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That's how “you” do it: Generic *you* expresses norms during early childhood



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ABSTRACT

Prior research indicates that children construe norms as general and construe preferences as individual. The current studies tested whether this expectation is built into how children interpret and use language. We focused on the pronoun *you*, which is ambiguous between a canonical interpretation (referring to the addressee) and a generic interpretation (referring to people in general). In Study 1, children ($N = 132$, ages 3–10 years) were asked a series of questions containing “you,” referring to either descriptive norms (e.g., “What do you do with bikes?”) or preferences (e.g., “What do you like to do with bikes?”). In Study 2, parents conversed with their children ($N = 28$, ages 2–4 years) about prescriptive norms (e.g., “What should you do with books?”) and preferences (e.g., “What do you like about books?”). In both studies, children’s choice of pronoun in their answer revealed whether they interpreted *you* in the questions as generic or canonical. Results indicated that children more often interpreted *you* as generic in the normative contexts (i.e., responded with generic *you*, e.g., “You read them”) and as canonical in the preference contexts (i.e., responded with *I*, e.g., “I read them”). This pattern emerged by early preschool, providing the first evidence that the distinction between norms and preferences directs young children’s interpretation and use of everyday language.

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Introduction

An important feature of norms is that they are general. “Thou shalt not kill” did not just apply to Moses, and “Drive on the right-hand side of the road” does not just apply to those who feel like doing so. Norms derive their power by providing rules of conduct and expected regularities of behavior that apply broadly, allowing individuals to coordinate their actions with one another. The classic tension between an individual’s wishes and what is best for the group can be managed by an expectation that certain rules extend beyond the person who creates them and may take precedence over personal desires.

Here we suggest that this expectation of norms as general is a foundational principle that is built into young children’s interpretation and use of language. We examined this idea by focusing on generic “you,” a ubiquitous but understudied expression that refers broadly to people in general (e.g., “You don’t eat ice cream with your fingers”; “You need to be 21 to drink”; “You only live once”). Specifically, we propose that early in development, children honor a tight link between norms and group-level representations, and this link is expressed in language via generic *you*.

Groups and norms

Norms are fundamentally broad in scope, applying generally across individuals (Mulkay, 1976). They may be descriptive, referring to regularities of human behavior, or prescriptive, expressing expectations for how people should act (Cialdini & Trost, 1998). Descriptive norms characterize behaviors that are likely to be exhibited by members of the group, thereby providing insights into how people typically act in similar situations (Pepitone, 1976, cited in Cialdini & Trost, 1998; see also Cialdini, Kallgren, & Reno, 1991). In contrast, prescriptive norms convey more explicit expectations for acceptable (vs. unacceptable) behavior. Although descriptive and prescriptive norms can be distinguished in these ways, recent work suggests that they are often conflated in how people reason. In this vein, descriptive norms inform people’s expectations of what *should be* (Bear & Knobe, 2016; Tworek & Cimpian, 2016). For example, children aged 4–6 years judged individuals who violated a group regularity (e.g., listening to a different type of music than others in their group) as having done something wrong (Roberts, Gelman, & Ho, 2017). For these reasons, in this article we use “norms” to include both regularities and valued expectations of behavior that are shared among members of groups.

Children grasp the generality of norms from an early age (Göckeritz, Schmidt, & Tomasello, 2014; Kalish, 2012; Rakoczy & Schmidt, 2013; Rhodes, 2014). For example, when reasoning about third-party vignettes, preschool children generalize behaviors motivated by normative obligations from one individual to another person of the same social category (Kalish, 2012). Moreover, in face-to-face interactions, 2- and 3-year-olds protest and criticize another child who violates the rules of an invented game, indicating that they expect the rules to apply not only to those who initially invented the game but also to newcomers who are playing the game for the first time (Rakoczy & Schmidt, 2013; Rakoczy, Warneken, & Tomasello, 2008, 2009).

Norms are furthermore distinctive in their generality; whereas norms are assumed to be general, preferences are understood to vary from person to person. By 18 months of age, children understand that one person’s likes and dislikes are not necessarily shared by others (Repacholi & Gopnik, 1997; Wellman & Liu, 2004), and preschool children do not generalize behaviors motivated by psychological states from one individual to another person of the same social category (Kalish, 2012). Indeed, the very same content (food selection) can be construed as normative or not, depending on whether it is framed as a group-linked behavior or an individually linked preference (cf. Repacholi & Gopnik, 1997, and Roberts et al., 2017).

The link between norms and groups is also bidirectional; children not only expect norms to apply generally but also expect group behaviors to be normatively appropriate. As noted earlier, Roberts et al. (2017) found that properties attributed to contrasting novel groups (Hibbles and Glerks) were viewed normatively, leading to negative evaluations of those who failed to conform to the behavior typical of the group. In contrast, in a control condition where properties were attributed to contrasting *individuals* rather than contrasting *groups*, children did not have a negative evaluation of nonconforming individuals.

Nouns with a generic reading

How do people communicate the link between groups and norms in language? To answer this question, we first need to consider how languages express concepts of groups. One common way of referring to categories or groups is with full noun phrases (e.g., “dogs” in the statement “Dogs are friendly”). This contrasts with using nouns to make specific reference to an individual or individuals within a group (e.g., “dogs” in the statement “These dogs are friendly”). Henceforth, we refer to the former as “generic nouns” for ease of expression, although it should be noted that whether a noun is specific or generic is determined not by the noun phrase per se but rather by its context of use (Gelman & Raman, 2003; Papafragou, 1996). Generic nouns are universally available in the world’s languages (Carlson & Pelletier, 1995). They express conceptually central generalizations (Cimpian & Markman, 2009; Hollander, Gelman, & Raman, 2009) and imply that a category is homogeneous, inductively rich, and stable over time and contexts (Gelman, Ware, & Kleinberg, 2010; Rhodes, Leslie, & Tworek, 2012). They are also common in the speech that adults direct toward children (Gelman, Coley, Rosengren, Hartman, & Pappas, 1998; Gelman and Tardif, 1998; Gelman, Ware, Kleinberg, Manczak, & Stilwell, 2014), appear frequently in children’s instructional books (Gelman, Ware, Manczak, & Graham, 2013), and are acquired early in development—by about 2½ years of age (Gelman, Goetz, Sarnecka, & Flukes, 2008; Graham, Gelman, & Clarke, 2016).

Importantly, there are several indications that generic nouns may imply norms. Adults judge certain generics to be not just *general* but also *proper and natural* (e.g., “Dogs are four-legged” implies that dogs *should* be four-legged; Prasada & Dillingham, 2006, 2009). Similarly, some generics endorsed by adults express *norms* more than epistemic truths. For example, statements such as “Boys don’t cry” or “Scientists care only about the truth” might not be descriptively accurate (e.g., in fact most boys do cry, at least sometimes, and some scientists care more about tenure or lucrative patents than about the truth), but adults use them to express group-relevant norms (Knobe, Prasada, & Newman, 2013; Leslie, 2015; Wodak, Leslie, & Rhodes, 2015).

These findings suggest that at least certain generic nouns are used to convey normative concepts about groups, but such findings are currently limited in scope to particular content (e.g., boys being stoic) and, thus, may reflect learned beliefs about particular features that are associated with categories rather than a more general link between groups and norms. Thus, they raise the question of whether there is an expectation that generic language links to norms more broadly, beyond the particular categories and properties that have been studied to date.

Generic “you”

The second-person pronoun *you* provides a mechanism for examining more directly the link between normative reasoning and generics. Whereas canonically *you* refers specifically to one’s addressee (e.g., “You gave a great talk!”), *you* also has a generic interpretation, referring to “one” or people in general (e.g., “You win some, you lose some”; Berry, 2009; Myers & Lampropoulou, 2012; Wales, 1996). For ease of expression, we refer to generic uses of *you* as “generic *you*,” although as with generic nouns the generic reading is not located in a distinctive form of the word but rather is located in its context of use. Importantly, generic *you* expresses generalizations that extend beyond specific groups (e.g., boys, scientists) to people more broadly. Of particular relevance to the current discussion, qualitative linguistic analyses suggest that generic *you* may be used to express norms, rules, or moral teachings (Bolinger, 1979; Hyman Staels, 2004; Laberge & Sankoff, 1979; Pennycook, 1994).

A recent set of experiments with adults demonstrates that generic *you* is selectively elicited when talking about rules and norms (Orvell, Kross, & Gelman, 2017). Adult participants read a series of questions that referred to either norms (prescriptive: “What *should* you do with Xs?”; descriptive: “What *do* you do with Xs?”) or preferences (“What do you *like* to do with Xs?”), where Xs were common objects (e.g., lamps). These questions were all ambiguous, open to either a generic interpretation (e.g., “What should one do with Xs?”) or a canonical interpretation (e.g., “What should [addressee’s name] do with Xs?”). Participants’ task was simply to write down a response to each question; responses were then coded for pronoun use. Responses containing *you* (e.g., “You should turn them on”) were coded as generic; those containing *I* (e.g., “I like to turn them on”) were coded as

nongeneric. Notably, results indicated that responses shifted markedly from generic in response to normative questions (e.g., “What *should* you do with TVs?”; “What *do* you do with TVs?”) to nongeneric in response to non-normative questions (e.g., “What do you *like* to do with TVs?”).

These data raise the question of whether children understand generic *you* as linked to norms early in development. Although personal pronouns are typically produced by 2 years of age (Fenson et al., 1994), and children master their nongeneric uses by 3 years of age (Oshima-Takane, Takane, & Shultz, 1999), little is known regarding when and how generic *you* develops during childhood. Moreover, there are competing developmental predictions surrounding this issue.

On the one hand, given the canonical use of *you* as nongeneric, and claims that children under 7 or 8 years of age favor item-specific versus category representations (Fisher & Sloutsky, 2005), young children may initially misinterpret generic uses of *you* as referring to the immediate context (i.e., the addressee[s]) or simply be confused as to when and why *you* is used generically versus specifically. In contrast, given children’s early sensitivity to generic noun phrases (e.g., Cimpian & Markman, 2008; Gelman & Raman, 2003) and the relatively high rates of generic *you* in adult corpora, ostensibly including that of parents and teachers (Jensen, 2009; Myers & Lampropoulou, 2012), it is also possible that the generic interpretation of *you* may emerge by preschool age.

Two published articles provide intriguing hints to suggest that sensitivity to generic *you* may arise early in development. One case study of personal pronoun reversal in two English-speaking children parenthetically noted that both children produced generic *you* in their earliest productive speech (11–35 months; Evans & Demuth, 2012). For example, at age 2 years 10 months of age, one child said, “That’s how you make a square,” which was coded as a generic use of *you*. Furthermore, an experimental study of 5-year-old German-speaking children found that children tended to express norms using generic language. However, here a variety of linguistic expressions constituted generic language, including any utterance that extended beyond the concrete “here-and-now,” including “Marbles always go here,” “It needs to be done this way,” and “One must do it like this” (Göckeritz et al., 2014). Thus, more systematic data are needed to address children’s understanding that *you* can be used in a generic sense, whether its use is favored in normative contexts, and how use of *you* compares for normative versus preference contexts.

The current studies

To our knowledge, the current research provides the first experimental tests of whether children early in development differentially link norms with generic language, and link preferences with specific language, by examining children’s interpretation and use of generic versus canonical *you*. We report two studies; Study 1 provides a controlled experimental task examining children’s interpretation of *you* in response to questions that ask about either descriptive norms or preferences, and Study 2 focuses on naturalistic parent–child conversations examining children’s interpretation of *you* in questions that ask about either prescriptive norms or preferences. The pronoun *you* has three distinctive advantages for addressing this question. First, it permits a broader test than studies of generic noun phrases because generic *you* applies to people in general (not just specific concepts such as “boys” and “scientists”). Second, due to the ambiguity of the pronoun, we can test whether the very same word shifts interpretation based on its semantic context (normative vs. preference). And third, because *you* emerges early in development, it is plausibly a mechanism to which even young children would be sensitive.

Study 1

We hypothesized that children presented with *you* in questions regarding behavioral regularities—descriptive norms (e.g., “What do you do with Xs?”)—would interpret the pronoun as generic, whereas children presented with *you* in the context of questions regarding preferences (e.g., “What do you like to do with Xs?”) would interpret it as specific. Conventional interactions with artifacts are guided by norms and rules (Casler, Terziyan, & Greene, 2009; Siegel & Callanan, 2007). Thus, we expected that simply asking children what they do with various objects would lead them to draw on descriptive

norms for behavior associated with each type of object. In contrast, we expected that asking children about their preferences would elicit personal opinions rather than broad norms. We included a wide age range of children (3–10 years) given the lack of available data to tell us when children would be sensitive to generic *you*.

Method

Participants

Participants were 132 children (87 female). Data were collected from children in three age groups: 3- and 4-year-olds ($n = 50$, 32 female, $M_{\text{age}} = 3.91$ years, $SD = 0.58$), 5- and 6-year-olds ($n = 47$, 30 female, $M_{\text{age}} = 5.96$ years, $SD = 0.530$), and 7- and 10-year-olds ($n = 35$, 25 female, $M_{\text{age}} = 8.81$ years, $SD = 1.09$). Two children from the 3- and 4-year-old group did not complete the task and were dropped from the analyses. One participant completed the experiment twice; his second testing session was excluded from the analyses. All participants were recruited from a children's museum in a small mid-western city of the United States.

Materials

Materials used during a brief warm-up activity included pictures of scenarios with common objects (e.g., flying airplane, dog chasing ball) and a puppet. Materials used during the experimental trials consisted of laminated 3×4 -in. pictures of six familiar objects (bike, crayons, ball, book, puzzle, and TV). Each picture was presented by itself against a white background.

Procedure

Two experimenters administered the experiment at a table set up in the gallery of a children's science museum. Children participated individually. When a parent and child approached the table, one experimenter obtained informed parental consent and permission to audio-record the session while the other experimenter talked with the child to obtain child assent. The session began with one experimenter administering the protocol with the child while the other experimenter initiated the audio-recording and wrote down the participant's responses. Experimenters took turns performing these roles.

Warm-up activity. First, the child completed a short warm-up activity during which he or she was introduced to a puppet. The purpose of the warm-up activity was to encourage the child to use full sentences during the experimental trials to ensure that we would obtain codable responses (i.e., utterances with subject pronouns). The experimenter showed a picture to the puppet and asked him to describe what was happening in it. The puppet modeled answering in a full sentence (e.g., "The dog is chasing the ball"). The experimenter then provided reinforcement (e.g., "Right! The dog is chasing the ball. That was a great full sentence!"). Next, the experimenter asked the child to describe what was happening in a different picture. If the child used a full sentence, the experimenter provided positive reinforcement (e.g., "That's right; the airplane is in the sky. Great full sentence."); if the child did not provide a full sentence, the experimenter used the puppet to model one and then asked the child to repeat it. The child completed three practice trials.

Main task. To signal that the experiment was beginning, the experimenter asked the child if he or she wanted to continue with a different game and reassured the child that there were no right or wrong answers. In the main task, the child was asked a series of questions about six familiar objects (see "Materials" section above). Piloting revealed that children were familiar with all of the objects. However, to ensure that the child accurately identified the object in the picture, the experimenter asked the child to identify the item before asking each question. If the child did not provide an appropriate label (which very rarely happened), the experimenter identified the object and then asked the child if he or she knew what it was.

Once the child indicated that he or she was familiar with the object, the experimenter proceeded to the experimental question. The child was randomly assigned to one of two conditions: either Norms ($ns = 25$ [3- and 4-year-olds], 24 [5- and 6-year-olds], and 16 [7- to 10-year-olds]) or Preferences

($n_s = 22$ [3- and 4-year-olds], 23 [5- and 6-year-olds], and 19 [7- to 10-year-olds]). Random assignment to condition was determined before data collection, such that each participant's ID number was already associated with a condition when the child began the session.

Participants assigned to the Norms condition were asked "What do you *do* with Xs (e.g., books)?" for each of the six objects. Children assigned to the Preferences condition were asked "What do you *like to do* with Xs (e.g., books)?" for each of the six objects (emphases added here for clarity). The prompts were deliberately ambiguous, such that a response with *I* (e.g., "I bounce balls") would indicate that *you* was interpreted canonically (i.e., referring to the participant), whereas a response with *you* (e.g., "You bounce balls") would indicate that *you* was interpreted as generic (i.e., referring to people in general).

If the child did not respond to the question, the experimenter asked the question again. If the child responded but did not provide a pronoun in the response, the experimenter prompted the child to "try using a full sentence" while avoiding the use of pronouns so as not to prime the participant. If the child still did not produce a response with pronouns, the experimenter continued to the next trial. This protocol was repeated for each of the six objects. Objects were asked in the same order for all trials to ease administration of the experiment,¹ and experimenters were instructed to ask the questions with consistent voice volume and intonation throughout the session and across conditions.

Once sessions were complete, children were thanked for their participation and invited to select a small toy as a "thank you" gift. The experimenter then provided parents with a debriefing form and thanked them for their participation.

Transcription and coding

During the session, the experimenter who was not working directly with the child transcribed the child's responses. The experimenter also indicated whether the child needed to be prompted to answer in a full sentence. After data collection was complete, transcriptions for all available audio data were checked against the recordings for accuracy by a second research assistant. Next, two independent coders, blind to condition, coded the participant's responses. Each response was coded into one of six categories to fully capture the range of provided responses: (a) generic *you*, including variations such as *your* and *you're*; (b) first-person singular pronouns, which for parsimony are referred to as *I* responses but included *I*, *my*, *mine*, *me*, and contractions such as *I'm*; (c) *we*, including variations such as *we're*; (d) on-topic responses without coded pronouns (i.e., responses that did not contain *I*, *we*, or generic *you*, e.g., "Ride bikes outside"; nongeneric uses of *you* were included here); (e) off-topic responses (e.g., "Having chicken . . ."); or (f) no answer (i.e., the child simply did not respond). A given response could be coded in multiple categories (e.g., "I don't color, but you draw with them" would be coded as both *I* and generic *you*).

Reliability between coders was high ($\kappa = .98$), and a third coder resolved discrepancies. Once discrepancies were resolved, each participant received a frequency score for each of the six categories; for example, a child who used generic *you* in two responses and provided responses without personal pronouns in four responses would receive a score of 2 for generic *you*, 4 for on-topic responses without coded pronouns, and 0 for all other categories. To ease interpretation, frequencies were then calculated as a percentage of the six trials (e.g., if a participant used generic *you* in two of the six trials, he or she would receive a 33% for use of generic *you*).

Among the participants, 6 children at 3 or 4 years, 8 children at 5 or 6 years, and 3 children at 7–10 years of age were missing audio files, either because their parents did not provide permission for the sessions to be audio-recorded or due to human or technical error. Given that one experimenter wrote down children's responses during the session, the data from these participants are included in the analyses reported below.

Results

Of central interest was participants' use of generic *you* and *I* across the six trials; Table 1 provides information on the frequency with which participants provided all coded responses by condition. We

¹ For 3 participants, two of the items were asked in the incorrect order.

Table 1

Mean percentage of responses for each of the six coding conditions as a function of condition.

		Generic <i>you</i>	<i>I</i>	<i>We</i>	On-topic, no pronouns	Off-topic	No response
Norms	Mean	48.72	8.72	5.13	34.36	0.00	2.31
	Standard deviation	40.86	20.22	16.38	37.14	0.00	5.80
Preferences	Mean	10.94	51.30	2.34	32.29	0.52	1.82
	Standard deviation	25.41	43.57	9.79	38.25	2.92	6.72

were also interested in how the type and frequency of responses might differ by age. Given that each participant received two scores, one for generic *you* and one for *I*, we conducted a mixed-factorial analysis of variance (ANOVA) with condition (2: Norms or Preferences) and age group (3: 3- and 4-year-olds, 5- and 6-year-olds, or 7- to 10-year-olds) as the between-participants factors and response type (2: *you* or *I*) as the within-participants factor. The two dependent variables were the percentage of trials containing generic *you* and the percentage of trials containing *I*. These scores are independent in that each participant could have provided more than one response code per trial. The patterns of results reported below were also obtained when the data were analyzed using nonparametric tests.²

As predicted, there was a significant Condition \times Response Type interaction, $F(1, 123) = 86.71$, $p < .001$, $\eta_p^2 = .41$. Planned pairwise comparisons revealed that participants used generic *you* significantly more in the Norms condition ($M = 52.62\%$) than in the Preferences condition ($M = 10.58\%$), $p < .001$. In contrast, participants used *I* significantly more in the Preferences condition ($M = 52.75\%$) than in the Norms condition ($M = 9.20\%$), $p < .001$. There was no main effect of response type, $F(1, 123) = 0.02$, $p = .89$, $\eta_p^2 = .00$, indicating that neither generic *you* nor *I* was more frequent overall. There was also no main effect of condition, $F(1, 123) = 0.06$, $p = .81$, $\eta_p^2 = .00$, indicating that providing a codable pronoun (collapsing over generic *you* and *I*) did not vary as a function of condition. However, there was a significant main effect of age group, $F(2, 123) = 22.75$, $p < .001$, $\eta_p^2 = .27$, and a significant Condition \times Age Group \times Response Type interaction, $F(2, 123) = 9.49$, $p = .001$, $\eta_p^2 = .13$.

To understand the nature of this interaction, we performed planned contrasts within each age group. As Fig. 1 illustrates, children in every age group produced *you* more often in the Norms condition than in the Preferences condition: 3- and 4-year-olds, $F(1, 123) = 4.35$, $p = .039$, $\eta_p^2 = .03$; 5- and 6-year-olds, $F(1, 123) = 11.91$, $p = .001$, $\eta_p^2 = .09$; 7- to 10-year-olds, $F(1, 123) = 52.19$, $p < .001$, $\eta_p^2 = .30$. Conversely, children in each age group produced *I* more often in the Preferences condition than in the Norms condition: 3- and 4-year-olds, $F(1, 123) = 10.31$, $p = .002$, $\eta_p^2 = .08$; 5- and 6-year-olds, $F(1, 123) = 13.16$, $p < .001$, $\eta_p^2 = .10$; 7- to 10-year-olds, $F(1, 123) = 41.35$, $p < .001$, $\eta_p^2 = .25$. Both of these patterns were evident even among 3- and 4-year-olds. However, as age increased, so did the magnitude of these effects.

Post-hoc analyses were conducted to explore the basis of the aforementioned age effects. There were no significant differences between age groups in how frequently the *unpredicted* response was produced: $ps > .39$ regarding production of *I* in response to the Norms questions; $ps > .20$ regarding production of *you* in response to the Preferences questions. However, there were several significant age differences in how frequently the *predicted* response was produced. Specifically, for the Norms questions, 7- to 10-year-olds produced *you* significantly more than 3- and 4-year-olds and 5- and 6-year-olds, $ps \leq .001$, and 5- and 6-year-olds produced generic *you* significantly more than 3- and 4-year-olds, $p = .022$. Similarly, for the Preferences questions, 7- to 10-year-olds produced *I*

² The Mann-Whitney test for nonparametric distributions does not allow for within-participants models; thus, we examined the effect of condition on generic *you* and *I* separately (condition on generic *you*: Mean Rank_{Norms} = 82.50, Mean Rank_{Prefs} = 47.23, $U = 942.50$, $|z| = 5.86$, $p < .001$; condition on *I*: Mean Rank_{Norms} = 47.90, Mean Rank_{Prefs} = 82.37, $U = 3191.50$, $|z| = 5.74$, $p < .001$). These results remained significant when examining the effect of condition on each age group separately (3- and 4-year-olds—condition on generic *you*: Mean Rank_{Norms} = 27.12, Mean Rank_{Prefs} = 20.45, $U = 197.00$, $|z| = 1.94$, $p = .053$; condition on *I*: Mean Rank_{Norms} = 20.56, Mean Rank_{Prefs} = 27.91, $U = 361.00$, $|z| = 2.18$, $p = .03$; 5- and 6-year-olds—condition on generic *you*: Mean Rank_{Norms} = 29.90, Mean Rank_{Prefs} = 17.85, $U = 134.50$, $|z| = 3.19$, $p = .001$; condition on *I*: Mean Rank_{Norms} = 18.50, Mean Rank_{Prefs} = 29.74, $U = 408.00$, $|z| = 3.13$, $p = .002$; 7- to 10-year-olds—condition on generic *you*: Mean Rank_{Norms} = 26.59, Mean Rank_{Prefs} = 10.76, $U = 14.50$, $|z| = 4.97$, $p < .001$; condition on *I*: Mean Rank_{Norms} = 9.72, Mean Rank_{Prefs} = 24.97, $U = 284.50$, $|z| = 4.58$, $p < .001$).

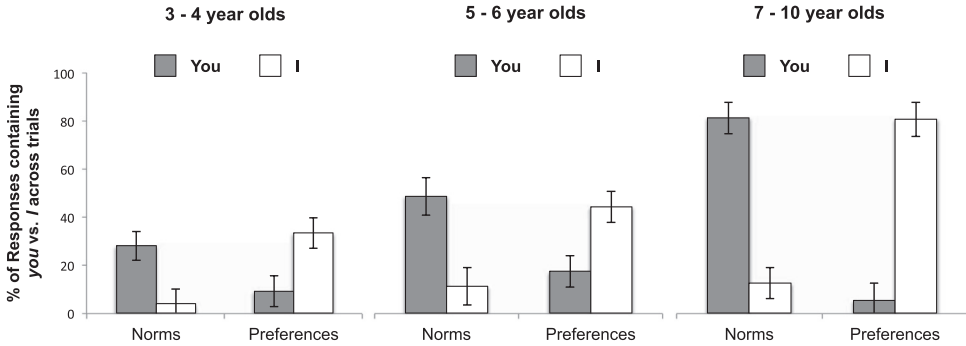


Fig. 1. Mean percentage of responses containing generic *you* versus *I* across trials by condition. The x axis indicates whether participants produced *you* or *I* in their responses. The y axis represents how often *you* versus *I* was used as a percentage of the six trials that were presented. Higher rates of generic *you* (vs. *I*) in response to the Norms prompt indicate that *you* was interpreted as generic, whereas higher rates of *I* (vs. *you*) in response to the Preferences prompt indicate that *you* was interpreted as canonical.

significantly more than 3- and 4-year-olds and 5- and 6-year-olds, $ps < .001$. These results suggest that the youngest children are not being less discriminating than the older children in their use of these pronouns. Instead, the major difference is that the predicted use of these pronouns is lower for children aged 3–6 years than for children aged 7–10 years.

Study 2

The results of Study 1 suggest that children conceptualize descriptive norms as general and conceptualize preferences as individual early in development. Study 2 sought to extend these findings in three ways to determine the robustness of the effect: (a) to examine whether children similarly are more likely to reach a generic interpretation of *you* for questions that ask about *prescriptive* (as opposed to descriptive) norms than for questions that ask about preferences, (b) to examine these uses in natural language conversations between children and their parents, and (c) to focus on the age group that was the youngest in Study 1. To examine these questions, parents conversed with their children about both preferences and prescriptive norms using a within-participants design. We predicted that children would be more likely to use generic *you* in response to questions that asked about prescriptive norms as opposed to questions that asked about preferences.

Method

Participants

A total of 29 parent–child dyads were recruited from a small midwestern city. One dyad was excluded because the parent did not provide any codable questions regarding prescriptive norms (see below), leaving a sample of 28. The final sample of 28 children ranged in age from 2.13 to 4.94 years ($M = 3.90$ years, $SD = 0.92$; 18 boys and 10 girls; 25 White/Caucasian, 2 Black/African American, and 1 biracial). The parents were 24 mothers and 4 fathers.

Materials

Materials consisted of 24 items divided into two sets (A and B) of 12 items each, matched on superordinate category (animals, objects, or foods) and valence (positive or negative) (see Table 2). The items were presented in two books; one book focused on prescriptive norms (i.e., “What should you do? What shouldn’t you do?”), and one focused on preferences (i.e., “What do you like? What don’t you like?”). The assignment of set (i.e., Set A or Set B) to book (i.e., Norms or Preferences) was fully counterbalanced, with each participant receiving one of each book, yielding a 2 (Set A or Set B) \times 2 (Book: Norms or Preferences) repeated-measures design. Items in the book were presented

Table 2
Item sets used in Study 2.

	Animals	Objects	Foods
Set A	Fish	Ball	Apple
	Puppy	Bike	Broccoli
	Skunk	Crayon	Cupcake
	Spider	Stove	Spaghetti
Set B	Bird	Book	Orange
	Kitten	Puzzle	Spinach
	Snake	TV	Ice cream
	Bee	Knife	Pizza

in a quasi-random order, with negative and positive items interspersed at regular intervals across the four books.

Procedure

The study took place in an on-campus, child-friendly laboratory. After the parent provided informed consent and granted permission for the session to be video-recorded, the experimenter obtained assent from the child. The dyad was then brought into the room, where the parent and child would be completing the main task, and the two were seated on a comfortable couch. The experimenter asked the parent to read both books to the child in a given order (counterbalanced across participants). Finally, the parent was instructed to read the directions in the book before beginning to talk with the child. The interaction was video-recorded through a one-way mirror.

In the Norms book (titled *Do's and Don'ts*), the instructions read, “Please talk with your child about appropriate behaviors: what you or your child *should* or *shouldn't* do.” On each page, a full-color photograph of an item appeared on a white background accompanied by the following text: “What should you do? What shouldn't you do?” In the Preferences book (titled *Smiles and Frowns*), the instructions read, “Please talk with your child about preferences: what you or your child *likes* or *doesn't like*.” Each item appeared on a separate page and was accompanied by the following text: “What do you like? What don't you like?” After the parent finished reading and discussing both books with the child, the parent was thanked for his or her participation and given compensation. The child was given a small toy as thanks.

Transcription and coding

All sessions were transcribed verbatim from the video-recordings and checked by a second transcriber. A priori, we were interested only in children's responses to questions containing the pronoun *you* that asked about either prescriptive norms or preferences. To identify such questions (henceforth referred to as “target questions”), the transcribed files were prepared in two steps. First, to ensure blind coding, files were filtered so that only the parents' utterances were visible. Next, coders read each parent line and identified which utterances met all of the following inclusion criteria: (a) question in the form of “what” (e.g., “What should you do?”; “What do you like about kittens?”); (b) inclusion of either “like/don't like” or “should/shouldn't” (note that questions with only “do” [e.g., “What do you do with Xs?”] were not included); (c) inclusion of the pronoun “you”; and (d) for those questions that mentioned an item, the item needed to be generic (e.g., “What do you like about dogs?” rather than “What do you like about this dog?”) and needed to refer to one of the items contained in the books. If a parent question did not match the current condition (e.g., a “like” question in the Norms condition), this was excluded; this happened only once. Given the objective nature of the coding, only 20% of transcripts were prepared by a second independent coder; reliability across this sample was high ($\kappa = .98$).

The next phase of the coding involved coding children's responses to the questions identified during the first phase. To ensure blindness to condition, each file was filtered so that only the line immediately following each of the identified parent questions was visible. Two independent coders coded each of these lines into four categories: (a) uncodable (i.e., no child response, nonspeech response

[e.g., gesture], unintelligible, and off-task [e.g., “I have to go to the bathroom”]), (b) generic *you* (including *your*, *you’re*, etc.), (c) *I* (including *me*, *my*, *mine*, *I’ve*, etc.); or (d) other (i.e., responses that did not fall into the previous three categories, e.g., nongeneric *you*, *we*, “I don’t know”). A given line could be coded into more than one category. The first 3 transcripts were used for training purposes; reliability among the remaining 25 transcripts was high ($\kappa = .94$), and discrepancies were resolved by a third coder.

Results

On average, parents generated 17.14 target questions in the Norms condition and 15.32 target questions in the Preferences condition. Each child’s generic *you* and *I* responses were divided by the total number of target questions that the child’s parent had asked and then converted to a percentage score, separately for the Norms and Preferences conditions, yielding four scores per child (see Table 3 for descriptive statistics on the four types of responses that were coded). A 2 (Condition: Norms or Preferences) \times 2 (Response Type: generic *you* or *I*) \times 2 (Order: Norms first or Preferences first) ANOVA was conducted with both condition and response type as within-participants factors and order as a between-participants factor.

As predicted, we obtained a significant Condition \times Response Type interaction, $F(1, 26) = 18.90$, $p < .001$, $\eta_p^2 = .42$. Planned contrasts indicated that children produced generic *you* more often in response to Norms questions ($M = 12.50$) than in response to Preferences questions ($M = 2.74$), $F(1, 26) = 4.35$, $p = .047$, $\eta_p^2 = .14$. Children also produced *I* more often in response to Preferences questions ($M = 26.84$) than in response to Norms questions ($M = 3.82$), $F(1, 26) = 41.73$, $p < .001$, $\eta_p^2 = .62$. There was also a main effect of condition, $F(1, 26) = 14.27$, $p = .001$, $\eta_p^2 = .35$, indicating that children were more likely to provide a codable pronoun (collapsing over generic *you* and *I*) in the Preferences condition than in the Norms condition. Finally, we obtained a main effect of response type, $F(1, 26) = 14.29$, $p = .001$, $\eta_p^2 = .36$; *I* was more common than generic *you*, collapsing over condition. There were no significant effects involving order, $ps \geq .07$. The pattern of results reported above was also obtained when the data were analyzed using nonparametric tests.³

General discussion

These studies examined children’s interpretation of the pronoun *you* in sentence frames expressing either norms (e.g., “What do you do with Xs?”; “What should you do with Xs?”) or preferences (e.g., “What do you like to do with Xs?”; “What do you like about Xs?”). Three patterns of results were possible. Children could have consistently interpreted *you* as canonical, which would have been reflected in uniformly high rates of responding with *I* across conditions. Alternatively, children could have learned that *you* may express generic ideas without having learned to differentiate where such uses are appropriate, which would have been reflected by indiscriminate use of *you* across conditions. Finally, children could have recognized that generic interpretations of *you* are more appropriate in response to questions that asked about norms, whereas canonical interpretations are more appropriate to express preferences. It is this last pattern of findings that we obtained. This pattern was robust in every age group studied, including the youngest (2- to 4-year-olds). Thus, children have command of both canonical and generic *you* at a remarkably young age. These findings are striking given that all the test questions used the same pronoun (“you”) and that the contexts of use were so similar (varying only in “do” or “should/shouldn’t do” vs. “like to do”).

The developmental patterns further support an early grasp of generic *you* as normative. In Study 1, there were increases in the rates at which children produced the *predicted* responses (*you* for norms and *I* for preferences), but there were not decreases in the *unpredicted* responses (*you* for preferences and *I* for norms). Thus, at no age did children indicate a purely canonical interpretation of *you*. Rather,

³ Given the fully within-participants design of Study 2, the Wilcoxon signed-rank test for nonparametric repeated-measures ANOVAs was conducted. There was a significant difference in generic *you* production in the Norms versus Preferences condition, $|T| = 2.22$, $p = .026$, $r = .30$. There was also a significant difference in *I* production in response to the Norms versus Preferences questions, $|T| = 4.38$, $p < .001$, $r = .59$.

Table 3

Mean percentage of target questions that were coded into each of four coding categories as a function of condition.

		Generic <i>you</i>	<i>I</i>	Uncodable	Other
Norms	Mean	12.50	3.82	30.49	54.67
	Standard deviation	24.60	6.23	26.49	29.20
Preferences	Mean	2.74	26.84	26.85	44.75
	Standard deviation	6.55	20.44	20.15	22.48

these age differences indicate that the older children more consistently followed the instructions to provide full sentences in response to the test questions. Furthermore, Study 2 focused exclusively on the youngest age group and found the same pattern of results.

These findings demonstrate that different sentence frames (cueing norms vs. preferences) elicit different uses of *you*. An interesting extension for future research would be to cue children to think in terms of either norms or preferences and then ask them identical questions in both conditions (e.g., “What do you do at the playground?”). If children used *you* more often when cued to think about norms and used *I* more often when cued to think about preferences, this would further demonstrate that context alone can modulate children’s interpretation.

Another important question to address is whether using generic *you* in normative contexts elicits different expectations than using canonical *you* or *I* in normative contexts (i.e., the reverse process of what these studies addressed). Can varying the language that children hear encourage a more versus less normative stance? These questions have potentially important implications for the role of language in guiding children’s interactions with and learning about their social world. Given children’s sensitivity to the generic/normative distinction in our task, we would hypothesize that the reverse implications would also appear early in development. For example, perhaps generic uses of *you*, by implying a broader and more inclusive norm, would be a more effective means of getting a child to comply with a request than other expressive forms or would be a powerful tool with which to communicate lessons about the social world (e.g., “You can’t always get what you want”).

Study 2 focused on children’s use of generic *you* in response to their parents’ questions. In future research, it would also be important to examine the contexts in which parents spontaneously provide information using generic *you* when speaking with their children. For example, recent research with adults suggests that generic *you* is evoked when reflecting on emotionally difficult past events. For adults, the normative use of *you* includes the provision of timeless truths or “lessons learned” as an effective means of distancing oneself from, and moving past, a stressful situation (Orvell et al., 2017). It would be interesting to see whether parents, and even young children, likewise use generic *you* in this way.

Another intriguing question is how broadly a norm is expected to apply. Whereas some norms apply only to specific contexts (e.g., in this classroom, backpacks belong in one’s cubby), other norms apply broadly (e.g., in general, it is wrong to hit someone). Does generic *you* imply that a norm extends to all types of people, just to people within one’s social group(s), or to different types of groups depending on the context? Do such expectations vary with the child’s age? Does generic *you* imply greater breadth than other generic expressions such as generic nouns (e.g., “children”)? We suspect that the answers to these questions may vary as a function of speaker and context (e.g., a teacher’s statement may be viewed as specific to the classroom context, whereas a parent’s statement may be viewed as more generally true), although this remains an empirical question.

Note that personal pronouns in and of themselves convey no content but rather are canonically characterized as deictics—essentially equivalent to finger points. Importantly, we see that when the pronoun *you* is used in a context where it can be interpreted generically (i.e., when it broadens in meaning to refer to people in general), its use is not simply to point out a group of people but rather to link tightly to norms and to communicate an expectation for how things are (Study 1) or how things should be (Study 2). Thus, a normative interpretation is added to *you* when it shifts in meaning from nongeneric to generic. An important further question is whether this same pattern applies in other languages. The personal pronoun *you* has a dual use as a generic form in multiple languages, including Chinese, Danish, Dutch, English, German, Gulf Arabic, Hindi, and Italian (De Hoop & Tarenskeen, 2015;

Jensen, 2009; Kitagawa & Lehrer, 1990; Siewierska, 2004). We would expect generic *you* to have normative implications in all of these languages, but this remains an open empirical question.

Conclusions

Although norms can be conveyed nonlinguistically, such as by means of modeling, rituals, or corrective feedback (Kenward, Karlsson, & Persson, 2011; Keupp, Behne, & Rakoczy, 2013), they can also be conveyed via language. Indeed, not only is language an especially powerful and efficient means of communicating norms, but Gibbard (1990) proposed that doing so may be one of its key biological functions: “A crucial function of talk . . . is to adjust the terms of social cooperation. Talk helps adjust the norms we accept together, and the norms we accept, in turn, have much to do with the ways we interact” (p. 787). It is perhaps not surprising, then, that children are exquisitely sensitive to subtle shifts in how language is deployed when expressing preferences versus norms.

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References

- Bear, A., & Knobe, J. (2016). Normality: Part descriptive, part prescriptive. *Cognition*. Advance online publication. <http://dx.doi.org/10.1016/j.cognition.2016.10.024>.
- Berry, R. (2009). You could say that: The generic second-person pronoun in modern English. *English Today*, 25(3), 29–34.
- Bolinger, D. (1979). To catch a metaphor: You as norm. *American Speech*, 54(3), 194–209.
- Carlson, G. N., & Pelletier, F. J. (Eds.). (1995). *The generic book*. Chicago: University of Chicago Press.
- Casler, K., Terziyan, T., & Greene, K. (2009). Toddlers view artifact function normatively. *Cognitive Development*, 24, 240–247.
- Cialdini, R., & Trost, M. (1998). Social influence: Social norms, conformity, and compliance. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (Vols. 1–2, 4th ed., pp. 151–192). New York: McGraw-Hill.
- Cialdini, R. B., Kallgren, C. A., & Reno, R. R. (1991). A focus theory of normative conduct: A theoretical refinement and reevaluation of the role of norms in human behavior. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 24, pp. 201–234). San Diego: Academic Press.
- Cimpian, A., & Markman, E. M. (2008). Preschool children's use of cues to generic meaning. *Cognition*, 107, 19–53.
- Cimpian, A., & Markman, E. M. (2009). Information learned from generic language becomes central to children's biological concepts: Evidence from their open-ended explanations. *Cognition*, 113, 14–25.
- De Hoop, H., & Tarenskeen, S. (2015). It's all about you in Dutch. *Journal of Pragmatics*, 88, 163–175.
- Evans, K. E., & Demuth, K. (2012). Individual differences in pronoun reversal: Evidence from two longitudinal case studies. *Journal of Child Language*, 39, 162–191.
- Fenson, L., Dale, P. S., Reznick, J. S., Bates, E., Thal, D. J., Pethick, S. J., Ellipsis Stiles, J. (1994). Variability in early communicative development. *Monographs of the Society for Research in Child Development*, 59(5, Serial No. 242).
- Fisher, A. V., & Sloutsky, V. M. (2005). When induction meets memory: Evidence for gradual transition from similarity-based to category-based induction. *Child Development*, 76, 583–597.
- Gelman, S. A., Coley, J. D., Rosengren, K. S., Hartman, E., & Pappas, A. (1998). Beyond labeling: The role of maternal input in the acquisition of richly structured categories. *Monographs of the Society for Research in Child Development*, 63(1, Serial No. 253).
- Gelman, S. A., Goetz, P. J., Sarnecka, B. W., & Flukes, J. (2008). Generic language in parent–child conversations. *Language Learning and Development*, 4(1), 1–31.
- Gelman, S. A., & Raman, L. (2003). Preschool children use linguistic form class and pragmatic cues to interpret generics. *Child Development*, 74, 308–325.
- Gelman, S. A., & Tardif, T. (1998). A cross-linguistic comparison of generic noun phrases in English and Mandarin. *Cognition*, 66, 215–248.
- Gelman, S. A., Ware, E., & Kleinberg, F. (2010). Effects of generic language on category content and structure. *Cognitive Psychology*, 61, 273–301.
- Gelman, S. A., Ware, E. A., Kleinberg, F., Manczak, E. M., & Stilwell, S. M. (2014). Individual differences in children's and parents' generic language. *Child Development*, 85, 924–940.

- Gelman, S. A., Ware, E. A., Manczak, E. M., & Graham, S. A. (2013). Children's sensitivity to the knowledge expressed in pedagogical and nonpedagogical contexts. *Developmental Psychology*, *49*, 491–504.
- Gibbard, A. (1990). Norms, discussion, and ritual: Evolutionary puzzles. *Ethics*, *100*, 787–802.
- Göckeritz, S., Schmidt, M. H., & Tomasello, M. (2014). Young children's creation and transmission of social norms. *Cognitive Development*, *30*, 81–95.
- Graham, S. A., Gelman, S. A., & Clarke, J. (2016). Generics license 30-month-olds' inferences about the atypical properties of novel kinds. *Developmental Psychology*, *52*, 1353–1362.
- Hollander, M. A., Gelman, S. A., & Raman, L. (2009). Generic language and judgments about category membership: Can generics highlight properties as central? *Language and Cognitive Processes*, *24*, 481–505.
- Hyman Staels, E. (2004). The indefinite you. *English Studies*, *85*, 161–176.
- Jensen, T. J. (2009). Generic variation? Developments in use of generic pronouns in late 20th century spoken Danish. *Acta Linguistica Hafniensia*, *41*(1), 83–115.
- Kalish, C. W. (2012). Generalizing norms and preferences within social categories and individuals. *Developmental Psychology*, *48*, 1133–1143.
- Kenward, B., Karlsson, M., & Persson, J. (2011). Over-imitation is better explained by norm learning than by distorted causal learning. *Proceedings of the Royal Society of London B: Biological Sciences*, *278*, 1239–1246.
- Keupp, S., Behne, T., & Rakoczy, H. (2013). Why do children over-imitate? Normativity is crucial. *Journal of Experimental Child Psychology*, *116*, 392–406.
- Kitagawa, C., & Lehrer, A. (1990). Impersonal uses of personal pronouns. *Journal of Pragmatics*, *14*, 739–759.
- Knobe, J., Prasada, S., & Newman, G. E. (2013). Dual character concepts and the normative dimension of conceptual representation. *Cognition*, *127*, 242–257.
- Laberge, S., & Sankoff, G. (1979). Anything you can do. In T. Givón (Ed.), *Discourse and syntax* (pp. 419–440). New York: Academic Press.
- Leslie, S. J. (2015). Generics oversimplified. *Noûs*, *49*(1), 28–54.
- Mulkay, M. J. (1976). Norms and ideology in science. *Social Science Information*, *15*, 637–656.
- Myers, G., & Lampropoulou, S. (2012). Impersonal you and stance-taking in social research interviews. *Journal of Pragmatics*, *44*, 1206–1218.
- Orvell, A., Kross, E., & Gelman, S. A. (2017). How “you” makes meaning. *Science*, *355*, 1299–1302.
- Oshima-Takane, Y., Takane, Y., & Shultz, T. R. (1999). The learning of first and second person pronouns in English: Network models and analysis. *Journal of Child Language*, *26*, 545–575.
- Papafragou, A. (1996). On generics. *UCL Working Papers on Linguistics*, *8*, pp. 165–198.
- Pennycook, A. (1994). The politics of pronouns. *ELT Journal*, *48*(2), 173–178.
- Prasada, S., & Dillingham, E. M. (2006). Principled and statistical connections in common sense conception. *Cognition*, *99*, 73–112.
- Prasada, S., & Dillingham, E. M. (2009). Representation of principled connections: A window onto the formal aspect of common sense conception. *Cognitive Science*, *33*, 401–448.
- Rakoczy, H., & Schmidt, M. H. (2013). The early ontogeny of social norms. *Child Development Perspectives*, *7*(1), 17–21.
- Rakoczy, H., Warneken, F., & Tomasello, M. (2008). The sources of normativity: Young children's awareness of the normative structure of games. *Developmental Psychology*, *44*, 875–881.
- Rakoczy, H., Warneken, F., & Tomasello, M. (2009). Young children's selective learning of rule games from reliable and unreliable models. *Cognitive Development*, *24*, 61–69.
- Repacholi, B. M., & Gopnik, A. (1997). Early reasoning about desires: Evidence from 14- and 18-month-olds. *Developmental Psychology*, *33*, 12–21.
- Rhodes, M. (2014). Children's explanations as a window into their intuitive theories of the social world. *Cognitive Science*, *38*, 1687–1697.
- Rhodes, M., Leslie, S. J., & Tworek, C. M. (2012). Cultural transmission of social essentialism. *Proceedings of the National Academy of Sciences of the United States of America*, *109*, 13526–13531.
- Roberts, S. O., Gelman, S. A., & Ho, A. (2017). So it is, so it shall be: Group regularities license children's prescriptive judgments. *Cognitive Science*, *41*, 576–600.
- Siegel, D. R., & Callanan, M. A. (2007). Artifacts as conventional objects. *Journal of Cognition and Development*, *8*, 183–203.
- Siewierska, A. (2004). *Person*. New York: Cambridge University Press.
- Tworek, C. M., & Cimpian, A. (2016). Why do people tend to infer “ought” from “is”? The role of biases in explanation. *Psychological Science*, *27*, 1109–1122.
- Wales, K. (1996). *Personal pronouns in present-day English*. Cambridge, UK: Cambridge University Press.
- Wellman, H. M., & Liu, D. (2004). Scaling of theory-of-mind tasks. *Child Development*, *75*, 523–541.
- Wodak, D., Leslie, S. J., & Rhodes, M. (2015). What a loaded generalization: Generics and social cognition. *Philosophy Compass*, *10*, 625–635.