonal crops grown is in part how C. Chang was able to determine that Tuzunsai was a sedentary, year-round site of pit-houses, even if some of its inhabitants were mobile.1193 Attention to palaeobotanical and zooarchaeological remains were unfortunately not as much of a concern for many pit-house excavators as one would like. This makes our interpretations of pit-houses in Central Asian antiquity a bit more burdensome.

1193 Chang 2018.
Another consideration is the archaeological evidence for seasonality itself. The presence of pit-houses often results in an \textit{a priori} assumption that the inhabitants were seasonal occupations, often transhumant or nomadic communities who occasionally return every year, which as noted C. Chang has already proven to be incorrect. There is even disagreement within Central Asian archaeological scholarship over which seasons pit-houses would have been ideally occupied, their relationship to nomadism, the motivations of their users, and their insulation properties.\textsuperscript{1194} Such assumptions are often based on the perceived ephemerality of the pit-house itself and ceramic complexes shared with known mobile populations. This is often at the expense of a critical look at the site depositional record and formation processes. Seasonal occupations should, in theory, leave a material trace in the archaeological record as sites are temporarily abandoned for months, or even years, before communities return. Thus, we should expect to find thin patterned depositions of organic material, animal dung, and trampled surfaces at habitation sites. Particularly it is the exterior (i.e. outside) spaces that may exhibit such a pattern as interior spaces would have been cleaned and repaired with each return. There is simply no way to know how often the interior of a pit-house had been cleaned, whereas exterior spaces would have been far less likely to receive the same treatment unless necessary.

As far as I can tell, aside from our own work at Bashtepa, it is only Avanesova’s excavations of the Bronze Age mining colony Tugai, near Samarkand, that has taken patterned deposition into account when asserting a temporary occupation.\textsuperscript{1195} The

\textsuperscript{1194} Develop this.
\textsuperscript{1195} Аванесова 2015: 47.
northern half of a pit-house excavated at that site was buried 90cm into the earth and reinforced with cladding made of stone blocks. The southern half of the pit-house had broken away in a landslide. The entire house was infilled with cultural material mixed into alternating layers of ash and mining debris with two hearths and storage pits at floor level. A 20-30cm cultural layer was excavated to the exterior of the structure. This thin, 20-30cm exterior layer was cited by Avanesova as a testament to the ephemerality of occupation here.\textsuperscript{1196}

The deposition of cultural layers associated with the post-Hellenistic settlement phase (late 2\textsuperscript{nd} century BCE – 1\textsuperscript{st} century CE) of pit-houses at Bashtepa is like Tugai. The interior of pit-houses were infilled with various thick layers of cultural debris and ash ranging in depth from 0.7-1.5m whereas the cultural layer of the exterior walking horizon hardly exceeded 15cm. This thin exterior cultural layer was comprised of the walking horizon itself, a 5cm thick layer of compacted earth with pressed organic material, and a maximum 10cm layer (usually thinner) of reed and loam with very few artifacts. While it is easy to conclude that the thinness of this exterior cultural layer represents an ephemeral occupation, the idea is humbled by the chronological range and dense packing of cultural debris infilling the pit-houses themselves, which typically range over several centuries. While this in no way suggests that the houses themselves were occupied for such a long time, we must remain cautious in making definitive statements about the longevity of a site’s occupation without taking other factors into consideration. Frankly, Bashtepa is located in a flat desert plain which is exceptionally windy. There is no question that much evidence for occupation on the highest elevated part of the site fell victim to wind.

\textsuperscript{1196} Аванесова 2015: 48-49.
erosion, which certainly would have affected the preservation of less durable features such as cultural accumulations of exterior walking horizons. Similar conditions may have prevailed at Tugai, which is located close to a river and obviously threatened by erosion (obvious because half of the site has disappeared in a landslide). The instability of the site was apparently even evident to its occupants, who utilized stone cladding secured by clay to reinforce the interior walls. These factors may have impacted the preservation of cultural layers at that site.

Perhaps then, one should consider the question of who lives in a pit-house from an ethnographic perspective. In a recent observation by Japarov on the choice of dwellings by modern Kyrgyz transhumant pastoralists, dwelling type is not specified, but Japarov found that dwelling type was constructed based on pragmatism. In his case study, transhumant herders, whose grazing rights were restricted to the snowless and low-snow Telek valley in the Kochorka raion of Naryn oblast, opted to build permanent, year-round structures because pasture forage is available year-round. Likewise in the high-mountain pasture of Ak-Sai in the inner Tian-Shan, competition with high grazing populations in adjacent areas of winter pasture has led some herders to occasionally opt for low-snow areas, or areas with high winds (that keep the mountains clear of snow). As with low snow areas of the Telek valley, these shepherds live in permanent structures presumably until grazing competition returns to a favorable equilibrium.

This brief cross-cultural historiography lends itself to my wider point that pit-houses cannot be associated with seasonality based on a priori assumptions. Despite the abundance of archaeologically attested semi-subterranean houses across the Old World,

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1197 Japarov 2017: 70.
there is a lack of consensus about the functions of these otherwise fairly simple structures. When encountered in a Central Asian context scholars are quick to interpret them based off of general assumptions rather than comparative investigation. As we have seen, these are often bluntly interpreted as winter residences for seasonal migrants, summer residences for others, temporary shelters for workmen, long-term domestic houses of sedentary agriculturalists, and even the Macedonian garrison of Alexander’s forces in Sogdiana. While the functions of these houses are never determined by systematic study, the breadth of ideas inadvertently reflects their reality. Yet even when pit-houses are the focus of intense scrutiny, as is the case for pit use across Neolithic Europe, there is no agreement about their actual function, the lifeways of settlement inhabitants, or other symbolic or phenomenological significance.\footnote{Whittle 1996; Souvatzi 2008; Thomas 1991, 1999; Anderson-Whymark and Thomas 2011; Bailey 2018.} In the most recent book on Neolithic pit-houses in the Balkans, even the notion of a pit-house is questioned in favor of the idea of open-air pits for ritual structured deposition (and not necessarily dwelling).\footnote{Bailey 2018.}

The problem with the debate over large pit function and meaning, be they pit-houses or something else, is that each locus of debate (i.e. Neolithic Britain, Eastern Europe, Central Asia, etc.) seeks to establish a unifying theory of pit-house use. The lack of cross-talk between disciplines seems to have greatly hindered the development of our understanding of pits and especially pit dwellings. There is little interpretive room for pits to be dwellings in some cases, ritually structured depositions in others, something else in others – let alone multi-use spaces that accommodate a variety of activities and meanings.

\footnote{Whittle 1996; Souvatzi 2008; Thomas 1991, 1999; Anderson-Whymark and Thomas 2011; Bailey 2018.}
Ironically, unified theories of architectural pit use do not treat pits as architecture.

Nobody questions the limitless possibilities of activities that might take place in a built, above ground structure. The appreciation for Bourdieu’s *habitus* derived his analysis of the Berber house is curiously withdrawn from subterranean dwelling.\textsuperscript{1200}

The discipline most divorced from an evidentiary basis for interpretation comes a surprising corner – the field of vernacular architecture studies. For some scholars in the discipline, the same *a priori* assumption about the economy of pit-houses exists as in the study of Central Asia. Some scholars whose purportedly engage with all global house types find themselves completely ignoring this house type as an object of analysis.\textsuperscript{1201} which can often be easily dispelled through basic research. For example, in the most recent edition of the *Encyclopedia of Vernacular Architecture*, pit-houses are defined as:

Semi-subterranean dugouts, consisting of timber structures that are partially built underground, are found throughout vast areas of arctic Asia and America. Commonly having roofs covered with logs, planks, sod or earth, they are used as permanent winter dwellings by their nomadic owners, offering good insulation, warmth and protection from winds. Similar structures were also built by early European settlers on the North American plains, and in a few parts of Africa and south-eastern Europe. Though some examples remain, most have been abandoned in the late nineteenth century.\textsuperscript{1202}

Bearing in mind this is a reference text for architecture students and professionals, the passage merits deconstruction. The structural details are somewhat sound but limited exclusively to timber frame structures (it is true, pit-houses of this type do exist in arctic Asia and America other types exist as well). In some places, perhaps even Yakke Parsan 2, they are used for winter residences because of their thermal and airflow properties, but

\textsuperscript{1200} Bourdieu 1970.  
\textsuperscript{1201} Oliver 2006.  
\textsuperscript{1202} Villinga, Oliver, Bridge 2007: 45.
not mentioned, these same properties also have a cooling function during the summer. A
particular problem is the link with nomadism and seasonal migration. As demonstrated in
the preceding chapters, there is a wide variety of semi-subterranean dwellings across
Bactria and Sogdiana.

The misattribution of semi-subterranean dwellings to seasonal migrants is largely
a reflection of assumptions made about the impermanence of the structures themselves.
Some of these structures, such as those Yakke Parsan and Dal’verzin (Surkhandarya), are
indeed ephemeral. As such they give the impression of a structure only slightly more
durable than a yurt (although yurts are quite durable as well). Many pit-houses are round
and the mere fact of yurt using traditions among steppe nomads of Central Asia leads for
a one-to-one correlation between both structure types. But these are just appearances. It is
this same a priori association of yurts with nomads that allows for interpreters of
Epipaleolithic Natufian pit-houses as reflecting the structure types of “nomadic
predecessors” – predecessors whose house types were so ephemeral that we do not fully
understand archaeologically.

Most pit-houses dating to the Hellenistic and post-Hellenistic period are not
ephemeral. They are remarkably durable. They are so durable that I will go as far as to
suggest that they are as durable, if not more durable than above ground mudbrick
architecture in many areas of Bactria and Sogdiana. Taking Bashtepa as an example, we
seem confident that above ground architecture also existed in some areas, such as perched
on top of the Hellenistic platform. However, we have no evidence of these structures
because of site deflation (for which there is an abundance of evidence). In contrast, the
entire architectural plan of the post-Hellenistic and Hellenistic pit-house settlement is
near perfectly preserved. Collapsed walls are rare, ancient repaired walls held up at their joins, walls are still plastered (even in areas where the walls were earthen and not constructed of adobe or mudbrick). Even some of the reed roofing material has survived. These houses can and probably will be reused by one of the local shepherds who currently utilize the area as pasturage every day. If one is thinking that these are unique preservation contexts, we can also turn to Tamoshotepa or Kampyrtepa which both occupy very different ecological conditions than the arid southern Kyzylkum.

Based on my presentation in previous chapters, it is possible that pit-houses were the principle house type for rural populations in general in Central Asia’s late Iron Age and even Kushan Periods. However, despite their prevalence among Soviet and post-Soviet archaeological literature (they are almost completely ignored by Classically trained scholars in Western Europe and North America), these house types are still interpreted based off assumptions mirroring those those noted here. Thus, when encountering Greco-Bactrian period pit-houses at Dalverzintepa, object DT-7, G. Pugachenkova states plainly:

According to ethnographic data, semi-dugouts consist of a round or square pit 30–40 cm deep, above which a spherical or gable roof is made of reeds and felt. B. X. Karmysheva considers the semi-dwelling to be an indicator of a semi-sedentary lifestyle and believes that it retained the shape of the dwelling of ancient Iranian-speaking nomads who became part of the Tajiks of the Turkestan, Zarafshan and Gissar ranges. It is possible that some of the pit-houses uncovered at the site of Tamoshotepa, dating from the Greco-Bactrian period and similar in construction to the Dalverzin, are also dwellings of the type of semi-dugouts, and not only utility pits.\textsuperscript{1203}

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\textsuperscript{1203} My translation. Пугаченкова и Ртвеладзе. 1978: 75.
Despite Pugachenkova’s suggestion that Dalverzin’s pit-houses are *possibly* like those of Tamoshotepa – it is in fact not possible. In fact, they are entirely dissimilar, although this might not have yet been known to her at the time.\(^\text{1204}\) What is remarkable is that the interpretation is made based strictly off ethnographic comparison rather than comparative seriation of known pit-house types in Central Asia.

Pugachenkova made the same essentializing mistake that I criticized above across pit-houses in a Central Asian context – their mere presence leads to an assumption of uniformity. For Pugachenkova pit-houses at Dalverzintepa are like Tamoshotepa (they are not), for Omel’chenko the pit-houses at Padayaktepa are also like Tamoshotepa (they are not). The only common feature between most rural and non-rural sites that utilize pit-houses is their utter lack of regularity in architectural form.

The essentializing problem is also repeated in other areas of household archaeology. In an earlier section of this chapter, I expressed a general frustration with the production of settlement typologies to simplify and classify the big datasets we produce about broad human habitation across landscapes. I feel more confident about the utility of typologies at the household level, but still not as confident as others. In his attempt to bring order to the vast published “legacy” archive of households at Olynthos, N. Cahill regularly found himself challenging the notion of a “Type House” pulled by interlocutors who drew upon excavated household contexts Olynthos to make broad claims about the Classical Greek household.\(^\text{1205}\) Repeating his examples here, Cahill criticized W. Graham, G. Mylonas, and Hoepfner and Schwander who each (to varying

\(^\text{1204}\) The more complete reports of Tamoshotepa only appeared after the publication of Pugachenkova and Rtveladze’s volume on Dalverzintepa.
\(^\text{1205}\) Cahill 2002: 82-83.
extremes) drew on the idea that houses at Olynthos were near identical or only slightly varied. In different ways, each of those authors cited perceived uniformity of a Greek house at Olynthos to argue for specific Greek ideas about town planning or even virtuous ideals such as *isonomia* in a naturally Greek spirit of domestic building. However, as Cahill noted Olynthos is spectacular not because of its uniformity, but because the broad excavations of D.M. Robinson and later L. Nevett actually demonstrates the *irregularity* of the Greek household across a contemporaneous site.

Similar arguments about the regularity of the household are now canonized in the recent Ai Khanoum publication of excavated households. In that book there is much talk about the regular form of the mansions in the southwest quarter compared to those of the suburbs, and with shared architectural principles in the rural hinterland. Yet, this is not the case at all. As I noted in chapter two, from our limited evidence there is not much uniformity across any of these contexts. There is variety in rural settlements as much as there is variety in the types of houses within the urban environs of Ai Khanoum itself, if we dare to compare the elite mansions of the southwest city with the non-elite (possibly barrack) housing of the acropolis.

I find the same irregularity with pit-house construction as much as I find the same urge among scholars to lump objects together that are in fact dissimilar, from which misleading and essentializing claims are made about the archaeological record. While this might be a tedious argument for some, I do think the stakes are quite high if our ultimate goal is to identify loci of human diversity in the archaeological record (or it least that should be the goal). This diversity is important because, as I have argued in other sections under different evidentiary constraints, without it we end up with categories in Hellenistic
Central Asian archaeology of “Greek” and “non-Greek,” or “Greek” and “Bactrian”, or “sedentary” and “nomad.” Each of these categories are overly essentialized and cannot possibly reflect the way that ancient people saw themselves or each other in this colonial context.

This brings me to another issue raised by Pugachenkova’s assumption that persists elsewhere as well – the relationship between semi-subterranean dwellings and ethnic identity, particularly “Iranian speaking nomads.” To be clear, the is no way to associate the use of an architectural principle with particular language groups. Even if the concept of a pit-house developed autochthonously within the area south of the Gissar range, its universal adaptability as an architectural technology would allow it to flourish far beyond the confines of a particular ethnic group. Comparable to changes in pottery production technology and figurative art as evidence for the “spread of Hellenism” (and sometimes even a physical Greek presence), the use of a pit-house is taken to be representative of the spread of Iranian-speaking nomads.

The problem extends beyond the implied wink to notions of “pots equals people” that led to the spectacularly ruinous association of Indo-Europeans with grey ware pottery in Iran and West Asia.\textsuperscript{1206} There are modern ethno-political implications for the association made by Pugachenkova, as there usually are when ethnicity is drawn from material objects. The presence of a pit-house at Dalverzintepa becomes evidence for the ancestral, nomadic origins of modern Tajiks in Turkestan, the Zerafshan (where there were and remain ethnic tensions with Uzbeks),\textsuperscript{1207} and Gissar Range.

\textsuperscript{1206} Refer to Iran prelim bibliography for the debate.  
\textsuperscript{1207} Foltz 2019.
Chapter 6. Conclusion.

One of the immediate successes of this dissertation for the field of Hellenistic Central Asian archaeology is that it demonstrates that there is far more to be said about the topic than is currently appreciated. In this work I deliberately avoided engaging with the most pressing debates in the field to show that there are other unexplored avenues of research that can enrich our understanding of ancient lives in the region. Through focusing on rural indigenous life, that is, all non-Greek populations living under the abstract authority or influence of Seleucid and Greco-Bactrian rule, I hope to have convinced the reader that our discipline cannot afford to continue to turn away from the evidence for colonized peoples. In this sense my approach is entirely post-colonial in that I have sought out every scrap of archaeological evidence for what Ranajit Guha would refer to as the “sub-altern” or “small voice of history.”

Whereas previous researchers have looked to deconstruct elite architecture for evidence of native Bactrian life (never Sogdian) I asked the archaeological record what evidence there was for actual non-elite populations across Bactria and Sogdiana. To do so I had to rely almost entirely on the vast legacy archive of Soviet-era and post-Soviet archaeological literature. I know that there are many areas I missed. I am especially aware that there are many promising lines of inquiry that I did not fully engage based on the data drawn together here. After several years of collecting this data the prospect of saying something more than descriptive and superficial about rural Hellenistic and post-

\[\text{Guha} 2009.\]
Hellenistic life gradually slipped away as it became more pressing to simply bring together the pockets of data that have only recently started to come together.¹²⁰⁹

When this project began, R. Mairs *The Greco-Bactrians and Indo-Greeks* did not exist. While there is much crossover between my own approach and interpretations of the authors within that volume, I did my best to update my own work and give credit to what is now published. However, the perspective of many articles in that book still takes evidence for Hellenic life as the starting point with indigenous life hardly considered, even if the sites in which those people lived do appear in that volume. What I hope to have achieved here is provide some nuance to the discussion in emphasizing the types of material evidence available that speaks to rural engagements with Hellenic life, but especially the evidence for continuity of indigenous lifeways that persisted in spite of the power of colonial material culture across the region.

My chosen approach was to look at settlement patterns and specifically rural vernacular architecture. As presented at the end of chapter two, this is in part due to my own excavations of a rural farmstead built entirely of pit-houses at Bashtepa in western Uzbekistan, or the limits of western Sogdiana. In focusing on pit-houses, I emphasized a class of material culture that is generally avoided because of clear biases that favor monumental architecture. While I too am interested in monumental architecture in Central Asia, it seems to me to be very limited as a category of meaning. With most of our evidence coming from Ai Khanoum, we can only speak of monumentality in relation to royal kingship. I see this royal kingship as formulated by the early Seleucids in Mesopotamia and only applied as a veneer over a Bactrian landscape context. I do not

¹²⁰⁹ Mairs 2021.
think monumentality at Ai Khanoum tells us anything about Bactrians, other than that it is one political, colonial statement.

The post-Hellenistic pit-house farmstead at Bashtepa is the antithesis of Ai Khanoum’s monumentality. There people slept in the ground instead of addressing the lofty heights of a Seleucid or Greco-Bactrian king (and yes, these structures are later, but here they are a metaphor for all of their non-elite brethren). They were quite messy, ate a lot of meat, primarily lived and socially engaged outside, toiled in fields, and walked many kilometers per day alongside goats and cattle. This is not to romanticize or exoticize rural life, it is just that very few have asked about the people who lived and worked in overwhelming majority of territory that was ostensibly under Greek authority.

With this dataset now established in this dissertation, this project can only go in new directions that addresses the social and economic aspects of rural Hellenistic life. One question that needs to be addressed is how the rural economy interacted with the elite, Seleucid and Greco-Bactrian economy. Was it the case that these populations lived only in parallel to each other without interacting? This cannot be the case. My suspicion is that aspects of the rural economy in Bactria and Sogdiana actually formed the backbone of local elite wealth. This wealth was likely reliant upon the production and trade of animals. In fact, the wealth itself might have been the animals, since coinage seems to have had only a restricted circulation at this time. Regrettably, I was only able to hint at this issue in addressing rural, suburban, and urban interactions at Ai Khanoum. A more in-depth study can only now begin with the evidence laid out as it has been in this dissertation.
Another promising line of inquiry that emerged from this work, but was left unaddressed, is aspects of social identity derived from material evidence that can move beyond tired, fruitless questions of ethnic identity in a Central Asian context. While I enjoy and admire post-colonial approaches such as hybridity theory as useful paradigms for studying complex colonial interactions, I also believe we need to be especially careful with how we try to apply these interpretive frameworks to highly restrictive classes of evidence. For Hellenistic Central Asia hybridity has only been applied to elite contexts while attempting to make a statement about the lives of local non-elites. The result is a preservation of the very problematic categories post-colonial models seek to redress – the reification of a dominant, highly visible culture against a muted, obfuscated, and essentialized “other.” While I see that the intentions mean well, I do not see how hybridity theory can be applied to Bactria or Sogdiana if the actual evidence for indigenous Bactrians or Sogdians has not been sought out. This is another area that I hope my dataset helps move forward.

Returning to the point however, there are other areas that do not rely upon ethnicity as a classificatory paradigm for seeking out social identity. One area that will emerge from this dataset is a study on ancient viticulture and the construction of a “viticulture identity” across the region. Grapes, wine, Dionysus, vineyards, and textual attestations to Central Asian wine consumption are recurring themes in this dissertation as well as in data that I left out. I think there is a strong likelihood that there were large late Iron Age, Hellenistic, and post-Hellenistic vineyards that engaged with wine trading. Within this framework a trade in wine drinking vessels seems to have emerged and
continued to evolve according to the elite fashions of the day: phiale to Megarian bowls to fine stemmed clay goblets that look very similar to modern wine glasses.

One final area builds upon the last. Who was responsible for the trade in elite goods? This is something that also lurked behind the data presented here. One striking area, that remains pure speculation, is the possibility that migrants arriving from northwest China, the Yueh-Chih, might have been able to exploit a gap in the movement of elite goods by the end of the Hellenistic period, only then establishing themselves as an early incarnation of “Sogdian traders” rather than the bands of marauders that prevailing interpretations of history currently allow. My suspicion is that this group might have played an important intermediary role between non-elite and elite communities in commodities trade from which they were later able to position themselves as regents over Bactria (and smaller nomadic kingdoms elsewhere) by the beginning of the 1st century CE. One aspect I think that has emerged from the present study which lends itself to this idea is their rapid development of settlements across all of Central Asia after the end of Greek rule. We do not have a good reason for understanding this phenomenon, nor do I think we have until now been able to fully appreciate the scale of post-Hellenistic and Kushan influence.

To sum up, here the cliché holds that there is still much work to be done. Drawing attention to an overlooked body of material can only be the springboard for future research. What is particularly exciting is that we can now start a conversation about actual indigenous Bactrians and Sogdians since I do not expect all to agree with my interpretations here. But seeking validation of an idea is not the point of this work. What I hope to have achieved is the exploration of a new line of inquiry that moves us beyond Ai
Khanoum, or even Takth-i Sangin and allow some new areas of contextualization for ongoing and future research projects in Afghanistan, Uzbekistan, and Tajikistan.
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Images
Figure 1. Regions of Central Asia during the Hellenistic period and their approximate boundaries. Significant archaeological sites are indicated in black (© Zachary Silvia; imagery, Bing 2016).
Figure 2. The distribution of Hellenistic period sites across Bactria, Sogdiana, and Margiana (440 total) with key oases indicated. Eastern Kashkadarya is represented by an incomplete dataset (© Zachary Silvia; imagery, Bing 2016).

Figure 3. The distribution of post-Hellenistic and Kushan period sites (ca. late 2nd c. BCE – 3rd c. CE) across Bactria, Sogdiana, and Margiana (850 total) with key oases indicated. Eastern Kashkadarya is represented by an incomplete dataset (© Zachary Silvia; imagery, Bing 2016).
Figure 4. The mountains and oases of Bactria. (© Zachary Silvia; imagery, Bing 2016).
Figure 5. 4th c. BCE (late Achaemenid) sites of northeast Bactria. Note that an Achaemenid occupation of AMCAA 2, Ai Khanoum, is uncertain. AMCAA site key: 2 – Ai Khanoum; 47 – Bīsh Ka‘ik; 48 - 47 – Bīsh Ka‘ik; 92 – NN 92; 93 – NN 93; 110 – Ghuz Tepe; 111 – Ghuz Tepe 2; 113 - Gügar; 117 – Gügar; 139 – Kāfir Qal’a, Rustaq; 158 – Kaldīsh, NE; 159 - Kaldīsh, S; 160 - Kaldīsh, S; 161 – Kaldīsh, S; 176 – Khwāja Ḥafiz; 180 – Kohna Qala; 334 – Zard Kamar; 335 - Zard Kamar; 336 – Zard Kamar; 337 – Zard Kamar; 338 – Zard Kamar; 340 – Zulm; 1204 – Tepe 106; 1239 – Makonimor. (© Zachary Silvia; imagery, Bing 2016).
Figure 6. Late 4th – mid. 2nd c. BCE (Hellenistic period) sites of northeast Bactria. AMCAA site key: 2 – Ai Khanoum; 45 – Bish Ka’ik; 46 - Bish Ka’ik; 47 - Bish Ka’ik; 94 – Tepe 97; 110 – Ghuz Tepe; 111 – Ghuz Tepe 2; 112 – Gugari; 117 – Gügari; 139 – Kāfir Qal’a, Rustaq; 142 – Kakul; 158 – Kaldīsh, NE; 159 - Kaldīsh, S; 160 - Kaldīsh, S; 161 – Kaldīsh, S; 176 – Khwāja Hāfiz; 180 – Kohna Qala; 228 – Qarluq; 270 – Shahrawan Gur Tepe; 290 – Shortughai; 303 – Takhnabad; 304 – Takhnabad; 314 – Turghai Tepa; 318 – Uraz Bacha 1; 319 – Uraz Bacha 2; Uraz Bacha 3; 340 – Zulm; 735 – Sakhsanokour.
Figure 7. Archaeological sites of the plain of Ai Khanoum. Hellenistic canals are indicated in blue. AMCAA site key: 2 – Ai Khanoum; 85 – Chim Qurghān; 92 – No name (NN) 93 – NN 93; 94 – “Tepe 97”; 110 – Ghuz Tepe; 111 – Ghuz Tepe 2; 142 – Kakul; 180 – Kohna Qala; 290 – Shortughai; 314 – Turghai Tepe; 318 – Uraz Bacha 1; 319 – Uraz Bacha 2; 320 – Uraz Bacha; 340 – Zulm; 1204 – Tepe 106 (© Zachary Silvia; imagery, Bing 2016).
Figure 8. A satellite image of Ai Khanoum (AMCAA 2) featuring a plan of all excavated areas (© Zachary Silvia; CNES / Airbus via Google Earth, image date 10/9/2019).
Figure 9. Satellite image of the eastern area of so-called “indigenous habitations” and possible garrison housing on the acropolis of Ai Khanoum (© Zachary Silvia; CNES / Airbus via Google Earth, image date 10/9/2019).
Figure 10. A satellite image of Kohna Qala (AMCAA 180) (© Zachary Silvia; CNES / Airbus via Google Earth, image date 10/9/2019).

Figure 11. A satellite image of Hellenistic vineyards in the suburbs east of Ai Khanoum (© Zachary Silvia; imagery, Bing 2016).
Figure 12. Hellenistic Shortughai (AMCAA 290) (Reconstruction by Zachary Silvia, after H.P. Francfort 2013).

Figure 13. Dingildje in Chorasmia (© Zachary Silvia after Воробева 1973).
Figure 14. Sites of eastern Bactria overview. AMCAA site key: 2 – Ai Khanoum; 5 – Aliābād; 27 – Āwarzan; 32 – Bād-I Āsyā; 82 – Chehel Kand; 184 – Kuri; 290 – Shortughai; 696 – Dushanbe Settlement; 702 – Hissar Fortress; 730 – Tamoshotepa; 734 – Takht-i Sangin; 735 – Sakhshanokour; 736 – Sariab; 737 – Parshnev; 738 – Chartim; 739 – Baikala; 740 – Miyenakukh I; 741 – Badamara I; 742 – Jaushangaz III; 743 - Jaushangaz IV; 744 – Jaushangaz VI; 745 – Rin II; 746 – Kaakhka I; 747 Mislidigar; 748 – Chilkhana; 749 – Yamchun I; 750 – Yamchun II; 751 – Ratm II; 752 – Ratm I; 753 – Richive; 1246 – Kei-Kobad-Shah (© Zachary Silvia; imagery, Bing 2016).
Figure 15. Sites in the Wakhan corridor. AMCAA site key: 32 – Bād-I Āsyā; 82 – Chehel Kand; 737 – Parshnev; 738 – Chartim; 739 – Baikala; 740 – Miyenakukh I; 741 – Badamara I; 742 – Jaushangaz III; 743 - Jaushangaz IV; 744 – Jaushangaz VI; 745 – Rin II; 746 – Kaakhka I; 747 Mislidigar; 748 – Chilkhana; 749 – Yamchun I; 750 – Yamchun II; 751 – Ratm II; 752 – Ratm I; 753 – Richive (© Zachary Silvia; imagery, Bing 2016).
Figure 16. A satellite photo of Kaakha I in Badakhshan (© Zachary Silvia; CNES / Airbus via Google Earth, image date 8/18/2017).

Figure 17. A satellite image of Sariab (AMCAA 736) with the course of likely paleochannels channels indicated (© Zachary Silvia; CNES / Airbus via Google Earth, image date 8/24/2019).
Figure 18. A plan of Saksanokhur (AMCAA 735) (from Литвинский и Мухитдинов. 1969).

Figure 19. A plan of Tepai Diniston (AMCAA 1206) (from Денисов 1982).
Figure 21. Tamoshotepa in Yavan (AMCAA 730). Excavation areas are indicated in grey. The original map is not clear enough to locate specific trench areas (© Zachary Silvia 2020, after Филимонова, Юсупов, и Абдуллаев 2016)
Figure 22. Tamoshotepa. Plan of excavation 9.
Areas with dotted lines are household economic pits. Numbers correspond to Abdullaev’s system of pit numbering (from Абдуллаев, 1979).

Figure 23. Tamoshotepa. Plan of the upper phase, excavation area 18.
Legend: 1 - ash layer, 2 - ceramic vessels, 3 - fragments of ceramics, 4 - khums, 5 - touchstone, 6 - beads, 7 - burnt clay, 8 - stone, 9 - pakhsa, 10 – virgin soil (from Абдуллаев, 1979).
Figure 24. Tamoshotepa. Excavation area 6.
Figure 25. Reconstruction of Tamoshotepa first pit-house phase (Zachary Silvia 2020, after Филимонова, Юсупов, и Абдуллаев 2016)

Figure 26. Reconstruction of the Tamoshotepa final phase above ground farmstead (from Филимонова, Юсупов, и Абдуллаев 2016).
Figure 27. The plains of Panj, Archi, and Imam Sahib along the Darya-i Panj (© Zachary Silvia; imagery, Bing 2016). AMCAA site key: 18 – Archi; 42 – Bāsiz; 44 – Bāsiz; 99 – Durman; 128 – Ishkili; 129 – Ishkili; 135 – Kāfīr Qala; 136 – Kāfīr Qala; 177 – Kirghiz Tepe; 190 - Mullah Afghāni; 191 – Mullah Afghāni; 192 – Mullah Afghāni; 193 – Tash Tepa; 195 – Mullāh Qūli; 196 – Mullāh Qūli; 202 – Nayib Dum; 217 – Qanjughā; 218 – Qarawal; 219 – Tepe Burhan Bai; 215 – Qanjughā; 239 – Qurghan Tepe; 241 – Qurghan Tepe; 242 – Qurghan Tepe; 243 – Qurghan Tepe; 270 – Shāhrawān Gur Tepe; 271 – Shāhrawān Gur Tepe; 732 – Baitudasht 2; 733 – Baitudasht 4; 1241 – Baitudasht 5; 1242 – Baitudasht 6; 1243 – Baitudasht 7; 1244 – Baitudasht 8; 1245 – Kyzyltepe.
Figure 28. Baitudasht sites 1-8 (© Zachary Silvia, after Абдуллаев 1983).
Figure 29. The Baitudasht piedmont with the location of Baitudasht 2 indicated (© Maxar Technologies via Google Earth, 2022).

Figure 30. Plan of a pit-house at Baitudasht 2 (© Zachary Silvia after A. Абдullaев 1987).
Figure 31. The settlement at Takht-i Sangin. Sectors A though H represent the residential area with the Oxus Temple located at sector E. In the north are the Takht-i Sangin necropoleis and limestone and clay quarries, situated in the Teshiktash Mountains (© Zachary Silvia; imagery, Bing 2016).
Figure 32. Oxus temple precinct with bazaar(?) and dock to the east based off of the description of Druzhinina 2016. South of the temple is the beginning of settlement area D. Google image indicating the docking area, marketplace, and temple (© Zachary Silvia; imagery, Bing 2016).

Figure 33. Kampyrtepa with the location of the pit-house circled in grey (© Дворенческая 2012).
Figure 34. Settlements of the Hissar Valley with western (A) and eastern (B) zones indicated. AMCAA site key: 414 – Besh Kopa; 415 – Kafir Kala; 477 – NN 477; 506 – Bujrapush Tepe; 695 – Chimkurkantepa; 697 – Kutantepa; 696 – Dushanbe Settlement; 698 – Mavlondjar; 699 – Karamkul'; 700 – Langar; 701 – Mogil’nik Ittifok; 702 – Hissar Fortress; 703 – Khoki Safed; 704 – Tophona; 705 – NN 705; 706 – Niegon; 707 – Dayubtepa; 708 – Chilontepa; 709 – Gylyazilatepa; 710 – Markhamattepa 1; 711 – Regarska Fortress; 712 – Garavtepa; 713 – Kutantepa; 714 – Akkurgan; 715 – Yakhshiabad; 716 – Nuratepa; 717 – Durbenttepa 1; 718 – Durbenttepa 2; 719 – Shakhrinai; 720 – Kakhramontepa 2; 721 – NN 721; 722 – NN 722; 723 – NN 723; 731 – Kuz Kainar; 1233 – Kiblai; 1236 – NN 1236; 1237 – NN 1237; 1238 – Kurgon Kulobi.
Figure 35. 5th-4th c. BCE (Achaemenid period) sites in the Surkhandarya and Kafirmigan oases (55 total), including Kyzlcha 1-5 and 8-10 (not depicted) (© Zachary Silvia; imagery, Bing 2016). AMCAA site key: 341 – Javlandattepa; 360 – Yalingoyq ota Tepa; 376 – Talashkantepa 1; 391 – Pashmaktepa; 392 – NN 392; 393 – NN 393; 394 – NN 394; 403 – Khajtabad Tepe; 413 – Junus Tepe; 418 – Termez; 419 – Termez Citadel; 451 – Khalchajan; 453 – Khalchajan Settlement; 454 – Khalchajan Settlement 2; 479 – Kyzyltape; 481 – Kyzlcha 6; 486 – Kyzylcha 5; 487 – Kyzylcha 7; 491 – Kyzylcha 11; 495 – NN 495; 496 – Kuchuk Tepe; 497 – Pshak Tepe; 499 – NN 499; 500 – Bandykhan 2; 501 – Kindyk Tepe; 502 – Gazimulla Tepe; 509 – Bandykhansai Tepe; 515 – NN 515; 530 – NN 530; 535 – Shortepa; 540 – Kuchuk Tepe; 549 – Beshkutan Tepe; 561 – Chigatay Tepe; 575 – NN 575; 576 – NN 576; 578 – Koi Turabek Tepe; 588 – Navruz Tepe; 591 – NN 591; 604 – NN 604; 605 – Qira Qira; 607 – Dunjo Tepe; 608 – Dunjo Tepe; 609 – Qira Qira; 760 Kobadian; 818 – Takht-I Sangin, Necropolis 1; 1246 – Aral Pajgamber; 1247 – Kei-Kobad-Shah.
Fig 37. Previous page. Mid. 2nd c. BCE – 3rd c. CE (post-Hellenistic and Kushan periods) of Northern Surkhandarya: the To’palang, Qizilsu-Kiyasu, Khalkadzhar micro-oases (101 total) (© Zachary Silvia; imagery, Bing 2016).

Figure 38. Previous page. Mid. 2nd c. BCE – 3rd c. CE sites (post-Hellenistic and Kushan period) of southern Surkhandyarya and Termez (east), and the Sherabad micro-oasis (west), (103 total) (© Zachary Silvia; imagery, Bing 2016).

Figure 39. Kyzyltepa and the Kyzylcha group of rural settlements (© Zachary Silvia; imagery, Bing 2016). AMCAA site key: 479 – Kyzyltepa (outlines indicate the general contours of the settlement); 480 – Kyzylcha; Kyzylcha 6; 482 - Kyzylcha 1; 483 – Kyzylcha 2; 484 – Kyzylcha 3; 485 - Kyzylcha 4; 486 – Kyzylcha 5; 487 - Kyzylcha 7; 488 - Kyzylcha 8; 489 - Kyzylcha 9; 490 - Kyzylcha 10; 491 - Kyzylcha 11; 517 – Bujrachi Tepa 1; 611 - Bujrachi Tepa 2.
Figure 40. Kyzyltepa site plan (Zachary Silvia for the Uzbek-American Expedition in the Mirshade Oasis, 2015)
Figure 41. Kyzylcha 6. Phases 1-4 (from Сагдуллаев 1987a).

Figure 42. Kyzylcha 6. Artist rendering and isometric reconstruction (from Сагдуллаев 1987a).
Figure 43. 5th-4th c. BCE sites of Kashkadarya (6 total) (© Zachary Silvia; imagery, Bing 2016). AMCAA site key: 620 – Er Kurgan; 768 – Kunya-Fazli; 803 – NN803; 1092 - NN 1092; 1093 - NN 1093; 1177 – Sangirtipa.
Figure 44. Late 4th – mid. 2nd c. BCE (Hellenistic) sites of the Guzar Oasis in Kashkadarya (12 total). The yellow dashed line indicates the likely route from Baysun to Er Kurgan by way of Guzar (© Zachary Silvia; imagery, Bing 2016). AMCAA site key: 808 – NN 808; 809 – NN 809; NN 1061 – 1061; NN 1062 – 1062; NN 1066 – 1066; NN 1067 – 1067; NN 1069 – 1069; NN 1071 – 1071; Saubagtepa – 1077; NN 1079; Kabristontepa – 1081; Kurgancha - 1092.
Figure 45. Mid. 2nd c. BCE – 3rd c. CE sites (post-Hellenistic and Kushan period) of the Guzar Oasis in Kashkadarya (32 total). The yellow dashed line indicates the likely route from Baysun to Er Kurgan by way of Guzar (© Zachary Silvia; imagery, Bing 2016).

Figure 46. Late 4th c. - mid. 2nd c. BCE sites (Hellenistic) of the Karshi Oasis in Kashkadarya. The inset features sites around Er Kurgan. (32 total). (© Zachary Silvia; imagery, Bing 2016). AMCAA site key: Er Kurgan – 620; NN 764 – 764; Kiiktepa – 765; Koshtepa – 770; NN 771 – 771; Kutantepa b – 774; Kutantepa c – 775; Kutantepa d – 776; Kutantepa e – 777; Kutantepa f – 778; Kutantepa g – 779; Kutantepa h – 780; NN 782 – 782; NN 783 – 783; Dashtlikmazartepa – 785; NN 786 – 786; Kurgantepa – 787; Shaykhalitepa – 789; Yalpaktepa – 791; NN 793 – 793; Kundjulitepa – 794; Mudintepa – 795; NN 799 – 799; NN 800 – 800; NN 801 – 801; NN 802 – 802; NN 803 – 803; NN 804 – 804; Kindiklitepa – 805; NN 806 – 806; NN 807 – 807.
Figure 47. Previous page. Mid. 2nd c. BCE – 3rd c. CE (Post-Hellenistic and Kushan) sites of the Karshi Oasis in Kashkadarya. The inset features sites around Er Kurgan. (33 total). (© Zachary Silvia; imagery, Bing 2016). AMCAA site key: Er Kurgan – 620; Shakhrikhaybar – 762; NN 764 – 764; Aylanmatepa – 766; NN 767 – 767; Koshtepa – 770; NN 771 – 771; Kutantepa – 772; NN 773 – 773; Kutantepa h – 780; Tokhmattepa – 781; NN 782 – 782; NN 783 – 783; Kalai – Zahoki Maron – 784; Dashtlikmazartepa – 785; NN 786 – 786; Kurgantepa – 787; Shaykhalitepa – 789; Magzantepa – 790; Yalpaktepa – 791; Maslakhattepa – 792; NN 793 – 793; Magzantepa – 790; NN 793 – 793; Kundjulitepa – 794; Mudintepa – 795; NN 796 – 796; NN 797 – 797; NN 799; NN 800; NN 801; NN 802 – 802; NN 804 – 804; Kindiklitepa – 805; NN 806 – 806; NN 807 – 807.

Figure 48. Er Kurgan (from Исамиддинов и Сулейманов 1984).
Fig 49. Plan of pit houses at Kurgancha after excavation (© S. Mirzaakhmedov).

Figure 50. Kindiklitepa and its satellies (© Zachary Silvia; imagery, Bing 2016).
Figure 51. Late 4th c. - mid. 2nd c. BCE sites (Hellenistic) in the western Oasis of Panjikent. (© Zachary Silvia; imagery, Bing 2016). AMCAA site key: NN 840 – 840; NN 841 – 841; NN 842 – 842; Zebon – 844; “Achaemenid Tower” – 999; NN 1000 – 1000; Kurgontepa – 1002; NN 1003 – 1003; NN 1004 – 1004; NN 1005 – 1005; NN 1007 – 1007; NN 1008 – 1008; NN 1009 – 1009; NN 1010 – 1010; NN 1011 – 1011; NN 1012 – 1012; NN 1013 – 1013; NN 1014 – 1014; NN 1015 – 1015; NN 1017 – 1017; NN 1018 – 1018; Kattakurgan – 1026; NN 1027 – 1027; NN 1028 – 1028; Khirmanjo – 1029; NN 1030 – 1030.
Figure 52. Late 4th c. - mid. 2nd c. BCE (Hellenistic) sites in the eastern Oasis of Panjikent. (© Zachary Silvia; imagery, Bing 2016). AMCAA site key: Sangi Surokh East - 1019; Sangi Surokh West – 1020; NN 1021 – 1021; Kholiknazar – 1022; Khamtuda – 1023; NN 1034 – 1034; Kzyzldzhar – 1035; NN 1036 – 1036; NN 1037 – 1037; NN 1038 – 1038.
Figure 53. Late 4th c. - mid. 2nd c. BCE (Hellenistic) sites in the middle Zerafshan River. (© Zachary Silvia; imagery, Bing 2016). 686 – Lyailyakui; 686 – Pulad; 687 – Koktepa; 688 – Afrasiab; 689 – Hellenistic Canal 690 – Hellenistic canal; 691 – Kuldortepa; 1051 – Katta-Kumyshkenttep; Kurgantepa – 1052; Chimkurgan – 1053; 1054 – Bagrytep; 1056 – Mazartepa West; 1057 – Mazartepa East; 1058 – Mazartepa Settlement; Kurgancha – 1190; 1191 – Boyssartep; 1192 – Koitepa; Lolazor – 1194; 1195 – Tupkhona; 1196 – Saratepa 2.
Figure 54. The Afrasiab citadel (© Zachary Silvia 2016).

Figure 55. Photo of Afrasiab including the Achaemenid walls its current landscape (© Zachary Silvia 2016).
Figure 56. Lyailyakui (AMCAA 685), Pulad (AMCAA 686), Bagrytepe (AMCAA 1054), and Tupkhona (AMCAA 1195) (© Zachary Silvia after Иваницкий 2005)

Figure 57. Besh Bulak (AMCAA 828), situated in the Kyzylkum Desert between the Bukhara Oasis, Chorasmia, Chach, and sites related to Chirik Rabat in the lower Syr Darya region (© Zachary Silvia; imagery, Bing 2016).
Figure 58. Previous page. Late 4th c. - mid. 2nd c. BCE (Hellenistic) sites in the lower Zerafshan River in the Navoi and Bukhara Oases (© Zachary Silvia; imagery, Bing 2016). Paikend – 638; Ramitan – 641; Bukhara Arc – 642; Iskijat – 643; Varakhsha – 646; Ramish Tepa 647; Sivanj – 648; Burkuttepa – 649; Bashtepa – 650; Khujada 652; NN 655 – 655; Khama? – 656; Ayak Tepa 2 – 660; NN 662 – 662; NN 663 – 663; NN 664 – 664; NN 665 – 665; Iakkatal – 666; Tal-I Surkh – 667; Chektepa – 668; Choklytepa-2 – 670; Bashtepa agricultural fields – 673; NN 677; NN 678 – 678; Kichkintepa – 679; Kuzminatepa – 683; Khodzha-Bustan Tepa – 684; Burantepa – 878; Bashtepa west – 879; “No name 2” – 880; Varakhsha Bastion – 886; NN 1047 – 1047; Mokhitabontepa – 1048; Bukhara Arc, Zindan – 1183; Bukhara Arc, NE Corner – 1184; NN 1197 – 1197; Kala-I Malbek – 1198; Kyzylkyr 1 – 1199; Kyzylkyr 3 – 1202; Karnab – 1240.

Figure 59. The Bronze Age communal pit-house at Zamanbaba (Гулямов, Исламов, и Аскаров. 1966).
Figure 60. Final plan of Bashtepa as of 2021. Drawing by Zachary Silvia based on data collected with a Leica T6 total station (© Uzbek-American Expedition in Bukhara).
Figure 61. Bashtepa. Plan of the central pit-house settlement phase (Zachary Silvia; © Uzbek-American Expedition in Bukhara).
Figure 62. Bashtepa. Second phase repair wall ON264 installed into ON46 in pit-house ON263. (Photo Zachary Silvia; © Uzbek-American Expedition in Bukhara).

Figure 63. Pit-house ON362 with a plastered floor ON377. In the northeast corner is hearth ON378 (Photo Zachary Silvia; © Uzbek-American Expedition in Bukhara).
Figure 64. Hearth ON378 in the northeast corner of ON362, lined with fired brick and broken khum fragments. (Photo Zachary Silvia; © Uzbek-American Expedition in Bukhara).

Figure 65. Bashtepa pit-house farmstead. Exterior walking horizon ON389 and its relationship to pit-houses ON263, ON362, and ON366. (Photo Zachary Silvia; © Uzbek-American Expedition in Bukhara).
Figure 66. Pit-house ON29. The green highlighting indicates the first phase of the structure. The yellow indicates a second phase extension to the south. The clear highlighting at the foreground indicates a lost earthen wall, which may have been reinforced with handmade bricks in the south during the second phase (Zachary Silvia; © Uzbek-American Expedition in Bukhara).

Figure 67. Ayak tepa 2 in the Bashtepa Group of sites (© Zachary Silvia after Жуков 1956).
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