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Brief article

Children prefer certain individuals over perfect duplicates

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Abstract

Adults value certain unique individuals—such as artwork, sentimental possessions, and memorabilia—more than perfect duplicates. Here we explore the origins of this bias in young children, by using a conjurer's illusion where we appear to produce identical copies of real-world objects. In Study 1, young children were less likely to accept an identical replacement for an attachment object than for a favorite toy. In Study 2, children often valued a personal possession of Queen Elizabeth II more than an identical copy, but showed no such bias for another sort of valuable object. These findings suggest that young children develop attachments to individuals that are independent of any perceptible properties that the individuals possess.

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1. Introduction

The medieval Scottish philosopher, John Duns Scotus, coined the term “haecceity” to denote the aspect of an individual that makes it unique, which is separate from the object’s “quiddity”—the property that makes it a member of a category. These terms have never caught on, but the distinction itself has long been recognized as central to human cognition. All languages, for instance, make some structural distinction between words that refer to individuals *qua* individuals (as in proper names like “Tessie”) versus words that refer to individuals as category members (as in common nouns like “dog”) (Macnamara, 1982). Even the simplest cases of numerical cognition, such as thinking about two pennies in the fountain, requires both that one appreciate the category membership of the individuals (that they are pennies) *and* that the individuals are distinct (there is penny X and penny Y). Accordingly, there has been considerable research into how babies and young children construe individuals as both distinct entities and category members (Bloom, 2000; Hall, 1998; Sorrentino, 2001; Wynn, 1992; Xu & Carey, 1996).

There has been far less research, however, addressing questions of liking, preference, and evaluation. It is obvious that people have likes and dislikes about certain categories; one might prefer dogs over cats, or beer over wine. It is obvious as well that people can evaluate individuals by virtue of the categories they belong to or the properties that they possess. One might like Tessie because she is a dog, or because she is loyal or friendly. What is less clear, though, is under what circumstances people make evaluative judgments about an individual in part because it is *that individual*, separate from the category that it belongs to or any properties that it possesses or is thought to possess.

The clear examples of preferences for individuals *qua* individuals arise in the domains of art, memorabilia, and sentimental objects. A copy of Rembrandt’s *Night Watch*, for instance, would be worth a tiny fraction of the value of the original, even if the two were impossible to tell apart (Bloom, 2004). As of today (18th Dec, 2006), President John F. Kennedy’s chess set is selling on “eBay” for \$275,000. This set is presumably so valuable by dint of its unusual history. On a more personal level, people often claim to be attached to specific objects, like a ring given by a lover, or a security blanket, and to prefer these individuals over perceptibly identical substitutes.

It is unclear, however, how general these phenomenon are. Some scholars have argued that the obsession with authenticity is a uniquely Western phenomena (Julius, 2002), perhaps emerging late in individual development (Evans, Mull, & Poling, 2002). One might also question the extent to which they really do reflect preferences for individuals per se. The traditional empiricist view on mental representation is that we naturally encode individuals in terms of properties that they possess—as Bishop Berkeley put it: “Take away the sensations of softness, moistness, redness, tartness, and you take away the cherry, since it is not a being separate from sensations.” (Berkeley 1713). This view grounds certain neural network theories that define object representations in terms of activation patterns of units corresponding to features (see Pinker, 1997 for discussion). From this perspective, apparent preferences

for unique individuals must be due to properties that the individuals possess or are thought to possess. A child might prefer his own security blanket because of its special smell; an art collector might believe that her original Picasso looks better than any possible duplicate.

We explore this issue here by asking whether young children, not schooled in art theory or involved in economic practice, view distinct individuals as having special value over perfect duplicates. In Study 1 we examine children's attitudes towards items to which they were emotionally attached, and in Study 2, we evaluate children's attributes toward items that were deemed special because they had previously belonged to a famous monarch.

2. Study 1: preference for attachment versus non-attachment objects

Many young children in Western cultures develop some sort of attachment to an inanimate object such as a soft toy or a blanket (Lehman, Arnold, & Reeves, 1995). This raises the question of whether children's attachments are to the specific individuals, as opposed to distinguishing properties that the individual possess or are thought to possess.

2.1. Methods

2.1.1. Participants

We asked parents to bring their 3- to 6-year-olds into our laboratory with the child's attachment object, or, if the child did not have one, with any particular object that the child currently liked. To count as an attachment object, the child had to regularly sleep with the object and had to have possessed it for at least one-third of the child's life. Participants were 22 children (12 boys, 10 girls, mean age = 54 months) with an attachment object and 21 children (11 boys, 10 girls, mean age = 53 months) with a non-attachment object. Attachment objects were stuffed toys ($N = 19$) and blankets ($N = 3$) whereas non-attachment objects were all toys and dolls.

2.1.2. Procedure

We tested children with a method inspired by DeLoache, Miller, and Rosengren (1997) invention of a "shrinking room". Children were shown a "copying machine"—actually two tachistoscopes that were modified to have flashing lights and buzzers (see Fig. 1). To demonstrate the machine, the boxes were originally open. A green wooden block was placed in one box and both doors were closed. The experimenter adjusted some controls and then activated a buzzer. Following a delay of several seconds, the buzzer on the second box activated and the experimenter opened both doors to reveal a green block in each box (the "duplicate" block was inserted through the back by a hidden experimenter). When asked to explain what they saw, all children said that the machine had copied the block. No child reported that the event was an illusion. The procedure was repeated for a rubber animal and then for a stuffed toy.



Fig. 1. The copying machine is opened to reveal two identical stuffed toys during the familiarization phase.

The experimenter then explained that this machine could copy toys that the child could keep. A rubber “stretchy man” was placed in the box and the illusion repeated. This time the doors remained closed and the child was asked to choose which object they would like to keep—either the original or the copy. The child was then given the toy of their choice. Following this, the experimenter suggested that they copy the child’s own object. If the child agreed, the experimenter placed the object in the box and repeated the question as to which object the child would like to keep. At the end of the study, all children were debriefed and shown how the illusion was achieved and they were reassured that the item that was given to them was truly the original.

2.2. Results

Our subjects were divided into two groups based on parental judgment as to whether or not they had an attachment object. To validate these judgments, parents were asked to rank their children on a 10-point scale as to how distressed their child would become if the object was lost, how possessive their child was towards the object, and how emotionally attached to the object their child was. As expected, the children with attachment objects scored higher on distress (6.36 vs. 3.71, $t(41) = 2.89$, $p < .01$, $d = .9$), possessiveness (6.23 vs. 4.24, $t(41) = 2.29$, $p < .05$, $d = .72$) and emotional attachment (7.18 vs. 4.04, $t(41) = 3.87$, $p < .001$, $d = .92$).

Both children with attachment objects (64%) and those with non-attachment objects (62%) tended to select the copied experimenter’s toy. Thus, there are no overall differences between the groups with regard to preferences for copies versus

originals. When children's own objects were chosen for duplication, however, a difference did emerge. All children with non-attachment objects allowed their object to be copied and 13 (62%) chose the duplicate. In contrast, four of the attached children refused to allow the experimenter to copy their object at all and, of the remaining 18, only five children (23%) chose the duplicate. (Fisher's exact test, $p = .01$, one-tailed).

In sum, children with attachment objects preferred their original object to a duplicate, and did so to a greater extent than children with non-attachment objects. None of the children offered a detailed rationale for their choice; they would typically simply state, "because it's mine".

3. Study 2: evaluation of special items

Children's attachment objects might comprise an unusual case. These are personal possessions to which only a subset of children form emotional attachment to, and might not reflect the same processes underlying adults' valuation of artistic and sentimental entities. This motivated a second study exploring children's understanding of the value of other people's items.

In this study, we repeated the copying illusion but the original was deemed to be special because either it (a) had belonged to a famous person or (b) was made of a precious metal. Unlike the first experiment, the original and the copy were revealed in full view to the child. Children were asked to distribute 10 counters between the original and the copy as a dependent measure of relative value. Our prediction was that children, like adults, would appreciate that a historical property, such as belonging to a famous person, is connected to a specific individual and does not extend to a duplicate. Hence an original with this property should be valued over a copy. In contrast, a material property, such as being made of precious metal, *can* be duplicated, and so there should be no preference for the original.

Our pilot work indicated that the younger children we originally tested had inconsistent concepts of fame and precious metal. In particular, they were unable to name a famous person. For this reason we tested 6-year-olds. Queen Elizabeth II was the famous person as she had recently visited the region and was immediately identifiable by our sample.

3.1. Methods

3.1.1. Participants

Thirty-eight children (16 males, 22 females; mean age = 80 months) were recruited from two primary schools. A further four children were excluded for not passing the initial training condition.

3.1.2. Procedure

Each child began with a training condition to familiarise them with the concept of relative value. The experimenter counted out 10 counters and said that he was going on a shopping trip to the local toyshop. The experimenter presented two identical

toys and explained that as these were the same, he thought that they would be worth five counters each. He then presented two non-identical toys and said that he much preferred one toy to the other and valued it at seven counters compared to three. He then presented a desirable toy and an old leaf. The toy was valued at 10 counters and nothing for the leaf. The child was then given the counters and the exercise was repeated for new items including two identical toys, two non-identical toys and a desirable toy compared to a stone. The child passed the training condition if they gave equivalent amounts for the same items and more counters for the preferred toy and the desirable toy.

The child was then introduced to the copying machine in the same manner as Study 1. Then, in the test condition, the experimenter introduced either a small metal goblet or a metal spoon. For half of the trials, he explained that one item was special because it was made of the precious metal silver or it was special because it once belonged to Queen Elizabeth II. The copying exercise was repeated but this time, the doors were opened to reveal identical objects (cups or spoons) in each box. The counters were reintroduced and the child was invited to estimate how many counters each item was worth. Each child was tested twice—once for Queen condition and once for the silver condition—and the order of conditions, and assignment of item to condition, were counterbalanced.

3.2. Results

The average amount of counters given per item is shown in Table 1. The score out of ten for each item from all children was entered into a repeated measure ANOVA with property type (Queen vs. silver) authenticity (original vs. copy) as independent variables. This revealed a significant main effect of authenticity, $F(1, 37) = 17.31$, $p < .001$, $hp^2 = .32$ and a significant interaction between authenticity and property type, $F(1, 37) = 8.9$, $p < .01$, $hp^2 = .19$. Post hoc t -test revealed that this interaction was attributable to a significant difference in value between the original and copy of the Queen's item, $t(37) = 4.07$, $p < .001$, $d = 1.34$ and a non-significant difference between the original and copied silver item.

A different way to look at the data is to compare the relative proportions of children in the Queen condition versus the silver condition who attributed equal value to the two items, as opposed to favouring the original, or the duplicate. In the Queen condition, 20 children (53%) valued both items equally, 17 children (45%) gave more to the original, and 1 child (2%) gave more to the duplicate. In the silver condition,

Table 1
Mean (SD) values out of 10 for each item in Experiment 2

Queen's	
Original	5.87 (1.92)
Copy	3.71 (1.66)
Silver	
Original	4.79 (1.36)
Copy	4.39 (1.26)

31 (82%) children valued the two items equally, 5 children (13%) gave the original more, and 2 children (5%) gave the duplicate more. Children were over three times more likely, then, to attribute more value to the original when it was described as special because of its relationship to the Queen than when it was described as special because it was made of silver.

4. General discussion

Two experiments using a “copying machine” investigated young children’s attitudes towards original and duplicate possessions. Study 1 found that children with emotional attachments to their possessions were either reluctant to allow a copy to be made or preferred to take the original home. In contrast, children with no attachment to an item they owned showed no such preference. Study 2 found that children often treated items deemed to be special through association with a famous individual to be more valuable than an apparent copy. In contrast, items deemed to be special because they were made of silver tended to be valued the same as copies.

This finding suggests that children develop preferences for certain particular individuals. This is constrained in interesting ways, however. Children prefer their attachment objects over perfect duplicates, but show no such preferences for more mundane objects. They appreciate that an object owned by the Queen is more valuable than a duplicate with no such history, but that an object that is special because it is made of silver is no different in value from a duplicate object that is also made of silver. The extent to which cultural influences play a role here is unclear. It might be that parents and other adults draw children’s attention to the fact that some individuals are important in and of themselves. There are, after all, cultural differences as to which specific individuals count as important. (Not all cultures value autographs, for instance.) At the same time, however, the tendency to like or dislike specific individuals may emerge early in human development. Cultural influences might then shape this unlearned capacity. This would be consistent with the finding that the capacity to track and quantify over specific individuals is present even in young babies (e.g., Wynn, 1992).

Our studies are motivated by an interest in the capacity to evaluate individuals *per se*, independent of their properties or category membership. An alternative analysis, however, is that our results might arise because children believe that the favoured individual (the blanket; the Queen’s spoon) has a hidden and invisible property—an “essence”—that distinguishes it from everything else (Gelman, 2003). Children might further believe that this essence is not copied by the duplicating machine, and hence prefer the original item—not because of the individual *per se*, but because of a property that the individual is thought to possess. While our findings show that the evaluative preferences of children, and presumably adults, are not yoked to the *perceptible* properties of individuals, they do not yet speak to this essentialist theory.

Several questions remain, then, about children and adults. These include the sorts of individuals that generate these sorts of attachments, the process through which such attachments are formed, and whether preferred individuals are thought to possess essences. We see the copying machine as a useful tool to explore these issues.

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