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Brief report

The influence of familiar characters and other appealing images on young children's preference for low-quality objects

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This study examines the factors underlying young children's preference for products bearing a familiar character's image. Three-year-olds ($N = 92$) chose between low-quality objects with images on or near the objects and high-quality objects without images. Children showed stronger preferences for damaged objects bearing images of a preferred familiar character than for objects bearing images of a preferred colour star, and they showed weak preferences for damaged objects with the character near, but not on, the object. The results suggest that children's preference for low-quality products bearing character images is driven by prior exposure to characters, and not only by the act of identifying a favourite.

Statement of contribution
What is already known on this subject?
- Children are exposed to characters in the media and on products such as clothing and school supplies.
- Products featuring familiar characters appeal to preschool children, even if they are of low quality.

What does this study add?
- Three-year-olds prefer damaged objects with an image of a favourite character over plain undamaged objects.
- Children's preference is not solely a function of having identified a favourite image or of attentional cues.

Young children encounter familiar fictional characters not only in the media but also on products such as clothing, packaged foods and school supplies. Products featuring images of familiar characters generate billions of dollars in sales (NPD group, 2012). Moreover, evidence suggests that preschool-aged children are drawn to products with familiar characters: 4- to 6-year-olds indicate that foods from a package featuring a familiar character have enhanced taste (Letona, Chacon, Roberto, & Barnoya, 2014; Roberto, Baik, Harris, & Brownell, 2010), and 4-year-olds even prefer damaged objects (e.g., toys, school supplies) with a favourite familiar character over new objects that are plain or have a

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colourful control image (Danovitch & Mills, 2014). Understanding how young children's product judgements are influenced by the presence of a familiar character has practical implications for increasing children's adoption of products that may be less desirable (e.g., vegetables, toothbrushes). It also reveals how exposure to characters in the media over the first few years of life affects children's thinking and behaviour in situations where media are not directly involved.

Building on prior research, this study had two goals. First, we examined whether 3-year-olds, like older children in past research, prefer damaged objects bearing the image of a favourite character over undamaged plain objects. Early exposure to a particular colour appears to influence children's preferences for objects of that colour as early as age 2.5 (LoBue & DeLoache, 2011). However, it is unclear whether more complex images, such as cartoon characters, have similar influences on children's preferences at a young age. Parents report that familiarity with characters drives children's requests for products featuring packaging with character images at ages 2 and 3 (Henry & Borzekowski, 2011). However, there is currently no empirical evidence documenting whether 3-year-olds, like older children, prioritize familiar characters when judging an object's value. If 3-year-olds recognize damaged objects as less valuable than new ones, yet they show a preference for damaged objects with a familiar character's image, then this would suggest the character's presence is sufficiently powerful to override other aesthetic and practical considerations (i.e., the fact that the object may not be functional).

Second, we examined the nature of a familiar character's influence on children's preference for damaged objects over undamaged ones. In particular, we examined whether familiar characters exert a special influence on an object's value or whether other colourful or preferred images exert an equally strong influence. Thus, we compared children's preferences for damaged objects with an image of a familiar character to preferences for damaged objects with images of an unfamiliar character or a favourite colour star. These comparisons reveal whether children's judgements are driven by familiarity with a specific character, by the visual appeal of a colourful, yet unfamiliar, cartoon character, or by the act of identifying a favourite (see Egan, Santos, & Bloom, 2007). If children show a stronger preference for damaged objects bearing a familiar character's image than damaged objects bearing other types of images, this would suggest that children's preferences for the damaged objects are a function of positive associations with a specific character. In addition, we examined whether the familiar character's image functions as a simple attentional cue for choosing an object by measuring children's preferences for damaged objects with a familiar character's image adjacent to the object.

Method

Participants

Ninety-two children (49 males) aged 3.03–4.09[1] (M_{age} = 3.53) were recruited at preschools and from a laboratory database. Children were primarily middle-class Caucasian American and non-Hispanic. Twenty children were randomly assigned to each of four image conditions, and 12 children were assigned to the baseline condition. Parents provided written consent for their child's participation, and the Institutional Review Board at Michigan State University approved the study.

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[1] *There was one child over age 4. Omitting this child from the analyses does not alter the pattern of results.*

Stimuli and procedure

Children were randomly assigned to one of five conditions. Following closely from the procedure in Danovitch and Mills (2014), children in the familiar, unfamiliar and proximity conditions chose their favourite from four characters (Bob the Builder, Dora the Explorer, Blue and Nemo) displayed on a laptop computer monitor. Children were prompted to name the character, name the character's friends and describe what the character does. In the unfamiliar condition, children were then introduced to a novel character named Pat, stylistically similar in appearance to their favourite character (see Danovitch & Mills, 2014 for details; e.g., see Figure 1), who was identified as being from a 'brand new show that no one has watched yet'. Children were asked whether they had ever seen Pat. Children who said 'yes' were reminded that the show was new and they had not seen Pat before. In the star condition, instead of choosing a character, children chose their favourite of four different coloured stars (blue, grey, yellow and red). Finally, in the baseline condition, children made no choices.

Children in all conditions were then instructed that they would see pictures of objects and asked: 'If you saw these two things in the store, which one would you want?' Children viewed 10 different pairs of images presented in a fixed order, where each pair consisted of one undamaged object (e.g., ball, bucket, toy car) and one identical object that was dirty and damaged (see Figure 1). The damaged object, which was in many cases dysfunctional (e.g., a car missing its wheels), bore a full colour image on approximately one-fifth of its surface area. Damaged objects in the *familiar* condition bore the image of the child's favourite familiar character. Damaged objects in the *unfamiliar* condition bore the image of the unfamiliar character. Damaged objects in the *star* condition had an image of the child's preferred colour star of approximately the same size and in the same location as the familiar character. Damaged objects in the *proximity* condition had an image of the child's favourite familiar character adjacent to the object on the side closer to the edge of the monitor. There was no image on or near either object in the *baseline* condition. Children viewed the same familiar character, unfamiliar character or coloured star on or near the damaged objects across all trials. Damaged and new objects appeared on each side of the screen an equal number of times, and their location was balanced between subjects.

Results

Preliminary analyses showed no effects of gender or item order. These variables were excluded from further analyses. Children in the baseline condition chose the damaged objects on 1.7% of trials, demonstrating that children recognized that the undamaged objects were of higher quality.

A one-way ANOVA showed a main effect of condition,[2] $F(4, 87) = 12.569$, $p < .001$, $\eta^2 = .578$ (see Figure 2). Overall, the highest preference rate for the damaged objects was in the familiar condition, with children preferring the damaged objects at rates greater than chance, $t(19) = 2.438$, $p = .025$. Fifty per cent of children in the familiar condition chose the damaged objects on nine or 10 trials, and only 5% chose the undamaged objects on nine or 10 trials. (In all other conditions, it was far less common for children to select the damaged objects on nine or 10 trials.) Preference for damaged objects was at chance levels for the unfamiliar and star conditions ($ts \leq 1.890$, $ps \geq .074$). In contrast, children

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[2] *The same pattern of results emerges if the baseline condition is omitted.*

Figure 1. Examples of images used in each condition. [Colour figure can be viewed at wileyonline library.com]

preferred damaged objects at lower than chance levels for the proximity and baseline conditions (ts $\geq$ 5.486, ps $<$ .001); in other words, they preferred the undamaged objects in those conditions.

Children chose the damaged objects at progressively lower rates across the familiar, unfamiliar, star, proximity and baseline conditions. However, the differences between each condition and the nearest condition(s) were not significant, ps $\geq$ .524. *Post-hoc* Bonferroni tests showed that children chose the damaged items significantly more often in the familiar condition than in all other conditions except the unfamiliar condition, ps $\leq$ .015. Children chose the damaged objects significantly *less* often in the baseline condition than in all conditions except the proximity condition, ps $\leq$ .009.
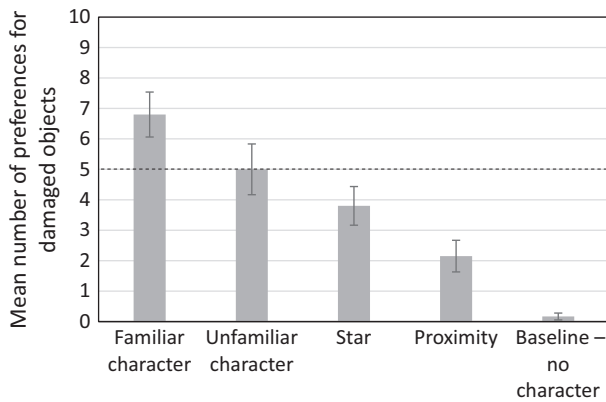
Figure 2. Mean number of times children in each condition chose damaged objects (with *SE*). The dashed line indicates chance.

Discussion

By age 3, children are already so captivated by familiar characters that they prefer damaged objects bearing a favourite character's image over plain, undamaged objects. In fact, in our study, at baseline, children rarely chose damaged objects, appearing to consider them low value. Moreover, their preferences do not seem driven purely by attentional cues, as children rarely chose damaged objects when the familiar character was near, but not on, the objects (i.e., the proximity condition). This evidence supports that by age 3, children's attitudes towards familiar cartoon characters are sufficiently positive that the presence of a character on a damaged object overrides their typical judgements about the object's desirability. Developmentally, this suggests that 3-year-olds show similar vulnerability to the influence of prior media exposure on their judgements as older children (Danovitch & Mills, 2014).

Although children showed the strongest preference for damaged objects that featured a familiar character, they also chose damaged objects featuring an unfamiliar character or a favourite-coloured star at higher than baseline rates. This suggests that children perceived other appealing or preferred images as adding some value to the damaged objects. That said, it is notable that although appealing images, such as stars or unfamiliar characters, prompted children to select damaged objects at higher than baseline rates, and responses in the familiar and unfamiliar conditions were not statistically different from one another, *only* the presence of a familiar character influenced children to choose damaged objects more often than undamaged ones. Additional research is needed to understand whether the unique power of a familiar character's image is a function of prior experiences with the character (e.g., observing the character's friendly behaviour), the strength of the child's one-sided emotional relationship with the character (i.e., a parasocial relationship; see Richards & Calvert, 2016) or prior experience with undamaged products bearing the character's image. Likewise, further investigations should examine how far children's preference for one familiar character extends. As the current evidence suggests, products with unfamiliar characters who look sufficiently similar to familiar characters may hold increased appeal, but products with familiar non-favourite or entirely novel characters may hold less appeal, even if they are in good condition.

Are all children susceptible to the allure of familiar characters? Perhaps, but our results suggest that there are individual differences. In this study, some children viewed damaged

objects with character images more positively than other children (e.g., some frequently chose the damaged objects, while others preferred the undamaged objects). Future research should more closely examine the relation between children's prior exposure to characters and the strength of their preferences for objects featuring those characters. Identifying the mechanisms that bias children towards objects associated with favoured characters might reveal methods for 'inoculating' children against the influence of salient characters. For instance, given evidence that direct negative product experience helps children become more sceptical of advertising (see Moses & Baldwin, 2005), perhaps explicitly noting that an object is damaged will increase the salience of the damage, and decrease the salience of the character's image. That said, as the current study suggests, the power of familiar characters may sometimes be so strong that young children are unable to override it.

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