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Learning the rules of the game: The role of generic "you" and "we" in shaping children's interpretations of norms

Ariana Orvell
Bryn Mawr College, aorvell@brynmawr.edu

Giulia Elli
University of Michigan - Ann Arbor

Valerie Umscheid
University of Michigan - Ann Arbor

Ella Simmons
University of Michigan - Ann Arbor

Ethan Kross
University of Michigan - Ann Arbor

See next page for additional authors

Authors

Ariana Orvell, Giulia Elli, Valerie Umscheid, Ella Simmons, Ethan Kross, and Susan A. Gelman

Abstract

A critical skill of childhood is learning social norms. We examine whether the generic pronouns "you" and "we", which frame information as applying to people in general rather than to a specific individual, facilitate this process. In one pre-registered experiment conducted online between 2020-2021, children 4-9 years old primarily living in the midwestern U.S. ($N = 146$, 75 girls, 71 boys, $M_{age} = 7.14$, $SD = 1.69$, 82% White) interpreted actions described with generic pronouns (vs. "I") as normatively correct and selected the speaker who used generic pronouns as the rule-follower, particularly when generic pronouns were presented first. There were no significant effects of age. These results illustrate how generic pronouns influence how children discern unfamiliar norms and form interpersonal judgments.

Keywords: Social norms, language, generics, language acquisition

Learning the rules of the game: The role of generic "you" and "we" in shaping children's

interpretations of norms

A critical challenge for young children is to decipher which norms apply in a given

context. Broadly, norms signal what behaviors are typical, expected, and valued, allowing group

members to coordinate their behavior (Cialdini & Trost, 1998; Schmidt & Tomasello, 2012).

Previous literature has distinguished between 'moral norms'—which concern expectations

regarding fairness and the avoidance of inflicting harm, and 'conventional norms'—which

involve more arbitrarily determined expectations for how a person should act in a given context

(Rakoczy & Schmidt, 2013; Schmidt & Tomasello, 2012; Turiel & Nucci, 1978). Here, our focus

concerns conventional norms. Children are highly sensitive to conventional norms and motivated

to discern them, both due to a motivation to garner favor with group members and out of a desire

to do things the "right way" (Schmidt & Tomasello, 2012, p. 232).

Conventional norms are often complex, context-dependent, and continually shifting

(Göckeritz et al., 2014; Rakoczy & Schmidt, 2013; Rakoczy et al., 2008). For example,

conventional norms that govern behavior among children in one classroom may be different

from those in another, and norms within a classroom may shift over time. Given this complexity,

children cannot simply memorize a set of "rules for behavior"; instead, they must infer the norms

from cues in their environment. Many approaches to understanding how children learn social

norms focus on how children attune to the *behaviors* of others; here we propose that children can

glean normative information from subtle linguistic cues that frame information as applying

broadly, beyond specific individuals.

Existing research indicates that young children are exquisitely sensitive to features in

their environment that convey social norms. In determining what conventional norms apply in a

given context, children consider the actions of adults as well as other children (Csibra &

Gergely, 2009; Piaget, 1932; Rakoczy et al., 2008, 2010; Schmidt et al., 2012), prioritize

collective agreement among groups of people (Schmidt et al., 2016), are attuned to actions that

are enacted by multiple people even when the actions themselves are not instrumental in bringing

about a goal (Hermann et al., 2013; Lyons et al., 2007), and accept premises that are created on

the spot (for example, "In this game of pretend play, the bed is the castle"; Rakoczy & Schmidt,

2013). Starting at preschool age, children also appreciate that norms are general, applying not

just to individuals but to groups (Kalish, 2012; Rakoczy & Schmidt, 2013; Schmidt &

Tomasello, 2012).

Prior research has examined how children use normative language to communicate and

enforce conventional norms, including modal verbs of necessity, which convey an obligation to

do something (e.g., "The ball must go here"); imperative commands (e.g., "Put the ball here");

and generic language (e.g., "You put the ball here"; Göckeritz et al., 2014; Orvell et al., 2018).

However, little is known regarding whether children *rely* on subtle linguistic mechanisms to

inform their interpretation of new conventional norms. Here we ask whether linguistic cues,

which frame information as applying to people in general rather than to a specific individual, can

inform children's interpretations of novel conventional norms in the context of learning the rules

of a new game. Examining this question is important because it identifies a subtle, yet widely

used avenue through which children may learn to navigate their complex social worlds.

We focus on the pronouns "you" and "we." In English, both "you" and "we" are

canonically used to refer to specific individuals (e.g., "You forgot to tie your shoes"; "We are

going to the zoo tomorrow"). However, they are also commonly used to convey that information

applies broadly (e.g., "You eat ice cream with a spoon"; "We brush our teeth before bedtime";

Gelman & Roberts, 2017; Kitagawa & Lehrer, 1990; Orvell et al., 2017, 2018). Below, we

briefly review the generic uses of these pronouns, focusing on how their unique features may

contribute to their normative function.

Generic-you expresses information that is broadly applicable, rather than confined to a

specific individual, time, or place (Bolinger, 1979; Kitagawa & Lehrer, 1990; Laberge &

Sankoff, 1979; Orvell et al., 2017). In contrast to generic noun phrases (such as "*Kids* eat

macaroni and cheese"), which express generalizations about particular categories (in this

example, "kids"), generic-you expresses generalizations that apply to people in general (Orvell et

al., 2017, 2018, 2019). Indeed, generic-you appears to be the most common way of expressing

generic persons in English (Orvell et al., 2017, 2020). Moreover, studies of the psychological

functions of generic-you have demonstrated a tight association between generic-you and norms.

Both adults and young children use generic-you when *talking* about norms as opposed to

preferences (Orvell et al., 2017, 2018). Furthermore, adults *rely* on generic-you to inform their

interpretation of unfamiliar norms, endorsing actions described with generic-you more than 'I' as

representing the normatively correct way to do things (Orvell et al., 2019).

Much less research has examined the psychological functions of *generic-we*, which

provides an interesting contrast case. Wales (1996) argues that although 'you' and 'we' are both

used generically in English, their generic meanings retain distinct interpersonal orientations, due

to their original (non-generic) meanings. Thus, "you" is relatively addressee-oriented, whereas

"we" is relatively speaker-oriented. Furthermore, 'we' has an ambivalence and fluidity of

meaning not found in 'you', in part because 'we' (unlike 'you') implies a contrasting group that

differs from the 'we' group (Wales, 1996). Notably, we know of no existing psychological

research that has explored children's or adults' interpretation of generic-we, or compared

interpretations to generic-you. In sum, both 'you' and 'we' can refer to more specified groups than 'people in general' (e.g., a family, classroom, country), but the difference is that with 'we', this group is implicitly contrasted with those who do things differently.

Taken together, there are conceptual and empirical reasons to expect generic-you and generic-we to influence children's interpretation of norms. First, young children are sensitive to generic nouns (e.g., "dogs", "girls"), using them to make inferences about how widely a given behavior is shared among group members (Cimpian et al., 2010; Gelman et al., 2010; Hollander et al., 2002, 2009; Rhodes et al., 2012). Second, children use generic-you when they are expressing norms (Orvell et al., 2018). Third, as noted earlier, generic-you carries normative meaning for adults, as do generic noun phrases (Orvell et al., 2019; Prasada, 2000). Yet generic-you and generic-we are subtle linguistic cues, whose tacit implications for norms may be overlooked when young children hear them in conversation.

At the same time, from a conceptual perspective, research indicates that children have a powerful tendency to interpret the behavior of even a single individual as normative. They imitate the actions of a single person, even when such actions are unusual or even clearly unnecessary (e.g., irrelevant tapping when operating a device that dispenses candy; Csibra & Gergely, 2009; Lyons et al., 2007; McGuigan & Whiten, 2009; Meltzoff & Moore, 1983; Schmidt et al., 2016; Whiten et al., 2009). Young children are also often characterized as concrete thinkers, being focused on the "here and now" (Piaget, 1964). Thus, it is possible that a single, concrete model of behavior may be more persuasive than a generic, abstract one.

We were also interested in whether a speaker's generic pronoun use would have implications for person perception, informing the mental model (i.e., schema) that children form about them. Previous research has established that children rely on people's prior actions to form

judgments about them; for example, children report that people who behave prosocially are "nice" (Van de Vondervoort & Hamlin, 2017). Young children also form judgments about individuals based on what they say (e.g., whether it is truthful) and how they say it (e.g., certainty expressed, accent) (Harris et al., 2018; Kinzler & DeJesus, 2013; Sabbagh & Baldwin, 2001). We propose that use of a generic implies personal endorsement of the generic claim. For example, a person who states, "You only live once" is not only expressing a general rule for others (live life to the fullest), but is also implicitly providing this philosophy as one that they personally endorse. This interpretation would be consistent with prior research showing that people make generic claims on the basis of personal experiences, beliefs, or endorsements (Orvell et al., 2017). In the current context, a person who describes how to play a game using a generic pronoun (e.g., "You move your piece to the green circle") is not only expressing a rule for how to play the game, but also additionally implying that they themselves follow this rule. That is, generic wording may not only signal the appropriateness of a particular action, but also reflect back information about the speaker who uses a generic pronoun, signaling that they are a rule follower. We examined this question by assessing whether children are more likely to judge the speaker who uses a generic pronoun as someone who follows the rules.

We thus sought to address three key questions here: First, do children rely on generic-you and generic-we to inform their interpretation of new norms, and if so, when in development does this sensitivity emerge? Second, do generic-you and generic-we differ from one another in terms of their normative force? Third, do generic-you and generic-we additionally have implications for person perception? That is, can a speaker's use of subtle linguistic devices affect the mental model (i.e., schema) that children form about them?

We predicted that participants would be more likely to endorse actions described with generic "you" or "we" as the right way to do things, compared to actions described with "I". We also predicted that participants would judge a person using generic language to be a "rule follower," more than a person using "I." An open question was at what point in development these sensitivities would emerge, and whether they would differ in strength by age.

Overview of present research

We conducted an experiment that tested whether and, if so at what age, young children would rely on generic-you and generic-we compared to personal endorsements expressed with "I" to determine unfamiliar norms. We tested this question in the context of learning to play a new board game. Games are highly normative contexts—there is a right way and a wrong way to behave, and the rules are conventionalized and often explicit (also see Rakoczy et al., 2008, 2009). Furthermore, we reasoned that a game context would be motivating for young children and heighten their active engagement and listening. On each of a series of trials, participants heard two different people describe the next 'move' in a novel board game, using either generic pronouns (e.g., "Here is what **you/we** do next…") or first-person specific pronouns (e.g., "Here is what **I** do next…") (emphases added here for clarity; the pronouns *you*, *we*, and *I* were unstressed). After each trial, participants were asked to decide which action was "the right thing to do." We also assessed whether generic-you and generic-we had implications for person perception by asking children which person follows the rules. To validate the paradigm, we administered a very similar task with adult participants, who have shown sensitivity to generic-you in their interpretation of norms (Orvell et al., 2019), but for whom the normative force of generic-we had not yet been studied. Adults' data are reported in the Supplementary Material. All studies were pre-registered on AsPredicted (private link for peer review:

); analyses which were not pre-registered are clearly

marked as exploratory. All data files and code are available

(https://osf.io/uq2k8/?view_only=b5dcb16afd3c4ba1bb757d8775c4796e).

Method

Participants

As stated in our pre-registration, we originally aimed to recruit a total of 144 children

($n_{\text{generic-you}}$ vs. I = 72; $n_{\text{generic-we}}$ vs. I = 72) from three age groups—4-5-year-olds, 6-7-year-olds,

and 8-9-year-olds—to participate in an in-person version of the study. However, due to the

COVID-19 pandemic, all in-person research was paused. The protocol was subsequently adapted

for online video-conferencing. All data reported in the current manuscript were collected online,

using video-conferencing. Participants were primarily recruited through a lab database and a

University-run participant registry, primarily consisting of families residing in southeast

Michigan . We first collected data from children in the two older age groups, because we

expected they would be capable of completing the online protocol. Specifically, between May

and August of 2020, we collected data from 105 children ($n_{\text{generic-you}} = 51$, $n_{\text{generic-we}} = 54$) between

the ages of 6-7 and 8-9. In response to reviewer suggestions, we then collected data from an

additional 60 children ($n_{\text{generic-you}} = 34$, $n_{\text{generic-we}} = 26$) between the ages of 4.50 and 5, between

July and October of 2021. We thus collected data from a total of 167 children ($n_{\text{generic-you}} = 85$;

$n_{\text{generic-we}} = 80$; two additional 4-5-year-olds were dropped due to technical issues that prevented

them from even beginning the study—they were not randomly assigned to either linguistic

contrast) between May 2020 and October 2021. We exceeded our pre-registered sample size in

an effort to balance our counterbalanced factors.

We excluded 19 children from the final sample ($n_{\text{generic-you}} = 11$; $n_{\text{generic-we}} = 8$). Four were excluded because they were tested as pilot participants to ensure the protocol was running smoothly. Four participants were dropped due to being distracted during the task or too shy to complete it, two accidentally completed the study twice and their second set of responses was dropped, six encountered technical issues, one was accidentally outside of our target age range, and one was dropped for completing a similar study. We additionally excluded one participant who failed to answer the warm-ups correctly, following our pre-registered criteria.

After accounting for these exclusions, we retained data from 146 children ($n_{\text{generic-you}} = 74$, 4-5-year-olds $n = 25$, $M_{\text{age}} = 5.17$, $SD = 0.44$, 6-7-year-olds $n = 28$, $M_{\text{age}} = 7.03$, $SD = 0.73$, 8-9-year-olds $n = 21$, $M_{\text{age}} = 9.21$, $SD = 0.45$; 39 girls, 35 boys; $n_{\text{generic-we}} = 72$, 4-5-year-olds $n = 24$, $M_{\text{age}} = 5.32$, $SD = 0.48$, 6-7-year-olds $n = 20$, $M_{\text{age}} = 7.04$, $SD = 0.58$, 8-9-year-olds $n = 28$, $M_{\text{age}} = 9.10$, $SD = 0.58$, 36 girls, 36 boys). Of the 74 children randomly assigned to the generic-you vs. I contrast, 79.73% of participants identified as White (7.1% of Hispanic origin), 10.81% as Multi-racial, 4.05% as East Asian, 2.70% as South Asian, and 2.70% preferred not to answer. Of the 72 children randomly assigned to the generic-we vs. I contrast, 84.72% of participants identified as White, 11.11% as Multi-racial, 1.39% as East Asian, 1.39% as Black or African-American, and 1.39% as "Other"). The majority of participants lived in the midwestern United States.

Design

We used a within-subjects design with five primary trials. On each of the five trials, participants heard the same two speakers describe different possible moves in a board game. One of the speakers consistently used generic language (i.e., generic-you or generic-we) and the other consistently used specific language (i.e., "I"). As between-subject factors, we varied whether

children heard trials that contrasted generic-you vs. I or generic-we vs. I (Language), whether the generic speaker was presented first or second (Order), which speaker used the generic vs. specific pronoun (Speaker), and which move (e.g., "move to the yellow circle" vs. "move to the green circle") on the game board was paired with the generic or specific pronoun on each trial (Assignment).

Procedure

The study was conducted online using Zoom video conferencing. During a study session, the experimenter shared their screen with the participant to guide them through the study (which was hosted on Qualtrics) and recorded the participants' responses.

Parents/legal guardians gave written informed consent prior to the study session and children gave oral assent to participate once the online session began. The families were awarded a $5 gift card as an expression of thanks for their participation.

Warm-up task. Before beginning the study, we familiarized participants with the online video conferencing format through a short warm-up activity. First, participants were introduced to a young woman named Sam (depicted in a still photo on the screen) and were told that their job was to help Sam by answering her questions. Sam asked all the questions throughout the warm-up task and main task through pre-recorded audio files, in order to control the intonation. We considered this important for two reasons. First, emphasis on the pronoun can change its meaning (Hall & Moore, 1997; Kurumada & Clark, 2017). For example, emphasis on the pronoun "you" would imply a non-generic meaning, and emphasis on the pronoun "I" would imply an exclusive meaning (i.e., that the content being expressed *only* applies to the speaker). Given this, it was critical to ensure that none of the pronouns received intonational stress, and that the intonation was equivalent across the three pronouns used in the two experiments (you,

we, I). Second, we wanted to eliminate the possibility of any potential experimenter bias in asking the test questions, because they included the two choices, and again intonation could have biased children toward one response or the other.

After being introduced to Sam, participants completed visual and audio checks to ensure that the visual and audio stimuli were working and to familiarize them with how to answer Sam's questions. Next, the experimenter introduced the premise that some people are "rule-followers" whereas other people "do things their own way" and told participants that their job was to "help Sam figure out who does things the **right** way." Participants then completed two warm-up trials based on this premise. In each trial, participants saw two videos of people performing behaviors associated with commonly known norms (i.e., playing basketball; putting flowers in a vase). In one video, the person did the behavior normatively (i.e., they dribbled the basketball; put the flowers right-side up in the vase). In the other video, the person did the behavior non-normatively (i.e., they kicked the basketball; put the flowers upside down in the vase). Participants were then asked to identify which person did the behavior "the right way." After the two warm-up trials, participants answered a comprehension check question (posed by the experimenter) asking whether everybody followed the rules or if only *some* people followed the rules. The experimenter gave participants positive feedback if they answered correctly ("only some people") and corrected them if they answered incorrectly ("everybody").

Main Task. Participants then moved on to the main task, where their job was to figure out "the right way" to play a new game based on two speakers' statements. Participants were told that only one of the speakers was a rule-follower and played the game "the right way," whereas the other was not a rule-follower and played the game "her own way." This framing was meant to heighten children's attention to the idea that one player followed the rules (i.e., played

normatively) whereas the other did not, and mirrored framings used in prior research with adults (Orvell et al., 2019). Participants were also told that the speakers were in different rooms and could not hear each other, to ensure that the second speaker was not interpreted as correcting the first speaker or making a contrastive statement.

In each trial, participants saw a cartoon representation of the speakers and their gameboards (see Figure 1). The experimenter played audio clips of the two speakers giving different information regarding the next move in the game. One of the two speakers gave the statements using generic-you (e.g., "Here's what you do first. You move your piece to the green circle. That's what you do." or "Here's what we do first. We move our piece to the green circle. That's what we do.") whereas the other gave the statements using specific language (e.g., "Here's what I do first. I move my piece to the yellow circle. That's what I do."). The pre-recorded audio clips were carefully scripted to ensure there was no intonational stress on any of the personal pronouns. Specifically, the words "I", "my", "you", "your", "we", and "our" were all unstressed, in order to block a contrastive reading. Within each trial, the only information that differed were the pronouns ("you" vs. "I" in Study 1, "we" vs. I" in Study 2) and the color of the shape.

Interpretation of Norms. The experimenter then played the audio clip that assessed the influence of generic pronouns on children's interpretation of norms (e.g., *Experimenter*: "Here's Sam's question"; *Recording of Sam*: "What's the right thing to do first? Move to the green circle or move to the yellow circle?").

Person Perception. After the five trials, participants were again shown the two speakers and were asked, "Who follows the rules?" to assess implications of generic pronouns on person perception.

[INSERT FIGURE 1 HERE]

At the very end of the experiment, participants were asked two exploratory questions. One question asked children which speaker they liked better, or if they liked them the same (see Supplementary Material). The other question was a metalinguistic test of whether participants interpreted the pronouns as generic (i.e., referring to "anybody") or specific (referring only to them) (i.e., the Pronoun Interpretation task). In the generic-you vs. I condition, participants listened to one of the test trial recordings that used generic-you. They were then asked: "What did she mean when she said, 'You move to the red square?' Did she mean *only you*? [accompanied by a picture of a finger pointing outward toward the participant] or did she mean *anybody*? [accompanied by a silhouette picture of a crowd of people]". In the generic-we vs. I condition, participants listened to one of the trial recordings that used generic-we and were asked, "What did she mean when she said, 'We move to the red square?' Did she mean only *you and her*? [accompanied by a finger pointing outward toward the participant, alongside the picture of the speaker] or did she mean *anybody*? [accompanied by a silhouette picture of a crowd of people]". The first twelve participants were also given the option of responding "I don't know" in response to this question; this choice was then dropped to parallel the paradigm used with adult participants. Additionally, seven children from our final sample in the 4-5-year-old age group did not receive the attribution question due to a technical error.

Results

Participants' responses to each of the forced-choice questions in the main task were coded such that 1 = the generic choice and 0 = the specific choice. The data were analyzed in R.

The lme4 package was used to fit binomial mixed-effects logistic regression models to anaylze

data associated the Interpretation of Norms dependent variable (Bates et al., 2007).

Preliminary Analyses. Two preliminary analyses were conducted to examine whether

any of our counterbalanced factors—i.e., Speaker, Order, Assignment—were related to the

dependent variables. In our pre-registration we proposed examining these factors separately

within each linguistic contrast (generic-you vs. I and generic-we vs. I). However, we pooled data

across both studies because these factors were uneven within each linguistic contrast due to

limitations in how randomization was set up in Qualtrics, which we were not aware of until after

the pre-registration was submitted and data were collected. We further reasoned that these factors

(i.e., Speaker, Order, Assignment) should not function differently for generic-you and generic-

we. This approach also allowed us to parsimoniously compare the normative force of the generic

pronouns (i.e., generic-you vs. generic-we), an analysis we intended to run *a priori*, by including

Language as a fixed effect in this model. Following our pre-registration, we also examined

whether there were any effects associated with age group by treating it as a categorical variable

with three levels (i.e., 4-5 year-olds; 6-7 year-olds; 8-9 year-olds). Finally, we examined whether

there were any learning effects over the course of the experiment by examining the effect of Trial

(using Helmert coding) on the first dependent variable (Interpretation of Norms).

Exact specifications of these models and all results associated with them are reported in

Tables S2-S3 of the Supplement. To summarize, for both dependent variables, there were no

significant effects associated with the counterbalanced variables of Speaker (Interpretation of

Norms: β = .39, 95% CI [-0.27,1.05], p = .245; Person Perception: β = .11, 95% CI [-0.65, 0.88],

p = .770) or Assignment (Interpretation of Norms: β = -.51, 95% CI [-1.19, 0.17], p = .145;

Person Perception: β = -.60, 95% CI [-1.39, .18], p = .135). There were also no effects of Trial on

children's Interpretation of Norms (ps for all comparisons, using Helmert coding $> .29$).

However, there were significant effects of Order (Interpretation of Norms: $\beta = -1.62$, 95% CI =[-

2.32, -0.93], $p < .001$; Person Perception: $\beta = -1.25$, 95% CI [-2.07, -.47], $p = .002$).

In terms of the relative force of the two generic pronouns (you vs. we), we failed to

observe an effect of Language on either dependent variable (Interpretation of Norms: $\beta = -.20$

95% CI [-.88, .48], $p = .566$; Person Perception: $\beta = .09$, 95% CI [-.69, .87], $p = .827$). We also

failed to detect effects of Age (Interpretation of Norms: βs $< .48$, $ps > .25$; Person Perception: βs

$< .57$, $ps > .21$).

Following our pre-registration, we conducted subsequent analyses examining any effects

associated with Age as well as Order—because Order had a statistically significant effect on

children's choices in both preliminary models. Exact specifications of these models and their

results are reported in Supplementary Tables 2-3.

Main Analyses Overview

To examine whether generic (vs. specific) language influenced children's judgments

significantly above chance (i.e., 50%) we ran a series of intercept-only models. These models

provide the overall effect of generic pronouns on young children's judgments of which game

board moves were normatively correct (Interpretation of Norms) and who the rule follower was

(Person Perception).

Following our pre-registration, we report intercept-only models for each generic pronoun

separately (generic-you vs. I and generic-we vs. I) collapsed across all age groups and then

within each age group. Given the strong Order effects observed in the preliminary analyses, we

additionally report exploratory intercept-only models for each Order (Order 1 and Order 2)

separately by generic pronoun. Further, we report exploratory intercept-only models for each

Order within each age group, collapsed across the pronouns 'you' vs. 'we' (given the lack of any significant effect of generic pronoun in the preliminary analyses), to maximize statistical power to detect developmental changes. Finally, given variability in children's interpretations of to whom the pronouns referred, we report exploratory subgroup analyses based on whether children interpreted the pronouns generically vs. not.

Interpretation of Norms

Generic-you vs. I. As predicted, participants endorsed the actions described with generic-you significantly above chance (65.95% of the time), suggesting that children relied on generic-you to inform their interpretation of new norms ($\beta = 1.15$, $SE = .32$, $z = 3.64$, 95% CI [0.57, 1.85], OR = 3.16, $p < .001$).

Looking within each age group, 4-5-year-old participants endorsed the actions described with generic-you 60.80% of the time, which was not significantly above chance ($\beta = 0.74$, $SE = .46$, $z = 1.60$, 95% CI [-.19, 1.90], OR = 2.09, $p = .109$). Participants in both older age groups did endorse the actions described with generic-you significantly above chance: 6-7-year-olds selected actions described with generic you 67.86% of the time ($\beta = 1.24$, $SE = .50$, $z = 2.46$, 95% CI [0.30, 2.49], OR = 3.45, $p = .014$), and 8-9-year-olds selected actions described with generic-you 69.52% of the time ($\beta = 1.57$, $SE = .70$, $z = 2.25$, CI [0.35, 3.58], OR = 4.82, $p = .025$).

Generic-we vs. I. As predicted, participants endorsed the actions described with generic-we significantly above chance (65.83% of the time), suggesting children relied on generic-we to inform their interpretation of new norms ($\beta = 0.93$, $SE = .23$, $z = 4.14$, 95% CI = [0.50, 1.45], OR = 2.54, $p < .001$).

Looking within each age group, 4-5- and 6-7-year-old children endorsed actions described with generic-we 60% and 61% of the time, respectively, which were not significantly above chance (4-5-year-olds: β = 0.52, *SE* = .31, z = 1.66, 95% CI [-0.10, 1.25], OR = 1.68, *p* = .096; 6-7-year-olds: β = 0.53, *SE* = .30, z = 1.74, CI [-0.08, 1.22], OR = 1.69, *p* = .082). Eight- to nine-year-old children, however, endorsed the actions described with generic-we 74.29% of the time, which was significantly above chance (β = 2.05, *SE* = .69, z = 2.97, 95% CI [0.93, 4.16], OR = 7.79, *p* = .003).

Person Perception

Generic-you vs. I. As predicted, when asked "Who followed the rules?" at the end of the game, participants chose the speaker who used generic-you significantly above chance (68.92% of the time), suggesting that generic-you influenced children's judgments about individuals (β = 0.80, *SE* = .25, z = 3.17, 95% CI [0.32, 1.31], OR = 2.22, *p* = .002).

Looking within each age group, 4-5-year-olds chose the speaker who used generic-you as the rule-follower 52% of the time, which was not significantly above chance, β = .08, *SE* = .40, z = .20, 95% CI [-0.71, 0.88,], OR = 1.08, *p* = .842. Participants in both of the older age groups, however, did choose the speaker who used generic-you significantly above chance. Six- to seven-year-olds selected the speaker who used generic-you as the rule-follower 78.57% of the time (β = 1.30, *SE* = .46, z = 2.82, 95% CI [0.46, 2.30], OR = 3.67, *p* = .005); 8-9-year-olds selected the speaker using generic-you as the rule follower 76.19% of the time (β = 1.16, *SE* = .51, z = 2.27, 95% CI [0.23, 2.28], OR = 3.20, *p* = .023).

Generic-we vs. I. As predicted, when asked "Who followed the rules?" at the end of the game, participants chose the speaker who used generic-we significantly above chance (71.83% of the time; (β = 0.94, *SE* = .26, z = 3.55, 95% CI [0.44, 1.48], OR = 2.55, *p* < .001). Looking

within each age group, 4-5-year-olds selected the speaker who used generic language as the rule

follower 73.91% of the time, which was significantly above chance, β = 1.04, *SE* = .47, z = 2.19,

95% CI [0.16, 2.06], OR = 2.83, *p* = .028. Children 6-7 years of age selected the generic speaker

65% of the time, which was not significantly different from chance (β = 0.62, *SE* = .47, z = 1.32,

95% CI [-0.27, 1.60], OR = 1.86, *p* = .187). Children 8-9 years of age selected the generic

speaker 75% of the time, which was significantly above chance, β = 1.10, *SE* = .44, z = 2.52,

95% CI [0.29, 2.03], OR = 3.0, *p* = .012.

Exploratory Order Analyses

      Generic-you vs. I. As illustrated in Figure 2 Panel A, Participants endorsed actions

described with generic-you significantly above chance when generic-you was presented first

(Order 1: 78.75%, β = 2.45, *SE* = .70, z = 3.48, 95% CI = [1.07, 3.83], OR = 11.60, *p* <.001) but

not second (Order 2: 56.19%, β = .39, *SE* = .32, z = 1.21, 95% CI [-.24, 1.01], OR = 1.47, *p*

= .227). Similarly, as illustrated in Figure 3 Panel A, participants selected the person who used

generic-you as the rule-follower significantly above chance, when generic-you was presented

first (Order 1: 87.50%, β = 1.95, *SE* = .53, z = 3.64, 95% CI [1.01, 3.16], OR = 7.0, *p* < .001,)

but not second (Order 2: 54.76, β = .19, *SE* = .31, z = .62, 95% CI [-.42, .81], OR = 1.21, *p*

= .538,).

                             [INSERT FIGURE 2 HERE]

                             [INSERT FIGURE 3 HERE]

Generic-we vs. I. As illustrated in Figure 2 Panel B, participants endorsed the actions described with generic-we significantly above chance when generic-we was presented first (Order 1: 78.50, β = 1.81, *SE* = .38, z = 4.80, 95% CI [1.07, 2.55], OR = 6.10, *p* <.001) but not second (Order 2: 50%, β = .00, *SE* = .25, z = .01, 95% CI [-.48, .49], OR = 1.00, *p* = .993,). Similarly, participants selected the rule-follower as the person who used generic-we significantly above chance when generic-we was presented first (Order 1: 80.00%, β = 1.39, *SE* = .40, z = 3.51, 95% CI [.66, 2.23], OR = 4.0 , *p* < .001) but not second (Order 2: 61.29%, β = .46, *SE* = .37, z = 1.25, , 95% CI [-.25, 1.21], OR = 1.58, *p* = .213).

Order by Age Group (Collapsed Over Generic Pronouns). To probe whether a developmental effect might by underlying the observed Order effects described above, we conducted intercept-only models within each age group, but collapsing over generic pronouns to increase statistical power. As illustrated in Table 1, generic pronouns influenced children's interpretation of norms and person perception, significantly above-chance, in each age group— but only when generic pronouns were presented first. Children's responses did not differ from chance when generic pronouns were presented second, in any of the age groups, for either dependent variable.

[INSERT TABLE 1 HERE - LANDSCAPE]

Discussion

Whereas much previous research has focused on how young children learn social norms by observing others' behaviors, here we find that they also attend to subtle linguistic mechanisms that express generality, in the form of generic pronouns (*you* and *we* used to refer to people in general), particularly when generic pronouns are presented to them first. These studies provide the first empirical test of whether children are sensitive to generic pronouns, which convey that

an idea is broadly applicable rather than specific, to inform their judgments. Specifically, we found that subtle shifts in pronouns (from "I" to "you" or "we") influenced children's interpretations of novel norms and their judgments of other people. From a theoretical perspective, these findings complement previous research suggesting that young children understand that norms are general and broadly applicable (Kalish, 2012; Rakoczy & Schmidt, 2013; Schmidt & Tomasello, 2012). Furthermore, these findings illustrate how children apply this knowledge to subtle linguistic cues, using them to make inferences about whether a given behavior represents the right way to do things.

A substantial literature demonstrates the persuasive value of personal models or endorsements. Among adults, personal (first-person) testimonials influence attitudes and behaviors (e.g., Shen et al., 2015). Similarly, young children readily infer social norms and conventional rules from a single actor or speaker (e.g., Csibra & Gergely, 2009; Harris et al., 2018; Lyons et al., 2007; McGuigan & Whiten, 2009; Meltzoff & Moore, 1983; Schmidt et al., 2016; Whiten et al., 2009). Indeed, children are even more likely to interpret one person's intentional action as normative than are adults. Thus, prior work with both children and adults supports the idea that individual endorsements and "I" statements can powerfully communicate norms. Our finding that generic "you" and "we" communicate norms above and beyond "I" suggests that generic pronouns—like other examples of generic language—may have a specially normative function (Prasada & Dillingham, 2006, 2009).

Nonetheless, an open question is the extent to which the results were driven by the normative force of generic-you and generic-we versus the exclusive meaning of "I." The strong Order effects observed in the data may partly shed light on this question. Prior work suggests that children may have a default tendency to interpret rules or behaviors as normative (i.e.,

applying generally to others) unless there are cues to signal otherwise (e.g., Lyons et al., 2007),

perhaps analogous to their tendency to treat generics as a cognitive default (Gelman et al., 2019;

Leslie, 2007, 2008; Leslie & Gelman, 2012). In the current experimental context, if children

default to behaviors as normative, then the first piece of information that they receive (a generic

statement or an "I" statement) should be interpreted as normative. When this first rule is

expressed generically and then followed by a specific piece of information (an "I" statement),

that latter behavior could be viewed as non-normative because the specific wording supports that

it is contrastive with the initial generic rule. In contrast, when the first rule is expressed

specifically (with "I) and then followed by a generic piece of information (a generic-you or -we

statement), then *both* would be viewed as normative: the "I" statement by virtue of being the first

and thus the default; the generic statement by virtue of its generic form.

Among adults, generic pronouns influenced their judgments significantly above chance

regardless of whether they were presented first or second—although the effects were

descriptively stronger when generic pronouns were presented first. It is possible that, between

childhood and adulthood, people may become less likely to accept the first rule as normative and

be more discerning to additional clues that signal the generality of a behavior. Ultimately, this

suggests that the contrast between generic and specific language is playing a role—for both

children and adults to varying degrees. However, it is still an open question as to how each

would compare to a neutral baseline condition. To disentangle the role of generic pronouns vs.

specific "I", one possibility for future research is to present children with stand-alone statements

(that use either generic pronouns or first-person pronouns) and assess the degree to which

children judge them as reflecting norms. In previous research conducted with adults that used a

similar method, generic-you continues to have persuasive force relative to "I" (see Orvell et al., 2019).

We failed to observe significant effects of age. One possibility is that by four and a half years of age, which corresponds to the youngest age sampled here, children have already formed a tacit understanding of what generic pronouns may signal, using them to inform their normative judgments. This possibility aligns with research suggesting that children develop the ability to express and understand generic language early in development (Gelman, 2004). By two years of age, children begin producing generic noun phrases (e.g., "Cats say meow"), using them at rates similar to adults by age four (Gelman et al., 2008). Between the ages of two and three years of age, children use the generic pronoun "you" discerningly, using it to talk about norms more than preferences (Orvell et al., 2017). Furthermore, the capacity to extrapolate meaning from generic statements emerges by three years of age (Hollander et al., 2002). Taken together, it is possible that the lack of age effects observed in the present study reflects children's early-learned understanding that generic pronouns convey broad information, as well as children's capacity to rely on these linguistic signals to form normative judgments.

Another possibility is that developmental differences would emerge in early childhood if children were tested in less scaffolded contexts. The context provided in the present experiment was highly normative (a game-learning situation), which may have increased children's sensitivity to generic pronouns. In contrast, if the context had been more neutral, we may have seen changes with age in children's use of language to guide their reasoning. It is also possible that developmental changes in children's sensitivity to generic pronouns on this task may emerge if younger children (i.e., below 4.5 years of age) were included. Future research should continue

to investigate when in development sensitivity to generic pronouns develops, including whether developmental differences in the normative force of generic pronouns may emerge with a different task, and/or with children two and three years of age.

Overall, it is notable that young children were sensitive to these linguistic cues, which are ubiquitous in everyday conversations, yet subtle. These findings converge with research demonstrating that young children display remarkable sensitivity to other kinds of variation in linguistic form. For example, children infer that qualities expressed with generic noun phrases (e.g., *Hibbles* eat grass) are more stable and representative of a category compared to qualities that are expressed by instantiating a specific individual (e.g., *This* hibble eats grass; Cimpian & Markman, 2009; Gelman et al., 2010; Graham et al., 2011; Hollander et al., 2009; Rhodes et al., 2018; Roberts et al., 2017). Similarly, research with bilingual Spanish- and English-speaking children demonstrates that they draw inferences about how stable a personal characteristic is depending on the form of "to be" that is used to describe it in Spanish (*ser* vs. *estar*; Heyman & Diesendruck, 2002).

We did not observe a significant difference in the relative normative force of generic-you vs. generic-we. However, there may be other contexts in which one is more influential than the other. "We" can signal that a statement applies to member of one's in-group, in contrast to one's outgroup (Zupnik, 1994). Further, there is a strong link between groups and norms (Goldstein & Cialdini, 2007; Kalish, 2012; Rhodes, 2014; Sherif, 1936). Thus, in contexts where people either have a pre-existing affiliation with a group or are motivated to affiliate, generic-we may have more normative force than generic-you, or may have more contrastive power. This may be particularly true among children, who are very sensitive to groups and often display a strong motivation to affiliate with them (Schmidt et al., 2012, Sparks et al., 2017). Similarly, Tomasello

(2020) has pointed to the conceptual meaning of "we" as being intimately tied to norms

regarding cooperation and moral obligation (also see Li & Tomasello, 2021). Thus, in situations

where cooperation or a moral obligation is present, generic-we may shape behavior or judgments

more than generic-you.

On the other hand, there may be contexts in which generic-you has a greater influence on

people compared to generic-we. Specifically, given that the scope of generic-you does not as

clearly imply a contrasting outgroup, it may have more normative force in situations where a

group is not clearly delineated. By virtue of using a word (i.e., "you") whose canonical meaning

is that of the addressee, generic-you may also be more effective for piquing an addressee's

interest and pulling them into the sentiment being expressed. In support of this, Orvell et al.

(2020) found that generic-you appeared relatively more frequently than generic-we in passages

that adults spontaneously highlighted while reading books on their Kindle application.

Taking a step back, there were also particular features of the experimental context which

may have heightened children's sensitivity to generic pronouns: namely, that we tested

children's sensitivity within a highly normative game context and further stipulated that one

person followed the rules whereas the other did not. We expect this context likely increased our

sensitivity to detect an effect of generic pronouns on children's normative judgments. That is, it

is possible that generic pronouns ("you" or "we") are particularly persuasive in situations where

behaviors tend to be closely governed by social norms and/or when people need to decipher

unfamiliar norms, serving as a linguistic route to 'informational social influence' (i.e., leading to

conformity out of a desire to be correct). In contrast, in situations that are not highly normative,

where a person has a pre-existing belief or knowledge about what is normative, or where a

person has little or no motivation to affiliate with a group, we expect generic pronouns to be less

persuasive. In this experiment, we used a game scenario because it is highly normative context (see also Rakoczy et al., 2009). Future research can explore such boundary conditions, or see whether cuing participants to affiliate with the speaker may make them more open to the persuasive force of generic pronouns.

Finally, the majority of children in our sample interpreted the pronouns generically, as referring to people in general. However, a subset of children interpreted the pronouns as referring to themselves, specifically. Subgroup analyses (reported in the Supplement) indicate that the results held among both subgroups of children – those who did and those who did not interpret the pronouns generically. That is, children who interpreted the pronouns generically selected behaviors described with you/we significantly above chance, demonstrating that a generic interpretation had normative force relative to the first-person pronoun "I." At the same time, however, children who interpreted the pronouns as referring to them, specifically, also selected behaviors described with you/we (vs "I") above chance. These analyses were not pre-registered because it is unclear whether young children can accurately reflect on the semantics of "you" in this metalinguistic task. Children may have interpreted the pronouns generically implicitly yet struggled to articulate this understanding when explicitly probed on the meaning of you/we. Thus, these findings should be interpreted tentatively. If we do assume that specific uses of you/we carried normative force relative to "I", however, this could be explained by children's tendency toward egocentrism. Perhaps young children assume that rules which apply to them personally are also likely to apply more generally to others. Future research can attempt to more directly interrogate these findings by comparing clearly specific (i.e., non generic) pronouns to generic ones.

Generic pronouns are notable for demonstrating how the capacity to shift perspectives is woven into the fabric of the world's languages. Generic *you*, *we*, and *one* allow speakers to seamlessly reframe their individual perspective as one that is broad and shared with others. Indeed, although our focus here was on English, generic-you and -we also appear in other unrelated languages (Creissels, 2013; de Hoop & Tarenskeen, 2015; Kitagawa & Lehrer, 1990; Margetts, 2015), suggesting their ability to function generically may reflect a common conceptual foundation in how language helps people coordinate their behavior. The results from the current studies suggest that by the time English-speaking children enter school, one effective means of communicating is to shift their perspective to broaden it, thereby encompassing a larger group to which the children belong. Future research should examine whether children who speak other languages or are embedded in different cultural contexts similarly rely on generic pronouns (including but not restricted to "you" and "we") to make normative judgments. Our sample consisted of predominantly White children from the Midwestern United States; one question for future research is whether children from other sociocultural contexts within the United States also show early sensitivity to generic pronouns. Another question for future research is whether these effects generalize to cultures that are more interdependent. In such cultural contexts, social harmony among the group is prioritized (Marcus & Kitayama, 1991); thus it is plausible that children who are exposed to these values may display even greater sensitivity to generic pronouns, perhaps even earlier in development.

The current studies focused on how children may rely on generic pronouns to discern conventional norms. As pointed out earlier, such norms are highly context-dependent and fluid. Future research should examine whether generic pronouns also influence children's thinking or behavior regarding moral norms, to determine if generic language also communicates to children

that there is a "right" or "good" way to behave in morally consequential interpersonal situations, such as helping others, sharing resources, or respecting others' property. Given that violations of such norms may result in interpersonal harm, identifying ways to communicate them effectively to children has both basic and translational implications.

Together, these results demonstrate how subtle linguistic cues can influence how children discern unfamiliar norms, as well as their judgments about others, highlighting two subtle yet pervasive mechanisms through which children may glean information from their social world.

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Table 1

Age Group	Order 1							Order 2						
	% Generic Choices	β	*SE*	z	*p*	95% CI	OR	% Generic Choices	β	*SE*	z	*p*	95% CI	OR
4-5 years of age:														
Interpretation of Norms	82.86%	2.54	0.77	3.30	<.001	1.03, 4.04	12.64	56.43%	-0.28	0.21	-1.33	.183	-0.69, 0.13	0.76
Person Perception	85.71%	1.79	0.62	2.87	.004	0.71, 3.24	6.00	55.56%	-0.22	0.39	-.58	.565	-1.00, 0.53	0.80
6-7 years of age:														
Interpretation of Norms	70.00%	1.24	0.47	2.63	.008	0.32, 2.17	3.47	60.77%	0.59	0.35	1.68	.092	-0.10, 1.28	1.80
Person Perception	77.27%	1.22	0.51	2.41	.016	0.30, 2.34	3.40	69.23%	0.81	0.42	1.91	.056	0.01, 1.70	2.25
8-9 years of age:														
Interpretation of Norms	82.07%	2.38	0.60	3.98	<.001	1.21, 3.56	10.84	58.00%	0.69	0.64	1.09	.275	-0.55, 1.94	2.00
Person Perception	86.21%	1.83	0.54	3.40	<.001	0.89, 3.06	6.25	60.00%	0.41	0.46	.89	.374	-0.48, 1.34	1.5

Note. Table reports intercept-only models that assess whether generic pronouns influenced children's Interpretation of Norms and Person Perception significantly above chance (i.e., 50%) when generic pronouns were presented first (Order 1, left panel) and second (Order 2, right panel). Results collapse across generic pronouns (*you* and *we*). "% Generic Choices" refers to the frequency with which children selected actions described with the generic pronouns as correct (Interpretation of Norms), and the speaker who used generic pronouns as the rule follower (Person Perception)