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## Cognitive Development



# You can't always want what you get: Children's intuitions about ownership and desire



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### ABSTRACT

Ownership is a central element of human experience. The present experiments were designed to examine the influence of psychological state on ownership judgments. In three experiments, 4-year-olds were asked to make ownership attributions about owners and non-owners who either desired or did not desire a gift. Despite exhibiting a clear sensitivity to the desires of others, children made accurate ownership attributions independent of individuals' desires. At the same time, there are subtle influences of desires on children's ownership judgments, as well as subtle influences of ownership on children's desire judgments. Thus, the two factors are largely but not wholly distinct in young children's thinking.

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Humans live in a complex social network constructed of people and property, in which children readily participate. By age two, children use possessive language (Rodgon & Rashman, 1976), recognize familiar items and recall who owns them (e.g., their own toothbrush and their mother's shoes; Fasig, 2000), and accurately track and identify new objects given to them. This ability expands rapidly, such that children keep track of both their own property and the property of others by age three (Gelman, Manczak, & Noles, 2012). Critically, they accomplish these tasks by monitoring the historical path of objects, and not simply by remembering physical features (Friedman, Van de Vondervoort, Defeyter, & Neary, 2013; Gelman et al., 2012). By age four, children exhibit impressively well-defined intuitions

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about ownership and property. They restrict ownership to humans only, and not non-human animals or artifacts (i.e., the dog drinks out of a bowl and we call it the “dog’s bowl,” but nevertheless a human, not the dog, owns the bowl; Noles, Keil, Bloom, & Gelman, 2012). Similarly, children infer that artifacts are much more likely to be owned than inanimate natural kinds (Neary, Van de Vondervoort, & Friedman, 2012). Having identified a piece of property, children use a wide variety of cues to identify property owners, including proximity, possession (Friedman, 2008; Neary & Friedman, 2008), gender stereotypes (Malcolm, Defeyter, & Friedman, 2014), creative labor (Kanngiesser, Gjersoe, & Hood, 2010), and control of permission (e.g., restricting access to a piece of property is a strong cue that the person controlling access owns the property; Neary, Friedman, & Burnstein, 2009).

Even more impressively, preschoolers demonstrate an understanding of the nuanced contrast between ownership and possession. They defend possession of an object more aggressively if they own it (Eisenberg-Berg, Haake, & Bartlett, 1981; Eisenberg-Berg, Haake, Hand, & Sadalla, 1979) and strenuously object when their property rights, as well as the property rights of others, are violated (Rossano, Rakoczy, & Tomasello, 2011). Furthermore, they use appropriate claims regarding ownership (“I want it; it’s mine!”) and possession (“But I was playing with it!”) despite receiving inconsistent instruction from parents that focuses on prosociality (“It’s nice to share”) instead of property rights (Ross, 1996). Children’s intuitions about property transfers, such as giving and selling, develop more slowly and require contextual support, but by age five children begin to demonstrate adult-like understandings when they are presented with highly ritualized property transfers (e.g., a present given at a birthday party; Blake & Harris, 2009; Friedman & Neary, 2008, but see Kanngiesser et al., 2010), and by age seven they begin to demonstrate more nuanced understanding of the property rights associated with ownership (Kim & Kalish, 2009).

Although prior studies document children’s ownership attributions, little is known regarding the extent to which children distinguish *mental attitudes* toward objects from ownership per se. In theory-of-mind reasoning, desire is understood as an internal state that motivates action toward achieving a goal, and children possess a rich understanding of desires, both their own and those of others, by preschool age (Repacholi & Gopnik, 1997; Wellman & Lui, 2004; Wellman & Woolley, 1990).

Concepts of desire and concepts of ownership may interact in at least two ways, and perhaps influence each other, over the course of development. First, desire may be a motivational component of property acquisition. For example, if I want a cookie, I am likely to construct the goal of owning it and may engage in a process (taking it off the plate, asking for it, buying it) that results in my satisfying this goal. Thus, desire for an object may lead to a set of actions that result in ownership of that object. Desire may similarly play a role in motivating the transfer or divestment of property (e.g., I don’t want this cookie, so you can have it). Given the tight link between desire for an entity and motivation to own it, children may have difficulty maintaining a conceptual distinction between the two.

Conversely, ownership status may influence attitudes toward property. Typically, owned objects are desirable (e.g., people buy things that they like and people select gifts for others that they hope will be desirable to the recipient). Furthermore, objects that a person does not desire are less typically owned by that person (e.g., one rarely requests or buys items that one does not want or intentionally gives a gift that the recipient will dislike). Further, there may be an element of cognitive dissonance, such that people at times downgrade their evaluation of items that they know they cannot have (so-called “sour grapes”). Knowledge of these attitudinal correlations between ownership and liking or desire may also lead to a blurring of the distinction between ownership and desire early in development.

Despite this intertwining of ownership and desire, a mature understanding of ownership also includes an appreciation of the opposite point: that ownership and desires are also distinct. People often want things that they do not own (e.g., an expensive car), and sometimes do not want things that nevertheless belong to them (e.g., an ill-considered gift). Whether children grasp that desires alone do not determine ownership is thus an empirical question.

Motivations and attitudes related to property are often divorced from ownership. Is this separation a natural and early emerging facet of children’s social cognition, or are there developmental challenges that they must meet in order to disentangle desire and ownership? The goal of the present study is to explore the influence of desires on children’s ownership judgments. To do so, we investigate children’s

intuitions about ownership when presented with individuals with different attitudes toward property (i.e., they find it either desirable or undesirable).

Preliminary evidence regarding the relation between desire and ownership is mixed and indirect. Anecdotally, young children promiscuously claim ownership of objects that they desire, and in research studies children cite desire as a justification for ownership (Hay, 2006) and make declarations of desire to defend their possession of property that does not belong to them during property disputes. These behaviors may indicate that children believe that desires play some causal role in ownership. However, children rarely mention desire when attempting to maintain or gain possession of their own property during a dispute. Instead, they refer to their ownership of the object (Ross, 1996). Similarly, Hay (2006) found that, as children got older, declarations of desire were quickly replaced by claims of possession. Also, Friedman and Neary (2008) found that 2-year-olds use first possession to infer ownership, and not simple liking (e.g., “The girl likes the ball”), which may reflect a capacity for separating simple preferences from ownership cues.

We investigate the influence of desires on children’s ownership attributions by presenting vignettes describing individuals’ desires and measuring the influence that those desires exercise over ownership attributions. We used gift giving scenarios in order to present children with situations involving a property transfer. Because young children have some difficulty reasoning about property transfers (Blake & Harris, 2009; Friedman & Neary, 2008), gift giving represents a strong test of the role of desires in making ownership attributions. If children understand that desire and ownership are independent, they will conclude that individuals own gifts given to them whether they like them or not, and that simple desire does not bestow ownership upon non-owners who desire another’s property. In contrast, if children believe that desire plays a central role in ownership, ownership attributions may be influenced when vignettes depict individuals who desire objects that they do not own, as well as when owners find their property undesirable. Our research design focuses primarily on the influence of desire on ownership, but the design also represents an opportunity to determine if children conceptualize desire as an active component of property acquisition. For example, it is possible that children believe that the simple act of desiring an object plays a causal role in the acquisition process. If this is the case, children will attribute ownership to individuals who desire gifts given to them, but not to individuals who find gifts to be undesirable. However, if children understand that desires and ownership vary independently, they will conclude that gift recipients own property given to them, even when that property is undesirable.

## 1. Experiment 1

In Experiment 1, we presented preschool aged children with vignettes describing different individuals’ desires. Each individual was given, as a present, an object that either did or did not align with their desire, and each vignette then closed with the actor stating whether or not they “liked” their present. Children were then asked two questions regarding their ownership attributions and a control question to ensure that they recalled each actor’s desires.

Critical to this design is children having a strong understanding of desires. Although even 18-month-olds understand that different individuals may have different desires (Repacholi & Gopnik, 1997) and grasp the link between desires and actions by age 2 (Wellman & Woolley, 1990), children’s reasoning about desires develops in important ways between ages two and four. By age four children exhibit a mature understanding of desires even when presented with difficult scenarios (e.g., pitting a child’s own desires against the desires of another; Atance, Belanger, & Meltzoff, 2010). Thus, we can reasonably assume that they have some expertise in understanding desires. Four-year-olds also exhibit mature intuitions about many but not all aspects of ownership (Blake & Harris, 2009; Friedman & Neary, 2008).

We elected to use third party scenarios (reasoning about a hypothetical other child) because they permit greater experimental control. This design decision allowed us to stipulate desires (rather than having to determine item desirability on an individual basis) and also allowed us to control item features across conditions.

## 1.1. Method

### 1.1.1. Participants

Participants were 18 preschool aged children (9 male; aged 4–0 to 5–1,  $M = 4–6$ ). Most were White and recruited from preschools in or around a Midwestern university town.

### 1.1.2. Materials

Materials included a line drawing of a gift-wrapped box and eight line drawings of individuals, drawn from a large set of characters that differ only by gender (half male and half female), clothing, and hairstyle. Two versions of these individuals were presented – a version with a slight smile and a version with a ‘surprised’ face (mouth in an ‘o’ shape). Each character was paired with one of four images – a ball, truck, horse, and book. All objects looked new and generally attractive. Each image appeared twice, once paired with a character who found it desirable and once paired with a different character who found it undesirable. This design allows us to control for the objective properties of the objects and to ensure that children’s own preferences are constant across conditions. The use of a third party context allowed us to minimize the influence of children’s own preferences (Atance et al., 2010). In addition to these stimuli, children were presented a five-point Likert scale anchored by a face with a wide smile and a face with a severe frown. The middle of the scale was a neutral face (i.e., the mouth was a straight line), and the intermediate faces had smaller smiles and frowns, respectively.

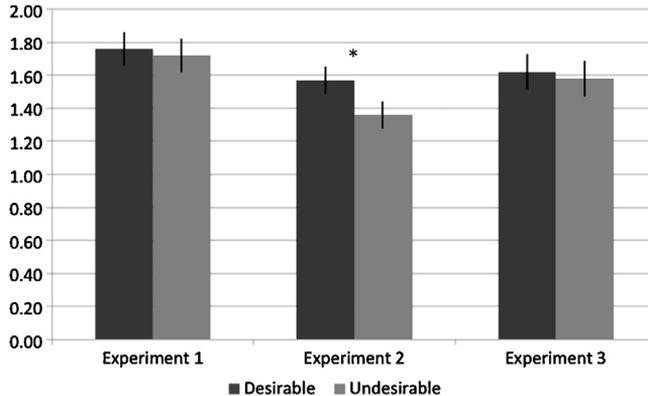
### 1.1.3. Procedure

Children were tested individually in a quiet space at their school. They were first presented with this pretest question: “Do you know what it means to own something? It means that you have it and it belongs to you. If you own something, you can take it to school and bring it home with you at the end of the day. What is something that you own?” This question was included as a coarse probe of each child’s understanding of ownership and to give children a rough definition of ownership in case they were unclear about the meaning of the word “own.” If children provided a response not easily identified as property by the experimenter, they were asked a follow-up question (“Can you tell me something else that you own?”). The experimenter then introduced the main task, saying, “Today we’re going to play the Party Game. In the Party Game, I will show you people who are at a party and I’m going to ask you to answer questions about them, okay?” A copy of the face scale was then placed in front of the child and the child was presented eight test items, with order randomized across children.

Each test item comprised the same elements. First, children were shown a page containing an image of a smiling actor standing next to an unopened gift. The experimenter introduced each actor and explained that the actor attended a party and received a present (“This is Meagan. Meagan went to a party and she got a present! *Meagan opens the present and looks inside.*”). On a second page, the identity of the present was revealed, and the gently smiling face of the actor was replaced with the surprised face, in order to discourage children from simply matching the actor’s facial expression to a value on the face scale. Each test item concluded with a final page in which the actor responded to the gift, indicating either a positive desire (“It’s a book! Jane says, ‘I like this book.’”) or a negative desire (“It’s a book! Meagan says, ‘I don’t like this book.’”).

Three queries were presented after each test item: (1) “Does the [item] belong to [actor]?” (2) “How much does [actor] like the [item]? Can you use the faces to show me how [actor] feels about the [item]?” (3) “Can [actor] decide who gets to play with the [item]? If someone else wants to play with it, can s/he tell them yes or no?”

Question 2 was included as a memory check to ensure that children remembered how each actor felt about their gift. Questions 1 and 3 were designed to probe children’s ownership concepts. Asking if something “belongs” to an individual is the most common question in ownership studies, but recent work indicates that control of permission (i.e., deciding who may and may not use property) is also a powerful indication of ownership (Neary et al., 2009). At the end of each session, children were thanked for their time and presented with a certificate of appreciation and a sticker.



**Fig. 1.** Mean number of correct ownership attributions for receivers of desirable and undesirable objects, on a scale from 0 to 2 (chance = 1).

## 1.2. Results

### 1.2.1. Preliminary analyses

When presented with the initial ownership query, 16 of 18 participants in Experiment 1 named identifiable pieces of property as something that they owned. One child failed to name something that he owned and another did not receive the query due to experimenter error. Children accurately reported actors' feelings toward their gifts. Their responses to the liking queries were converted to a five-point numerical value with 5 denoting the happiest face and 1 denoting the saddest face. On average, children judged that actors strongly liked desired gifts ( $M = 4.26$ ) and moderately disliked undesired gifts ( $M = 2.39$ ). A paired-samples  $t$ -test revealed that children judged the recipients of desired items to like their gifts significantly more than the recipients of undesired items,  $t(17) = 5.83$ ,  $p < .001$ ,  $d = 2.83$ , indicating that children paid attention to our manipulation of desirability and remembered it. (Here and throughout, all  $t$ -tests are two-tailed.)

The questions regarding belonging and control of permission represent two slightly different ways to examine children's ownership judgments. These queries did not yield a statistically different endorsement rates for either desirable,  $t(17) = 1.64$ ,  $p = .12$ ,  $d = .80$ , or undesirable,  $t(17) = 0.90$ ,  $p = .38$ ,  $d = .44$ , items. We combined them into a single composite measurement of ownership for each trial that ranged from 0 (children attributed neither belonging nor control of permission to the owner) to 2 (children attributed both belonging and control of permission to the owner).

### 1.2.2. Primary analyses

We used a paired-samples  $t$ -test to compare the average composite ownership score for desirable ( $M = 1.76$ ) versus undesirable ( $M = 1.72$ ) trials, a nonsignificant difference,  $t(17) = 0.51$ ,  $p = .62$ ,  $d = .25$ . We compared children's responses to random or chance (1.0) responding using one-sample  $t$ -tests and found that children attributed ownership to individuals at rates greater than predicted by chance for both desirable trials,  $t(17) = 10.70$ ,  $p < .001$ ,  $d = 5.19$ , and undesirable trials,  $t(17) = 8.70$ ,  $p < .001$ ,  $d = 4.22$  (see Fig. 1).

## 1.3. Discussion

In Experiment 1 children were presented vignettes that differed only in whether individuals desired the gift they received. Children recognized the desires of individuals and remembered them, but their ownership attributions were not influenced by this knowledge. Thus, by 4 years of age, children understand that an individual can own an object that he or she dislikes. In other words, children understood that ownership was independent of desire.

## 2. Experiment 2

In Experiment 2, we presented children with a more challenging task, designed to provide a strong test of their understanding that ownership is independent of desire. Actors explicitly stated their preferences before opening their gift (“I want something awesome,” or “I don’t want something yucky.”), and the gift was intrinsically either desirable or undesirable, matching the actor’s preferences (i.e., an undesirable object was intrinsically unappealing).

### 2.1. Method

#### 2.1.1. Participants

Participants were 19 preschool aged children (12 male; aged 3–8 to 5–0,  $M = 4-4$ ). Most children were White and recruited from preschools in or around a Midwestern university town.

#### 2.1.2. Materials

Materials included pictures of the four attractive items from Experiment 1 (ball, truck, horse, book) as well as pictures of four unattractive objects, one in each of the same categories. For example, one toy horse was attractive and the other toy horse was coated with dirt and missing its tail and mane.

#### 2.1.3. Procedure

The procedure was identical to the procedure used in Experiment 1 with a few additions. First, a statement noting each actor’s desire (e.g., “Meagan doesn’t want something yucky.”) was added to each trial. Each actor stated either that they wanted something desirable (e.g., something “clean,” “nice,” “great,” or “cool”), or that they did *not* want something undesirable (e.g., “rusty,” “dirty,” “yucky,” or “messy”), and then opened their present. Second, the descriptors associated with each actor’s desires were added to their gift in order to emphasize the relation between each character’s desires and the characteristics of their gift. For example:

“This is Meagan. Meagan went to a party and she got a present! Meagan does not want something yucky. Meagan opens the present and looks inside. It’s a yucky book! Meagan says, “I don’t like this book!”

### 2.2. Results

#### 2.2.1. Preliminary analyses

Every participant identified something they owned in response to the initial question. As in Experiment 1, children judged that actors who desired their gifts ( $M = 4.33$ ) liked them significantly more than actors who did not desire their gifts ( $M = 2.51$ ),  $t(18) = 6.17$ ,  $p < .001$ ,  $d = 2.91$ . Responses to the two ownership queries did not differ significantly when items were desirable,  $t(18) = 1.92$ ,  $p = .070$ ,  $d = .91$ , and when items were undesirable,  $t(18) = -.16$ ,  $p = .875$ ,  $d = .08$ .

#### 2.2.2. Primary analyses

Collapsing responses to the two ownership queries into a composite score as described in Experiment 1 and using a paired sample  $t$ -test, we discovered a small but significant difference in ownership scores for desirable trials ( $M = 1.57$ ) and undesirable trials ( $M = 1.36$ ),  $t(18) = 2.11$ ,  $p = .049$ ,  $d = .99$ . Thus, children’s ownership judgments are subtly influenced by desirability information. Children continued to make ownership attributions at rates above chance for both desirable trials,  $t(18) = 4.11$ ,  $p = .001$ ,  $d = 1.94$ , and undesirable trials,  $t(18) = 2.01$ ,  $p = .059$ ,  $d = .95$ , although the latter response pattern was only marginally significant (see Fig. 1).

### 2.3. Discussion

In Experiment 2, we placed special emphasis on the salience of individuals’ desires relative to their ownership status. Relative to Experiment 1, where differences in desirability were only subjective,

children could see how unappealing the undesirable objects were, possibly influencing ownership attributions as well. Under these strong conditions, children made significantly fewer ownership attributions when actors received an undesirable gift than when they received a desirable gift. At the same time, overall they displayed a tendency to attribute ownership even when property was undesirable.

### 3. Experiment 3

In Experiments 1 and 2, we probed children's understanding that ownership is independent of desire by examining situations in which an individual does not want a toy that they are given. In Experiment 3, we examined the reverse situation, in which an individual wants a toy that they are not given. We employed the same materials and questions used in Experiment 1 with two critical changes: (1) we added a second actor to each trial, and (2) the gift presented in each trial was given to the new actor and not the character that was the focus of the experimenter's queries. Whereas children in Experiments 1 and 2 answered questions about an owner, participants in Experiment 3 answered the same questions about a non-owner. If children believe that desires determine ownership, they should attribute ownership to the non-owners. However, if they understand that desire does not determine ownership, children should not attribute ownership to the non-owner. A further advantage of this method is that it is not susceptible to a bias to respond affirmatively, as is possible with the "yes/no" tasks used in Experiments 1 and 2.

#### 3.1. Method

##### 3.1.1. Participants

Participants were 18 preschoolers (5 male; ages 3–9 to 4–9,  $M=4-4$ ). Most were White and recruited from preschools in or around a Midwestern university town.

##### 3.1.2. Materials

The materials in Experiment 3 were identical to those in the prior two experiments, except that an additional character was added to the left of the original character in each trial such that the owner was at the center of the scene, with another actor on the left and the gift on the right. The new characters were selected from the same set as the originals.

##### 3.1.3. Procedure

The procedure differed from that of Experiment 1 in a few small ways. Both characters were introduced ("This is Jane and this is Ellen") and the second statement referred to both characters ("They went to a party and Ellen got a present"). The remaining script followed Experiment 1 except that the owner opened the gift but the non-owner expressed their feelings and desires. The experimenter pointed to each actor when their name was mentioned. The queries were similarly adjusted so that children indicated which of the two characters owned the object or exercised control of permission, instead of answering yes/no questions (e.g., "Who does the book belong to, Jane or Ellen?").

#### 3.2. Results

##### 3.2.1. Preliminary analyses

Every participant identified something that they owned. Children judged that actors liked desirable gifts ( $M=3.39$ ) more than undesirable gifts ( $M=2.51$ ),  $t(17)=1.99$ ,  $p<.063$ ,  $d=.72$ . Responses to the two ownership queries were very similar both when items were desirable,  $t(17)=.25$ ,  $p=.80$ ,  $d=.05$ , and when items were undesirable,  $t(17)=-1.84$ ,  $p=.08$ ,  $d=.28$ . We again collapsed responses to the two queries into a composite score.

##### 3.2.2. Primary analyses

A paired-samples *t*-test revealed no significant differences between ownership attributions on desirable trials ( $M=1.63$ ) versus undesirable trials ( $M=1.58$ ),  $t(17)=.39$ ,  $p=.70$ ,  $d=.07$ . Children

attributed ownership to the owner at rates significantly greater than predicted by chance (1.0) for both desirable trials,  $t(17) = 5.21$ ,  $p < .001$ ,  $d = 2.53$ , and undesirable trials,  $t(17) = 4.40$ ,  $p < .001$ ,  $d = 2.13$  (see Fig. 1).

### 3.2.3. Cross-experiment analyses

The difference in liking ratings in Experiment 3 was somewhat less sharply defined than in the prior experiments. Thus, we completed two additional analyses comparing children's liking judgments across experiments for desirable objects, we discovered a significant difference between experiments,  $F(2,52) = 4.80$ ,  $p < .05$ . Post hoc Bonferroni-corrected comparisons revealed that significantly lower liking ratings were attributed to non-owners (Experiment 3) relative to owners (Experiments 1 and 2) when they were presented with desirable objects,  $ps < .05$ , but Experiments 1 and 2 did not differ from one another. In contrast, a parallel analysis revealed that children's judgments regarding undesirable objects did not significantly differ,  $F(2,52) = .07$ ,  $p = .929$ .

### 3.3. Discussion

In Experiment 3, children attributed ownership to non-owners at very low rates, demonstrating that children do not treat desire as a variable sufficient to provoke an ownership attribution. In plain terms, children understand that individuals do not own things simply because they want them or like them. If children think that ownership and desire are related, this intuition might be expressed in one of two ways. Either desire information would influence ownership judgments, or ownership information would influence desire judgments. In Experiment 3, children rated desirable objects as less well-liked than in Experiments 1 and 2 despite the fact that the desirable objects were identical across experiments. Although children's ownership attributions were not influenced by desires, children either misremembered or misrepresented non-owners' evaluation of objects to conform to ownership cues.

## 4. General discussion

The goal of the present study was to examine whether preschool children are capable of separating ownership attributions from an individual's desires. Children begin to exhibit theories about the nature of desires and the relationship between desires and actions by age two (e.g., if they know that Judith likes taffy, children can infer what she is likely to eat if she is presented with a choice between eating broccoli or taffy; Repacholi & Gopnik, 1997; Wellman & Woolley, 1990), but their own desires interfere with their ability to accurately consider the desires of others until age four under some circumstances (Atance et al., 2010). Young children find desires to be salient and informative, but a previously unanswered question was whether they can partition this information from their reasoning about the relationships between people and their property.

In Experiments 1 and 2, children tended to infer that individuals with undesired property still owned the property. In Experiment 3, children tended to infer that individuals who desired property did not necessarily own it. In both cases, the social transfer of the object dominates, not desires. Thus, children understand that people can own things that they do not want and that people can want things that they do not own. Children may make bold claims about their own personal ownership, but by age four they understand that the desires and attitudes of others do not influence their ownership of property. They understand that the psychological states of owners and non-owners does not influence the outcomes of social actions such as gift giving. This finding is theoretically important because it addresses how mental states, such as desires, influence ownership attributions.

Although for the most part children are very good at separating liking and ownership attributions, these judgments are not wholly independent. In Experiments 2 and 3, desires subtly influenced children's intuitions. In Experiment 2, preschoolers made slightly but significantly more ownership attributions when owners received desirable versus undesirable gifts. And in Experiment 3, children attributed less liking of desirable objects to non-owners than they did to owners of the same objects in Experiment 1 – effectively bringing desire and ownership more in line with one another. This finding

suggests that children have some sense that individuals shift preferences to align with real-world realities (e.g., as in the case of cognitive dissonance; Elliot & Devine, 1994). It is possible that the liking data were more restricted than they might have been had we used faces with emotions matching each actor's response to their gift. These results suggest that children do not treat ownership and desire as wholly independent factors.

These effects may reflect a developmental process in which young children's ownership attributions are initially influenced by theory-of-mind considerations, such as the link between desires, actions, and goals (Wellman & Lui, 2004), but that such leakages decline with age. Assessing younger and older children would be useful to explore developmental patterns. However, it is important to note that while in the present experiments ownership is normatively independent of desire, in actuality desire can and does have downstream effects on ownership. For example, someone who doesn't like a gift can decide to sell, throw out, or re-gift it (thereby relinquishing ownership). Likewise, someone who desires an object can devote resources to obtaining and owning it (e.g., saving money).

Moreover, ownership may have effects on desire. For example, reactive devaluation is a documented tendency to devalue unselected options following a forced choice (Egan, Bloom, & Santos, 2010), and the endowment effect or mere-ownership effect involves valuing an object more highly after you receive it as property (see Kahneman, Knetsch, & Thaler, 1990, for evidence with adults; see Gelman et al., 2012, for evidence with preschool children). It is also likely that a disconnect between ownership and desire results in cognitive dissonance (Elliot & Devine, 1994), which might provoke even adults to attempt to adjust their desires to fit a social or moral norm (e.g., the non-owner decides he or she doesn't really like a fancy car that much, because it would be wrong to covet or envy another's property). Thus in some sense, children's intuition that ownership and liking are not wholly independent is consistent with adults' judgments as well.

Acquisition and maintenance of property is a central theme of human existence. By age 3, children use adult-like heuristics to infer ownership in ambiguous situations (Friedman & Neary, 2008; Kanngiesser et al., 2010; Neary et al., 2009) and to monitor both their own property and the property of others (Gelman et al., 2012). Between the ages of three and eight, children's naïve intuitions about property (Neary et al., 2012), owners (Noles et al., 2012), property transfers (Blake & Harris, 2009; Friedman & Neary, 2008), and property rights (Kim & Kalish, 2009) expand and become more refined with respect to interpersonal situations. We found that 4-year-olds appear to have at least a basic understanding of the relation between desires and ownership. At the same time, there are subtle influences of desires on children's ownership judgments, as well as subtle influences of ownership on children's desire judgments. The two factors are not wholly distinct in young children's thinking. The present study's focus on mental states thus represents a step toward understanding how different social cognitive competencies interact.

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