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Is the tendency to conform influenced by the age of the majority?

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ABSTRACT

The aim of the current study was to explore the influence that the age and the familiarity of a group majority has on copying fidelity in 4- to 6-year-old children. In Experiment 1, participants ($N = 120$, $M_{age} = 68$ months) viewed five child models, all of whom were either younger than, the same age as, or older than themselves, open a puzzle box using an inefficient technique (four models) or an efficient technique (one model). In Experiment 2 ($N = 82$, $M_{age} = 71$ months), the identical task was presented by groups of unfamiliar models. In both Experiments 1 and 2, a group of control participants saw an equal number of inefficient and efficient models. Results showed that the participants displayed conformity irrespective of the age, or the familiarity, of the individuals comprising the majority. However, the participants varied in their level of imitative fidelity depending on the identity of the group majority, with majorities that were either the same age as, or considerably older than, the participants eliciting the highest levels of over-imitation. In contrast, groups comprising individuals who were younger than the participants elicited a significantly lower level of over-imitation than that elicited by the same-aged and older majorities. We suggest that these findings demonstrate an interplay between conformist and model-based transmission biases.

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Introduction

If we were to glance around our everyday environments, we would likely see ample evidence of people's human disposition to adopt the behaviors and attitudes of those surrounding them. This conformist tendency was demonstrated experimentally by Solomon Asch during the 1950s where a substantial proportion of adult participants were shown to agree with a majority response in a perceptual judgment task despite the majority view being clearly incorrect (Asch, 1955; Asch, 1956). This bias to conform—here defined as the propensity to display a behavior because it is the most frequent displayed in others (Claidière & Whiten, 2012)—seems somewhat surprising because it would appear to have the potential to lead individuals, at least on some occasions, to adopt ineffectual responses. However, evolutionary biologists have shown that rather than conformity being a limitation of our species, our bias toward conformity most likely serves key social functions by promoting ingroup cohesion and defining ingroup/outgroup boundaries (Boyd & Richerson, 1988; Boyd & Richerson, 2009; Henrich & Boyd, 1998). The potential importance of conformity, both theoretically and behaviorally, has led to recent explorations of the phylogenetic (Haun, Rekers, & Tomasello, 2012) and ontogenetic roots of this conformist disposition (Corriveau & Harris, 2010; Haun & Tomasello, 2011).

Studies that have adapted the Asch paradigm for use with preschool children have shown that 3- and 4-year-olds conform at similar levels to their adult counterparts when faced with a majority (of adults or peers) making an incorrect perceptual judgments (Corriveau & Harris, 2010; Haun & Tomasello, 2011). Similarly, studies from the trust in testimony literature have shown children's readiness to conform to the label used by the majority even when this label is incorrect (Chen, Corriveau, & Harris, 2012; Fusaro & Harris, 2008; Fusaro & Harris, 2013; Seston & Kelemen, 2013). More recently, the study of conformity within the preschool period has been extended to the domain of action copying, with studies asking whether individuals will copy the actions displayed by a majority over an alternative action displayed by a minority. In one such study, 2-year-old humans, orangutans, and chimpanzees were allowed to observe a majority of same species models each place a ball in the same container (from a choice of three containers), whereas a single individual (the minority) was seen to place a ball in a different container (Haun et al., 2012). The results showed that two of the three species were influenced by the majority, with 56% of the children and 72% of the chimpanzees placing their ball in the same container as the majority despite there being no rationale for doing so. The orangutans, in contrast, responded randomly. Conformity to the actions displayed by the majority has also been demonstrated in slightly older children, with 3- to 6-year-olds more readily performing the technique used to remove pegs from a pegboard by two models than the same technique performed by a single model (Herrmann, Legare, Harris, & Whitehouse, 2013).

That the children in the studies described above readily adopted the same actions as the majority suggests that the domain of action copying may provide a fruitful, and as of yet relatively untapped, avenue with which to explore conformist behavior. Traditional action copying (social learning) studies are most often dyadic (one model and one observer), and precise fidelity to the task is assessed using a two-action design where half of the participants see a single model operate an object using Technique A and the remaining half see a single model operate the same object using an equally effective Technique B (e.g., Whiten, Custance, Gomez, Teixidor, & Bard, 1996). Studies have shown that children frequently copy the technique witnessed with high levels of fidelity (e.g., Hopper, Lambeth, Schapiro, & Whiten, 2008; Whiten et al., 1996); however, we currently know little of how children will respond when viewing a group of models, the majority of whom perform a task using a different technique than the minority. Will children conform to the technique performed by the majority even if there is no need to do so in order to succeed in the task? A tentative answer to this question can be extrapolated from the findings of recent studies that have used an open diffusion approach to explore the cultural transmission of tool use in preschool children (Flynn & Whiten, 2012; Whiten & Flynn, 2010). In these open diffusion studies, an individual who was pretrained to retrieve a reward from inside a puzzle box, using one of two different but equally effective techniques, was allowed to perform the task within the individual's naive peer group. Typically, the technique demonstrated for the seeded individual spread, with the majority of individuals adopting the technique performed by the pretrained individual, providing suggestive evidence that preschool children will conform to the