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2014

### Suicide Bombers in Iraq, 2003-2010: Disaggregating Targets Can Reveal Insurgent Motives and Priorities

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#### Citation

K. R. Seifert and C. R. McCauley, "Suicide Bombers in Iraq, 2003-2010: Disaggregating Targets Can Reveal Insurgent Motives and Priorities," *Terrorism and Political Violence* 26.5 (2014): 803-820.

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## **Suicide Bombers in Iraq, 2003-2010: Disaggregating Targets Can Reveal Insurgent Motives and Priorities**

**Keywords:** suicide bombing, suicide attacks, suicide missions, martyrdom missions, Al Qaeda in Iraq, AQI, Al Qaeda in the Land of the Two Rivers, Baathists, ...

**Acknowledgment.** The authors thank Dr. Mohammed Hafez for the model of studying suicide bombing in Iraq provided in his published research, and especially for sharing his database of suicide bombings in Iraq.

## **Abstract**

Extending data reported by Hafez in 2007, we compiled a database of 1,779 suicide bombers who attempted or completed attacks in Iraq from 2003 through 2010. From 2003 through 2006, monthly totals of suicide bombers show a pattern different from the pattern of non-suicide attacks by insurgents, but from 2007 through 2010 the two patterns were similar. This biphasic pattern tests the common assumption that suicide attacks require separate analysis: it appears that suicide attacks sometimes vary along with the general volume of insurgent violence. We also show that only 13 percent of suicide bombers targeted coalition forces and international civilians, primarily during the early years of the conflict, whereas 83 percent of suicide bombers targeted Iraqis (civilians, the Awakening Movement, Iraqi Security Forces and government entities) in attacks that extended throughout the duration of the insurgency. These results challenge the idea that suicide attacks are primarily a nationalist response to foreign occupation and caution that 'smart bombs' may be more often sent against soft targets than hard targets. More generally, we argue that suicide attacks must be disaggregated by target in order to understand these attacks as the expression of different insurgent priorities at different times.

Mass media and the international community have given considerable attention to suicide bombers and their horrifying acts of violence. As a tactic, suicide bombing offers some obvious advantages: a lethal weapon strapped to a conscious individual can, in principle, guarantee that the attack will be “carried out at the most appropriate time and place with regard to the terrorists’ objectives.”<sup>1</sup> Public attention and terrorism research thus tend to focus on the individual: the bomber’s gender, marital status, age, education, socioeconomic background, and ideology. This individualist focus has been associated with psychological and sociological research to illuminate motivation and recruitment of suicide bombers.<sup>2</sup>

It is important to note, however, that most suicide bombers operate as part of, in the name of, or are inspired by a group that has made a *strategic* decision to adopt suicide bombing as part of an armed campaign.<sup>3</sup> Here we are interested in learning more about the motives of those who arm and deliver suicide bombers, rather than the motives of the bombers themselves. We aim to explain the motives for using suicide bombers by examining trends over time in the targets against which suicide bombers are deployed. The context for our study is the insurgency in Iraq, where suicide bombings began shortly after the arrival of the Multi National Forces-Iraq (MNF-I) in 2003.

Hafez tallied 514 suicide attacks in Iraq between March 2003 and August 2006.<sup>4</sup> By 2010 Iraq had become the primary theater of operational and strategic development for this tactic. Rather than reading insurgent statements and propaganda in order to discern the goals of suicide bombing, we analyzed a monthly database of 1,779 attempted and completed suicide attacks in Iraq from 2003 through 2010 to identify who was targeted in these attacks. Patterns of targeting and changes in targeting can be identified; these patterns can be distinguished from patterns of non-suicide insurgent attacks, and, when examined in the context of major political events in Iraq, these patterns can tell us something about insurgent priorities and motivations in using suicide attacks. Before embarking on our analysis, it is useful to review briefly some current views of why and when insurgents and terrorists turn to suicide bombing as a tactic.

### **Why and when do insurgents use suicide bombing?**

Suicide attacks have been used historically by many different groups including religious sects, anarchists, secular nationalists, insurgents, and even national armies. Political scientists, psychologists, and anthropologists have developed a variety of possible explanations for why a group would use suicide attacks to advance their cause. To put the suicide campaign in Iraq within a larger historical and academic context, we examine briefly the work of four scholars—Bruce Hoffman, Robert Pape, Mia Bloom, and Mohammed Hafez—all of whom have studied the use of suicide bombing.

In a 2003 essay, Hoffman popularized a characterization of suicide bombers as “smart bombs.”<sup>5</sup>

“The fundamental characteristics of suicide bombing, and its strong attraction for the terrorist organizations behind it, are universal: Suicide bombings are inexpensive and effective. They are less complicated and compromising than other kinds of terrorist operations. They guarantee media coverage. The suicide terrorist is the ultimate smart bomb. Perhaps most important, coldly efficient bombings tear at the fabric of trust that holds societies together. All these reasons doubtless account for the spread of suicide terrorism from the Middle East to Sri Lanka and Turkey, Argentina and Chechnya, Russia and Algeria—and to the United States.”<sup>6</sup>

It must be observed that the utilitarian logic of “inexpensive and effective” cannot explain why many terrorists do not use suicide attacks. But for those who do, the “smart bomb” metaphor

implies that this tactic should be used against the most difficult and hardened targets, as Western armies use guided munitions and drones.

Pape's study of suicide bombers offers similar ideas. First, Pape agrees with Hoffman that suicide attacks are used because they work: they allow even a weak group to cause immediate damage and threaten more damage in the future. Second, and more specifically, Pape sees suicide attacks as "primarily an extreme national liberation strategy used against foreign occupiers with a democratic political system."<sup>7</sup> Here we understand Pape to be suggesting, as Hoffman's smart bomb metaphor suggests, that suicide attacks in Iraq will primarily target foreigners, both because they are foreign and because they are better defended. We test this idea in our study by comparing attacks on coalition forces and international civilians with attacks on Iraqi nationals.

Bloom's "outbidding theory" emphasizes the prevalence of suicide attacks in conflicts with multiple insurgent groups.<sup>8</sup> In the case of Iraq, outbidding theory suggests that insurgents use suicide bombing to show that they are more committed to the cause of liberation from occupying forces than other groups, because they are willing to make greater sacrifices for the struggle. Bloom's argument depends on a certain amount of public support for martyrdom operations, and also requires groups to claim responsibility for suicide attacks. In our study, we examine this prediction by analyzing how many suicide bombers are claimed and what groups are making the claims.

As already noted, Hafez focused specifically on suicide bombings in Iraq, and he argues that these attacks are designed to collapse the emerging democratic political structure and spark sectarian violence. The chaos which ensues is the only way the two weakest actors in the Iraqi insurgency, the Ba'athists and Al Qaeda inspired transnational insurgents, can compete for influence in Iraq. Hafez supports this interpretation with data on suicide attacks between 2003 and August 2006, which show that Al Qaeda inspired groups and Ba'athists were first and second in claiming suicide attacks. In our study of suicide bombers we test the generalizability of this pattern in examining claimed attacks across additional years, 2007-2010.

### **The present study**

We developed a new database of suicide bombers in Iraq, covering the years 2003-2010. Our database differed from that developed by Hafez in two ways.<sup>9</sup> First, he counted suicide bombing incidents whereas we counted suicide bombers. Second, his database covered the years 2003-2008, whereas our data covered the years 2003-2010.<sup>10</sup> As described below, we begin by showing convergence between our data and Hafez's data for the overlap years 2003-2006. Then we use our 2003-2010 data to compare trends in suicide bombing with trends in non-suicide attacks over the same time span. Finally, we compare trends in targeting against foreigners in Iraq with trends in targeting against Iraqis, including security forces, government entities, and civilians. Our discussion uses the patterns in our data to reflect on some of the ideas about suicide bombing that we have described above.

In addition, we examine the implicit assumption of previous research on suicide bombing, that this tactic requires separate analysis. Hoffman, Pape, Bloom, and Hafez all focus on suicide bombing in a way that implies that this tactic is not like roadside bombs, shootings, arson, and kidnapping. We test this implication by comparing trends in suicide attacks in Iraq with trends in non-suicide attacks over the same period.

## **Methods**

Studies of suicide bombings that derive their statistics solely from media accounts can be inaccurate and may emphasize casualties rather than bombing targets. Attacks that are particularly casualty-heavy, hit high-profile targets, are carried out by women, or claimed by Al Qaeda Iraq or its affiliates<sup>11</sup> are likely to receive a disproportionate amount of media attention. In contrast, suicide car bombs detonated at security checkpoints, killing one or two Iraqi soldiers, can easily be lost in a day's tally of roadside bombs, RPG attacks, fire fights, and kidnappings. To move beyond a media-biased perspective of suicide attacks in Iraq, we aimed to study all recorded suicide bomb attacks in Iraq from 2003 through 2010, including failed or foiled bombers.

Thus, our database compiled suicide bombers represented in three existing databases detailed below, with attention to the details of each incident to ensure that each individual suicide bomber was entered in our database only once. Details of each incident were also used to code the likely target for each suicide bomber.

For incidents in which multiple bombers converged on a single target, an entry in the database was made for each individual bomber who was involved. An attack which used three suicide bombers, therefore, was entered into the database three times, detailing the date, location, and target for each bomber. One coordinated attack on the Green Zone, for example, might involve one suicide bomber detonating at an entry checkpoint, and two who detonated after a crowd had formed around the first attack site.

It is important to note that our database counts bombers whereas the databases from which we took our cases counted incidents. There are more bombers than incidents to the extent that some of these incidents involved multiple bombers. Thus, monthly totals represented in our study tally each suicide bomber who detonated, or attempted to detonate, explosives in circumstances indicating that the bomber expected to die in the attack.

### **Sources of Data**

Our database included both suicide IEDs (Improvised Explosive Devices) and suicide VBIEDs (Vehicle-Borne Improvised Explosive Devices) from three terrorist incident databases: the National Counterterrorism Center's Worldwide Incidents Tracking System, the RAND Corporation's Database of Worldwide Terrorism Incidents, and the University of Maryland's National Consortium for the Study of Terrorism and Responses to Terrorism (START) Global Terrorism Database. All three databases had details that allowed us to identify the number of individual bombers involved in each attack. Our combined database of bombers was completed in April 2011.

The National Counterterrorism Center's Worldwide Incidents Tracking System (WITS NextGen) compiles "incidents in which subnational or clandestine groups or individuals deliberately or recklessly attacked civilians or noncombatants (including military personnel and assets outside war zones and war-like settings)." WITS NextGen defines these attacks by "subnational or clandestine groups" as "terrorist attacks," and therefore in Figure 1, where we use WITS NextGen's tally of non-suicide attacks, we refer to them as the database does, i.e. as terrorist attacks. The database includes only attacks which have been initiated and executed, and in most cases the attacker must have died in the attack for it to be considered a suicide.<sup>12</sup>

WITS NextGen's report of attacks in Iraq with Suicide=Yes and Event Type=Bombing generated 1,362 incidents from January 14, 2004 to the end of December, 2010. For comparison, from January 1, 2004 to the end of December, 2010, WITS NextGen recorded 24,127 non-suicide attacks in Iraq, including non-suicide bombings. Because this database is particularly

thorough in scope and consistent in its reporting of terrorist incidents, it was the obvious choice as our source for data concerning non-suicide attacks.

The RAND Database of Worldwide Terrorism Incidents (RDWTI) defines terrorism based upon “the nature of the act, not by the identity of the perpetrators or the nature of the cause” and uses Bruce Hoffman’s definition of terrorist acts “as the deliberate creation and exploitation of fear through violence or the threat of violence in the pursuit of political change.” Unlike WITS NextGen, RDWTI includes interrupted attacks in its database, so long as the attacker demonstrated “movement toward the target.”<sup>13</sup> Using an incident subset which included Iraq and Suicide Attack=true, incident type = bombing, RDWTI generated 954 attacks from February 26, 2003 to the end of 2008, with unexplained data omissions in May 2007 and January 2008. For comparison, from February 2003 through 2008, RDWTI recorded 884 non-suicide terrorist attacks, including non-suicide bombings, again with the omission of May 2007 and January 2008. Note that RDWTI contains many fewer non-suicide attacks than WITSNextGen.

START’s Global Terrorism Database (GTD) included several months where total incidents as well as suicide bombing incidents in Iraq were inexplicably and impossibly few in number. The pattern of overall attacks and suicide attacks deviated greatly from the patterns seen in the other two terrorism databases. Given this eccentricity, START’s GTD catalogue of suicide bombing incidents was used only during the last review of our database, and suicide incidents appearing only in the START database were included in our database only after additional research for verification.

Overall, our completed database showed that 6 percent of suicide bombers carried out attacks as part of a coordinated effort, with two to five individual suicide bombers used to attack one target. We believe that tracking bombers, rather than attacks, is a more direct and valid indication of the motives and priorities of those who send suicide bombers to their targets. An attack that uses five suicide bombers to attack a single target indicates that insurgents determined the target’s worth to be greater than that of a target warranting one bomber. Similarly, tracking bombers is a better indication of motives and priorities than tracking casualties, which can be determined more by chance than by the intent of those dispatching the bombers.

### **Target Coding**

Our analysis of suicide bombing in Iraq does not specifically address the number of casualties, as this information is often impossible to record definitively. When available, we did record whether or not a bombing attack was claimed by one or more militant groups. Most important, our database identified the intended target of each suicide attack and available details of the attack circumstances. This information is of particular significance in suicide attacks, as the bomber can more often ensure that the intended target objective will be hit. In contrast, the intended targets of buried roadside IEDs and booby trapped explosives are more uncertain.

We coded each bombing as targeting one of the following: Iraqi Civilian; Iraqi Government entity; Iraqi Security Forces; Coalition Forces; International Civilian entity; or Awakening Movement entity. Attacks targeting international Coalition Forces and International Civilian entities were combined because of their similar status as “high risk” targets, likely better defended than Iraqi targets, and because attacks on foreigners can have different political meaning than attacks on Iraqis. Also, we combined attacks targeting Iraqi Civilians, Iraqi Government entities, and Iraqi Security Forces, but we disaggregated these target subcategories in an additional analysis. The Awakening Movement began in late 2006, and attacks targeting this group begin only after this date.

For 67 suicide bombers, their intended target was either too ambiguous to determine, or in rare cases, did not fall into any of our target sets (e.g. attacks on infrastructure). Most of these unknown-target bombers appeared in 2007, when violence was widespread and reporting on attacks did not provide as much detail as attacks which occurred during calmer periods of the insurgency. As the number of unknown-target bombers was negligible in relation to the total number of bombers (67 of 1,779), we report percentages of suicide bombers associated with different targets based on the total number of suicide bombers (1,779).

### Results

Our results are organized in relation to three questions. Is the pattern of suicide bombers in our database similar to the pattern of suicide incidents reported by Hafez? Is the pattern of suicide bombers different from the pattern of other kinds of insurgent attacks? What are the patterns of suicide bombers against International targets and various Iraqi targets?

Results show in general that, during the insurgency, there were notable shifts in the targets of suicide bombings, and that some sense can be made of the timing of these shifts. Although it may appear that suicide violence was a sporadic and desperate attempt to sow discord in Iraq, a closer examination reveals different time-patterns of suicide bombers for different target sets.

#### **Suicide bombers vs. Hafez suicide incidents**

To test the reliability of our data, we compared our monthly totals of bombers with monthly totals of suicide incidents (not bombers or individual bombings) collected by Mohammed Hafez and published in his book, *Suicide Bombers in Iraq* (2007). His published data, which Hafez generously provided in detail to the authors for this study, included 514 incidents from March 22, 2003 to August 18, 2006. Over these same 42 months, our database included 792 suicide bombers.<sup>14</sup> The Pearson correlation of incidents and bombers was .94 (n=42), indicating a very high similarity in the pattern of suicide incidents and the pattern of suicide bombers for the months of overlap between Hafez's data and our own. Our data show monthly totals greater than those Hafez reported, owing largely to the fact that we counted individual bombers rather than incidents.

Monthly totals for our data are shown in Figure 1. Descriptively, our data agree with Hafez's data in showing a broad peak between January and September 2005.<sup>15</sup> In addition, our data show a second peak between January and September 2007. In short, our data from 2003 to 2006 show the same pattern as Hafez's data from these years, and our data from years not covered by Hafez show an additional peak in 2007. The convergence of the two sets of data during the overlap period is evidence of the reliability of both.

*Figure 1 about here*

#### **Suicide bombers vs. non-suicide attacks**

From 2003 through 2010, our database shows a total of 1,779 suicide bombers. In order to test the distinctiveness of suicide bombing as an insurgent tactic, we compared the pattern of suicide bombers per month with the pattern of total insurgent attacks per month. Because the database provided by the National Counterterrorism Center (NCTC) contained the most complete



collection of insurgent attacks in Iraq, data from NCTC WITS NextGen were used to make this comparison. Consistent WITS data for insurgent attacks are not available for 2003 but begin in 2004.

Comparison of insurgent attacks with suicide bombers revealed a two-phase relationship (see Figure 1). Monthly suicide bombers from 2004 through 2006 show a Pearson Correlation with monthly insurgent attacks of only .36 over 36 months. But the same correlation from 2007 through 2010 is .86 over 48 months. (The correlation of total attacks and suicide bombers over the total time period studied, 2003 through 2010, is .57.) Descriptively, it is clear that the relationship between total insurgent attacks and suicide bombers was weak at the beginning of the insurgency, but grew stronger beginning in 2007.

This bi-phasic relation, first weak then strong, indicates that suicide bombing need not be closely associated with the total volume of insurgent attacks. The weak relation of suicide attacks and non-suicide attacks between 2004 and 2006 indicates instead that suicide bombing can at least sometimes reflect different dynamics than other forms of violence in the same insurgency. Previous research on suicide bombings has generally assumed their distinctive quality and thus assumed that separate analysis of suicide bombing is warranted. Our results provide empirical support for this assumption for the period 2004-2006, but results for the period 2007-2010 challenge the claim. In short, our results indicate that sometimes suicide bombing is only weakly related to other forms of insurgent attack and must be understood in terms of its own dynamics, and sometimes is so strongly related to other forms of attack that separate analysis of suicide bombing may be unnecessary.

It would indeed be interesting to analyze non-suicide insurgent attacks by target, and to track change in targeting over time as we have done with suicide bombers. Unfortunately, the 24,127 non-suicide attacks recorded in WITS NextGen between January 2004 and December 2010 do not always provide enough detail to code the intended target. In any case, analysis of more than 24 thousand non-suicide attacks is beyond the resources and scope of our study.

### **Suicide bombers claimed vs. unclaimed**

Information about claiming of suicide bombers was obtained from the three databases and from other news reports of the incidents. Claims are likely incomplete, as the databases may not have picked up on groups claiming responsibility on obscure websites or in a more localized manner such as leaflets or word of mouth. Still, it is worth noting that the 395 bombers in claimed attacks made up only 22 percent of suicide bombers from 2003 to 2010.<sup>16</sup>

Approximately 88 percent (349/395) of claimed bombers were claimed by Al Qaeda and affiliated groups. Groups whose attacks were coded as an “Al Qaeda” claim include, in addition to Al Qaeda in Iraq (AQI), Tawhid wa al-Jihad, al Bara bin Malek Brigades (Al Qaeda’s specialized suicide bombing cell), the Mujahideen Shura Council, and the Islamic State of Iraq. It is possible that the databases we drew on and news accounts more generally tend to over-report Al Qaeda claims by assuming, when in doubt, that suicide attacks are the work of Al Qaeda. Nevertheless it is clear that an overwhelming majority of claimed attacks were associated with AQI or Al Qaeda-related groups.

The frequency of claimed attacks reveals a two-peaked shape similar to that of total suicide bombers per month, but with slight deviations. The first peak of claimed attacks started in early 2005, with 39 percent (156/395) of claimed attacks occurring in that year. The second peak began in March 2007, but this high level of claimed attacks lasted only four months: after July 2007 the number of claimed attacks per month remained under ten through 2010. The

earlier peak reached a maximum of 32 claimed bombers in June 2005, whereas the maximum of the second peak was 17 claimed bombers in March 2007.

This pattern suggests that insurgent groups were more motivated to assert their responsibility for attacks early in the insurgency, presumably while groups were competing for post-invasion status among a public more willing to cooperate with insurgent groups. The second peak in 2007, following the U.S. surge and a shift in public support away from Al Qaeda, may indicate motivation to reclaim public status, to intimidate new enemies, or both. The decline in claimed attacks after mid-2007 suggests a public turn against suicide bombing.

### **Suicide Bombers Target Set 1: Coalition Forces and International Civilians**

The defining characteristic of this first target set is that the targets are foreigners. Attacks against foreigners are distinguished from attacks against other targets because attacks against a perceived occupier will likely be viewed by Iraqis as importantly different from attacks against other Iraqis. Foreign targets include members of the coalition forces in Iraq at their bases, during their foot patrols, and at coalition-manned checkpoints. In addition to attacks against United States forces, attacks also targeted non-U.S. coalition members including Polish and Italian military forces.

This first target set also includes international civilians including tourists, diplomats, journalists, foreign contractors, embassy staff, employees of non-profit organizations, and hotels frequented by foreigners. Attacks in and at the entrance of the Green Zone (now known as the International Zone) were included in this set, as it served as a base of operations for coalition forces, and housed numerous embassies and private contractors. Attacks against patrols conducted jointly by Iraqi Security Forces and U.S. military forces are included in Target Set 1 because, compared with attacks on Iraqi Security Forces operating alone, attacks on joint patrols are higher risk and higher profile to the extent that U.S. forces are targeted in the operation.

Target Set 1 accounted for 12.9 percent of total suicide targets (229 out of 1,779). Although suicide attacks against Coalition Forces began in the spring of 2003, suicide bombers against Coalition targets reached new highs in April, May, and June of 2005. Thus bombers attacking Target Set 1 contributed to the peak in total suicide bombers in 2005 (see Figure 1). Bombers against Set 1 targets remained high through October 2005, as coalition forces carried out major counterinsurgency (COIN) operations in Baghdad and al-Anbar provinces, with many suicide attacks occurring in these two areas. It is important to note that, after October 2005, bombers per month against Target Set 1 became and remained very low, as suicide bombers shifted to targeting almost exclusively Iraqis. Even after the 2007 U.S. troop surge, when more than 20,000 additional U.S. soldiers were deployed to Iraq, suicide bombers did not increase against Coalition targets.

*Figure 2 about here*

### **Suicide Bombers Target Set 2: Awakening Movement**

The second set of targets is comprised of participants in the Awakening (*Sahwa*) movement which began in Iraq in late 2006. Included in Target Set 2 are attacks on Sunni tribal leaders who cooperated with coalition forces and the Iraqi government as part of *Sahwa* Councils, and their government-backed militias, the Sons of Iraq. Targets also included the houses of *Sahwa* Council tribal leaders, *Sahwa* Council meetings, and checkpoints manned by members of the Sons of Iraq. Although relatively few in number (116/1,779), making up only 6.5 percent of total suicide bombers, these attacks against Iraqi Sunnis deserve separate consideration.

Tribal leaders from twenty-five Sunni al-Anbar tribes joined forces in September 2006 to fight transnational insurgents in their province in a clear rejection of Al Qaeda in Iraq (AQI) and its affiliates. Working to reverse the mentality which had developed during the civil conflict, these armed Sunni groups contested AQI's claim to be the only Sunni defense against Iraqi Shi'ites.<sup>17</sup>

Awakening members aided in providing tips to the coalition and Iraqi Security Forces of the whereabouts of transnational insurgents, the locations of weapons caches, and they manned checkpoints. Most important, Awakening forces provided neighborhood security. Because the Sons of Iraq were made up of local Sunni volunteers, community trust in local security services was at least partially restored in Sunni dominated areas.

The alliance of Awakening leaders included some from areas that formerly harbored AQI actors, and the Sons of Iraq included many former Sunni insurgents.<sup>18</sup> The Awakening Movement severely weakened AQI because they "deprived the terrorist organization of its most secure base in Iraq."<sup>19</sup> In 2007, the model of tribal cooperation was brought to other transnational Sunni insurgent strongholds such as Diyala, Tikrit, and southern Baghdad, and AQI leaders are cited as reporting that between mid-2007 to 2008, their numbers had dropped by over 70 percent, from 12,000 to 3,500.<sup>20</sup>

As Sunni armed groups and tribal communities turned against Al Qaeda in Iraq and its affiliates, a critical shift in suicide bombing occurred. Attacks targeting the Awakening Movement were politically important as they marked the first time during the insurgency that Sunni communities were targeted by suicide bombers. Suicide attacks against Awakening targets increased significantly in early 2007 (Figure 2) and peaked in early 2008; these attacks especially targeted Sunni sheikhs at their homes, their convoys, and meetings; over one hundred Awakening Council leaders were killed by suicide bombings and ambushes.<sup>21</sup>

Targeting of Awakening Movement members declined in September 2008 and remained at a low level through the end of our study period in December 2010. As amplified in our Discussion, it seems likely that this decline represents a failure of capacity, as AQI and its affiliates lost their cover in Sunni communities and were repressed by Awakening forces.

### **Suicide Bombers Target Set 3: Iraqi security forces, civilians, and government**

Iraqi Security Forces include members of the Iraqi police or military formed after post-invasion de-Ba'athification. These forces were targeted in attacks on Iraqi military bases, foot patrols, police stations, as first responders to attacks, in lines and buses filled with recruits, as civilians queued to apply for jobs with the police or military, and at checkpoints where the suicide bomber detonated his/her explosives with no clear intent to target another entity.

Iraqi Government entities include civilian groups and individuals working or cooperating with the newly formed Iraqi governing body; these include political parties, politicians and their convoys, government buildings, and polling stations. Iraqi Civilian targets include suicide bombers detonating in crowded marketplaces, schools, in mosques, or on private property.

Unlike Awakening targets, who are known to be Sunni tribesmen, the third set of targets are not easily characterized in terms of ethnicity. Security Force and Government targets are probably mostly Shi'a, but include also some Sunni Arabs and Kurds. Civilian targets include an unknown mix of Shi'a, Sunni, and Kurds.

Target Set 3 was by far the most frequent target of suicide attacks, drawing 76.8 percent (1,366/1,779) of all suicide bombers in the period studied. Given that Target Set 3 drew three quarters of all suicide bombers in the study period, one would expect that the pattern of bombers

against this target set would mirror the pattern of all suicide bombers. Indeed the Pearson Correlation between monthly suicide bombers of Iraqi Targets and monthly total suicide bombers was .99 over the 96 months of our study. Thus Figure 2 does not separately graph total suicide bombers per month (already represented in Figure 1).

If we consider that Awakening targets were also Iraqi, the predominance of suicide attacks against Iraqi targets is even more striking: 116 *plus* 1,366, or 1,482 bombers targeted Iraqis, representing 83 percent of suicide bomber in the study period. From the U.S. it is perhaps not easy to grasp that four fifths of all suicide bombers in Iraq were targeting Iraqis. This result is important, as it shows that the fear, outrage, and destruction produced by suicide bombers were overwhelmingly intended for Iraqis themselves, *not* foreign forces.

Target Set 3 was analyzed further by separating this set into component target categories: Iraqi Security Forces (792 or 44.5 percent of bombers), Iraqi Civilians (375 or 21.1 percent of bombers), and Iraqi Government entities (199 or 11.2 percent of bombers). Here, it is interesting to note that bombers targeted security forces twice as often as civilians, and civilians twice as often as government entities.

Patterns of suicide bombers for these three Iraqi targets were only moderately correlated. Across 96 months from 2003 through 2010, bombers against Security Forces correlated .67 with bombers against Iraqi Civilians and .50 with bombers against Iraqi Government. Bombers against Iraqi Civilians correlated .37 with bombers against Iraqi Government. (Similar correlations, available from the authors, are obtained when the correlations are calculated separately for 2003-2006 and 2007-2010). Descriptively, Figure 3 shows that bombers targeting Iraqi Security Forces, and bombers targeting Iraqi Civilians, both show the two peaks (2005 and 2007) already noted in Figures 1 and 2. Bombers targeting Iraqi Government entities, however, show only a single peak early in January 2005.

It would be useful to further divide civilian targets into Sunni versus Shi'ite civilian targets (also Kurdish civilian targets) but our data too seldom provided explicit identification of the ethnicity of bombing targets. Nevertheless, a cursory examination of the assumed ethnicity of civilian targets shows that attacks on civilians starting in the early years of the insurgency may have intentionally targeted Shi'ite neighborhoods and mosques, and shifted to including Sunni targets only during the Awakening.

*Figure 3 about here*

### **Discussion**

Our study followed Hafez in focusing specifically on suicide bombers in Iraq.<sup>22</sup> Our database covered the years 2003 through 2010, and the monthly variation of bombers in our database closely matched the monthly variation of suicide attack incidents in Hafez's database for the overlap years of 2003-2006. The close correlation of our data with Hafez's data gives confidence in the reliability of our data. We turn now to the questions raised in the Introduction.

#### **Suicide bombers vs. non-suicide attacks**

Our results indicate that there can be different dynamics for suicide bomber attacks and non-suicide attacks, as suicide bombers per month showed a biphasic relation with total insurgent attacks per month. From 2004 to 2006, the correlation was only .36, but from 2007 to 2010 the correlation was .86. As seen in Figure 1, the gradual increase in violence during the insurgency peaked in 2007, a monotonic pattern contrasting with two separate peaks of suicide bombing

activity in 2005 and 2007. The peak in suicide bombers in 2005 confirms results presented by Hafez, who showed how the steady increase in insurgent attacks from 2003 to 2006 differed from the peaking of suicide attacks in 2005.<sup>23</sup> The different trends for suicide and non-suicide attacks become even more pronounced when compared over the longer period of 2003-2010.

Why did suicide bombing follow a different pattern from non-suicide insurgent violence early in the insurgency, but show much the same pattern of decline after 2007? Our interpretation is that, early in the insurgency, Al Qaeda-inspired groups in Iraq were competing with other militant groups in opposing coalition forces. AQI used suicide bombings to intensify a “system collapse” strategy as detailed by Hafez,<sup>24</sup> whereas larger militant groups hoped to control the new system being built by coalition forces. AQI used suicide bombers out of desperation and weakness, while Sunni ex-military and Shi’ite militants with support from Iran felt strong enough with conventional weapons. Thus, in the early part of the insurgency, AQI and perhaps small groups of Ba’athists were using suicide bombings, but most of the violence was produced by stronger players. The pattern of suicide attacks did not match the pattern of overall violence because suicide and non-suicide attacks came generally from different sources.

But why did suicide attacks and total insurgent attacks decline in parallel after 2007? Two major events occurred at this point in the insurgency. First, in late 2006, the Awakening Movement began to take hold. Second, in January 2007, the U.S. announced “The New Way Forward,” a surge of over 20,000 American troops in Iraq, along with a new COIN approach that focused on population security and required troops to transition from working from large forward operating bases to living and working among Iraqis in small security outposts and joint security stations.

It was a “synergistic interaction” between these two initiatives that led to greater overall stability in Iraq.<sup>25</sup> Earlier attempts by Sunni tribal leaders to counter the influence of AQI in their communities by arranging cease-fire agreements with coalition troops were unsuccessful in providing sufficient protection for those tribal leaders who cooperated in these negotiations. More troops deployed more locally after the surge not only gave the Awakening movement members the support and protection they needed to stand-up to AQI, but also opened a key partnership in intelligence-sharing and joint operations with the Sons of Iraq.

This latter element undoubtedly contributed to the decrease in suicide bombers from 2007-2010. Suicide bombing operations require more than a set of explosives and a willing transporter. Operations require detailed planning, expert bomb makers, and other support personnel to procure materials and transport. Given the scale of suicide operations in Iraq, local protection for support personnel and their hideaways was critical to success. The Sons of Iraq who shared information about the whereabouts of these cells with coalition troops, and the greater capacity of joint patrols to find and clear these cells, ultimately led to a decrease in suicide bombing due to a decrease in capacity and manpower to plan, create, and execute suicide attacks.

Our results show a pattern of attacks on Awakening targets that underlines the importance of the Awakening Movement for the general decline of insurgent violence during and after 2007. Although only about 8 percent of all suicide bombers between 2003 and 2010 were against Awakening targets, these targets are concentrated in time: beginning in 2007, peaking in 2008, and declining to very low levels after 2008. This was the period of the synergistic combination of new troops, new tactics, and U.S. contracts hiring Sunni militants. The key observation is that suicide bombing against Awakening targets peaked at this time, whereas suicide bombing against Coalition and International targets did not increase at all. The

implication is that those sending the suicide bombers saw the Awakening as a more proximate threat than coalition forces.

In short, suicide bombing declined from 2007 in parallel with decline in non-suicide attacks because both declines came from the same synergistic combination—more troops and more local troop deployment combined with Awakening contracts in which the U.S. paid Sunnis to shift from insurgency to local security as Sons of Iraq. This situation contrasts with the situation of 2003-2006, when suicide bombers were only a small part of insurgent violence perpetrated by Sunni and Shi'ite militants who were strong enough not to need suicide bombers.

This interpretation leads to an important question: Is suicide bombing more often related or unrelated to non-suicide attacks in the same insurgency? Theoretically, this is a question about the conditions that lead to patterns of suicide bombing that parallel non-suicide attacks, as opposed to conditions that lead to suicide attacks that do not parallel other attacks. Are parallel declines only possible when the same intervention is suppressing all kinds of attacks, as was the case for Iraq 2007-2010? Or are there conditions that will increase use of suicide bombers in parallel with increase in other forms of attack?

Further research comparing suicide and non-suicide attacks in the same insurgency will be required to make progress on these questions. We tend to think, however, that the synergistic combination of more and more locally deployed troops with a hiring program for insurgents was a product of unusual cultural and political conditions in Iraq. In this regard we note that the same combination has not yet been successfully put to work in Afghanistan.

### **Suicide bombers against Coalition Forces and International Civilians**

We believe that it will be surprising to many readers that attacks against Coalition and International targets amounted to only 13 percent of all suicide bomber attacks in Iraq between 2003 and 2010. Although suicide attacks against Coalition Forces began in the spring of 2003, suicide bombers against Coalition targets peaked in April, May, and June of 2005, and remained high through October 2005 as coalition forces carried out major COIN operations in Baghdad and al-Anbar provinces, with many suicide attacks occurring in these two areas. After October 2005, bombers against foreign targets declined and remained very low, as suicide bombers shifted to targeting almost exclusively Iraqis. Even after the 2007 U.S. troop surge, when more than 20,000 additional U.S. soldiers were deployed to Iraq, suicide bombers did not increase against Coalition targets.

Targeting patterns similar to those we report from tracking suicide bombers were reported in a study tracking fatalities from suicide bombings in Iraq 2003-2010. Far more civilians died as a result of suicide attacks than coalition forces, and coalition forces suffered a sharp spike in fatalities in late 2003 and late 2004 to early 2005. Civilians suffered peaks of fatalities in 2005 and 2007.<sup>26</sup>

An explanation for the low numbers of bombers targeting coalition forces after October 2005 may be the cost-benefit analysis of suicide operations against these high-value targets. Insurgent groups likely recognized the high risk of failure in targeting well-armed and trained coalition forces and heavily secured international civilians. For insurgents, an attractive characteristic of suicide attacks is the tactic's high kill-ratio (target deaths divided by bomber deaths), which is easier to obtain when detonating in a crowded marketplace filled with unprotected Iraqi civilians than when attempting to breach a heavily fortified compound.

Another reason that insurgents shifted their bombers away from foreign targets may be a change in perception of the threat facing the insurgents. At the start of the insurgency, the most obvious threat to the existence of these insurgent groups was the presence of foreign occupying forces. Later on in the insurgency, however, the forces with the greatest potential to weaken or eliminate insurgents were Iraqi forces. When well-organized and well-led, local forces with local knowledge are likely to be perceived as a greater threat to insurgents than foreign forces. Especially would this be true to the extent that early attacks on coalition forces, including suicide attacks, put coalition forces in defensive positions where barricades separated them from the local population they were supposed to secure and win over.

Theoretically, the relatively small proportion of suicide bombers attacking Coalition and International targets offers a warning against too-literal interpretation of suicide bombers as “smart bombs.” Real smart bombs—including drone attacks—are usually sent against the most inaccessible, difficult, or hardened targets. The too-easy implication of seeing suicide bombers as “smart bombs” is that insurgents will send their best weapon against the most difficult or hardened targets. In Iraq, the contrary is observed: the great majority of suicide bombers were sent against other Iraqis rather than against better-defended Coalition or International targets.

Similarly, Robert Pape’s thesis that suicide bombings are an extreme nationalist struggle against a foreign occupier is challenged by our results showing that far more suicide attacks occurred against Iraqis, especially Iraqi civilians, than occurred against foreigners. In fact, suicide bombers began to be dispatched in significant numbers after sovereignty was handed over to the interim Iraqi government in June, 2004. Although later attacks against the Awakening Movement might be rationalized as targeting perceived “collaborators” with the occupying forces, merely broadening the definition of an “occupying force” fails to take into account the change in strategy and political motivation behind these actions.

### **Conclusion**

In this study, we disaggregated suicide bombers in Iraq by target, and tracked monthly variation in bombers. Results offer some interesting implications for understanding the use of suicide attacks.

First, monthly suicide bombers in Iraq showed a different pattern than non-suicide attacks between 2003 and 2006, but a similar pattern between 2007 and 2010. We have suggested that understanding when these patterns are similar and when different is a project for future research. When the patterns are similar there is no need for separate analysis of suicide attacks, rather these attacks are then just one more violent tactic in a general trend of insurgent violence.

Second, suicide bombers in Iraq were sent predominantly against soft Iraqi targets rather than against harder Coalition and International targets. “Smart bombs” are not like hi-tech munitions in that they are not reserved for more difficult targets, nor are smart bombs focused particularly on foreign invaders, as Pape has suggested.<sup>27</sup>

Third, only about 20 percent of suicide bombers were claimed by an insurgent group. Data regarding claims are likely incomplete, but it is clear that the great majority of suicide bombers were not claimed. The preponderance of unclaimed bombers is a challenge to Bloom’s suggestion that suicide attacks are a form of competition for status (“outbidding”); unclaimed attacks cannot do much to raise a group’s public image.<sup>28</sup> Perhaps only Al Qaeda in Iraq, and other Al Qaeda-related groups, show signs of an “outbidding” strategy, given that nearly 90 percent of all suicide bombers claimed were claimed by these groups.

In general, our results are consistent with Hafez's suggestion that suicide attacks are the desperate means by which small groups tried to affect political events in Iraq. Our data show first a 2005 peak in suicide attacks on both foreigners and Iraqis, as coalition forces attempt to build a democratic government dominated by Shi'ites. Then we see a 2007 peak in attacks on Iraqis in response to the threat of a U.S. troop surge combined with U.S. purchase of Sunni fighters in the Awakening Movement. By this time the more immediate threat to AQI and other small insurgent groups was a more effective counterinsurgency conducted by both Iraqi government forces and Awakening forces. Finally in 2008, we see a peak in attacks on Awakening forces and leaders, a testimony to the special threat posed to AQI and other small Sunni insurgent groups by a counterinsurgency conducted by Sunni tribesmen. Overall, the peaks in bombers sent against different targets are consistent with a changing threat assessment by small Sunni insurgent groups, with shifts in targeting related to where the greatest threat was perceived.

In a larger perspective, suicide bombing campaigns have occurred in many countries since the invention of dynamite in the 1860s. Rather than looking to extremist Islamist ideology or nationalist outrage against foreign occupiers to explain suicide bombing, it may be more useful to identify the targets of such campaigns and the circumstances within which these targets are attacked. The goal is to understand suicide bombing as a tactic governed by an evolving strategy in relation to perceived threat, a perspective that can complement research on the psychology and sociology of martyrdom and the complex motivations for suicide bombers.

As we revise this paper in January 2013, Iraq is suffering the outbreak of politically motivated violence after the departure of the last coalition combat troops. Dozens of suicide bombers have already made headlines, targeting mainly Iraqi civilians and Iraqi Security Forces. Speculation of Al Qaeda's resurgence in Iraq abounds, and the group is increasingly claiming responsibility for strings of suicide and non-suicide attacks. Equally disturbing, the tactic seems to have moved next door to Syria, where transnational insurgents may have been responsible for the suicide attacks claimed by the opposition group al-Nusrah Front, designated as a terrorist group by the United States in December 2012. . Suicide bombers are also at work in Afghanistan and Pakistan. We expect that attention to targets and change in targets over time will be useful in understanding these and other campaigns of suicide bombing.



## Endnotes

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<sup>1</sup> Julian Madsen, "Suicide Terrorism: Rationalizing the Irrational," *Strategic Insights* 3, no. 8 (2004), 3.

<sup>2</sup> Ariel Merari. *Driven to Death: Psychological and Social Aspects of Suicide Terrorism*, (New York: Oxford, 2010).

<sup>3</sup> Martha Crenshaw, "Explaining Suicide Terrorism: A Review Essay," *Security Studies* 16, no. 1 (2007)

<sup>4</sup> Mohammed Hafez, *Suicide Bombers in Iraq: The Strategy and Ideology of Martyrdom*, (Washington, D.C.: United States Institute of Peace Press, 2007).

<sup>5</sup> Bruce Hoffman, "The Logic of Suicide Terrorism," *The Atlantic*, June 2003.

<sup>6</sup> Ibid.

<sup>7</sup> Robert Pape, *Dying to Win: The Strategic Logic of Suicide Terrorism*. (New York: Random House, 2005), 58.

<sup>8</sup> Mia Bloom, *Dying to Kill: The Allure of Suicide Terror*. (New York: Columbia University Press, 2005)

<sup>9</sup> For the purpose of this article, Dr. Hafez shared with the authors his own suicide bombing database, cataloging each attack in Iraq from March 2003 through August 2008.

<sup>10</sup> Comparisons between Hafez's data and that of this study focused on attacks occurring from March 2003 through August 2006, to reflect the period utilized in his published study, *Suicide Bombers in Iraq* (2007).

<sup>11</sup> Since 2003, foreign fighters who have traveled to Iraq to participate in the insurgency have operated under a variety of names and umbrella groups, including al-Tawhid wa al-Jihad, Al Qaeda Iraq, the Mujahideen Shura Council, and the Islamic State of Iraq.

<sup>12</sup> WITS NextGen database filters were not absolute in the sense that attacks which lacked conclusive evidence that the attacker survived (i.e. the attacker may have been among the wounded), were still included and additional circumstantial detail was explained in a description of the attack. On occasion, this description would relate the individual suicide incident with other attacks which occurred as part of a coordinated effort, including those additional offenses which were foiled or failed and therefore not included as a separate data entry in the source database. For example, an entry for a single, successful, suicide VBIED attack may include information about additional VBIEDs which were discovered nearby, but were defused before they could be utilized as weapons. Detailed reports of planned attacks, and additional failed and foiled attacks which were mentioned in source databases were included in this study's database.

<sup>13</sup> In many cases of foiled attacks, would-be suicide attackers are shot at as they approach a checkpoint, prematurely detonating their explosives; in failed attacks the explosive vest of the suicide bomber may fail to detonate altogether.

<sup>14</sup> Hafez's data not separately graphed, but see Chart 3 in Hafez, 2007, 94

<sup>15</sup> Ibid

<sup>16</sup> Of 395 suicide bombers whose attacks were claimed by insurgent groups, two suicide bombers were claimed by both Al Qaeda and Ansar al-Sunna and three suicide bombers were claimed as part of a joint attack carried out by Ansar al-Sunna, the Islamic State in Iraq, and the Mujahideen Army. Each group claiming an attack was counted as one "claim" in our data, as each group was attaching its name to this event. Whereas one claimed bomber indicates a group's desire to take responsibility for the attack, each group which claimed association with these joint attacks was counted separately. A group's claim indicates an attempt to be viewed as culpable of this violence, likely to win public support. These five joint suicide bombers, therefore, were measured as separate thirteen "claims", as thirteen separate attempts to attach a group's name to a suicide bomber.

<sup>17</sup> David Kilcullen, *The Accidental Guerilla* (New York: Oxford, 2009), 177.

<sup>18</sup> Stephen Biddle, Jeffrey A. Friedman, Jacob N. Shapiro, "Testing the Surge: Why Did Violence Decline in Iraq in 2007?," *International Security* 37, no. 1 (2012)

<sup>19</sup> Kimberly Kagan, "The Anbar Awakening: Displacing al Qaeda from Its Stronghold in Western Iraq," *Iraq Report*, Institute for the Study of War, (August 2006-March 30, 2007). 1

<sup>20</sup> Farook Ahmed, "Backgrounder #23: Sons of Iraq and Awakening Forces," Institute for the Study of War, (February 21, 2008). 2.

<sup>21</sup> Ibid, 12

<sup>22</sup> Hafez (see note 4 above)

<sup>23</sup> Ibid, 92-94

<sup>24</sup> Ibid

<sup>25</sup> Biddle, Friedman, Shapiro (see note 18 above)

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<sup>26</sup> Madelyn Hsiao-Rei Hicks, Hamit Dardagan, Peter M Bagnall, Michael Spagat, and John A Slobada, "Casualties in civilians and coalition soldiers from suicide bombings in Iraq, 2003-2010: a descriptive study," *The Lancet*, 378, 2011.

<sup>27</sup> Pape (see note 7 above)

<sup>28</sup> Bloom (see note 8 above)