How Two Intuitive Theories Shape the Development of Social Categorization

Marjorie Rhodes
New York University

ABSTRACT—Social categorization provides a valuable mechanism for explaining and predicting human behavior, yet also contributes to the development of social stereotyping and prejudice. Thus, understanding how social categorization develops is critical for both cognitive and social development. This article presents a theoretical perspective on the development of social categorization—that children map intuitive theories about the structure of the social world onto categories they encounter in their environment. In particular, 2 intuitive theories—that social categories are natural kinds and that social categories mark people who are obligated to one another—are described as shaping the acquisition of social categories. The article discusses implications for how children explain, predict, and interact with their environment.

KEYWORDS—social categorization; folk theories; social cognition

From early infancy, children have countless experiences with human behaviors and human variation. Classifying people into categories (e.g., girls, doctors, babies) is a crucial way of organizing these experiences. Social categorization enables children to encode and retrieve information about people efficiently and provides a valuable mechanism for predicting and explaining human action (for review, see Kinzler, Shutts, & Correll, 2010). Yet, social categorization also contributes to a range of negative psychological and social phenomena, including social stereotyping and prejudiced attitudes (Bigler & Liben, 2007; Rutland, Killen, & Abrams, 2010). Thus, social categorization is critical to our understanding of both cognitive and social development, and provides insight into important connections between these fields. This article outlines a theoretical perspective on this intriguing and socially important area.

Categories reflect domain-specific intuitive theories about the structure of the world (Murphy & Medin, 1985). For example, given the many ways that animals could be categorized (fur color, size, location, behavior), the decision to classify into species kinds (e.g., dogs vs. cats) reflects abstract beliefs about the structure of the biological world—that the biological world is composed of discrete kinds that are determined by biological inheritance (Atran, 1998). Thus, to describe the development of social categorization, it is necessary to identify the nature of children’s theories about the structure of the social world. This article describes two intuitive theories of the social world—that social categories are natural kinds and that social categories mark patterns of social obligations—and examines the role of each in shaping the development of social categorization across childhood.

INTUITIVE THEORY 1: SOCIAL CATEGORIES AS NATURAL KINDS

Hirschfeld (1996) proposed that an intuitive theory that social categories are natural kinds—that is, that the social world is composed of discrete, coherent kinds determined by nature—guides the development of social categorization (also, Rothbart & Taylor, 1992). From this perspective, children view social category memberships as determined by birth, stable, and predictive of a wide range of physical and behavioral properties, much like animal species. By preschool (ages 3–5), children’s beliefs about at least one social category—gender—indeed reflect theoretical commitments indicative of treating social categories as natural kinds. Preschoolers view gender as: (a) marking objective structure (e.g., judging that it is wrong to consider a boy and a girl the same kind of person, even if they have other traits in common; Rhodes & Gelman, 2009a; Rhodes, Gelman, &
Rather than emerging in early childhood, natural kind beliefs theory that some social categories are natural kinds to race. Awareness of race, preschool-age children do not map their race as marking fundamental similarities. Thus, despite their awareness of race, preschoolers did not view racial categories in this manner. For example, Rhodes, Roben, and Spelke (in press) found that preschoolers did not test whether the children treated those physical features as inherited and stable, but not other salient social categories such as race? And (b) what determines how children map these beliefs to other categories across development? Several hypotheses have been proposed for why young children hold essentialist beliefs about gender, but not other categories. First, because of the significance of gender to the processes involved in shaping evolution, concepts of gender may be particularly constrained by intuitive cognitive biases (Cosmides, Tooby, & Kurzban, 2003; Kinzler et al., 2010). In contrast, because categories based on race (or other criteria) did not play a role in shaping human evolution, they would not be constrained in this manner and would instead depend more heavily on cultural experience. Empirical support for this possibility comes from studies showing that natural kind concepts of gender develop in early childhood even in communities where older children and adults have more flexible gender beliefs, suggesting that children’s own intuitive biases shape their early concepts (Rhodes & Gelman, 2009a; see also Kurzban, Tooby, & Cosmides, 2001).
Another plausible proposal, however, is that cultural input plays a crucial role in shaping how children apply natural kind beliefs to particular categories in both early childhood and across development. From this perspective, children might be exposed to the relevant cultural input for gender categories earlier than for other categories, such as race. Language may be a key form of this cultural input. In particular, hearing generic language (language that describes abstract kinds, e.g., “boys play baseball”) leads 4-year-olds, as well as adults, to develop natural kind beliefs about novel social categories that they would not otherwise view in this manner (Rhodes et al., 2012). Furthermore, parents selectively produce generic language when talking to their children about social categories for which they themselves hold natural kind beliefs (Rhodes et al., 2012); thus, generic language could serve as a mechanism that facilitates the cultural transmission of natural kind beliefs about particular social categories (see also Gelman, Taylor, & Nguyen, 2004). Other cultural factors may also play a role; for example, learning that two novel categories are engaged in intergroup conflict increases beliefs that the categories reflect fundamentally distinct kinds of people (Rhodes & Brickman, 2011); experiences with social diversity appear to contribute as well (Deeb et al., 2011; Kinzler & Dautel, 2012).

In sum, children have an intuitive theory that certain social categories mark natural kinds. Children apply this theory to social categories selectively and in a manner that is partially dependent on cultural input. Although children hold natural kind beliefs about a limited number of social categories, the social categories that they do view in this manner are particularly important because they are often implicated in the development of social stereotyping and prejudice (Dweck, 2009; Haslam, Rothschild, & Ernst, 2002; Keller, 2005; Leslie, in press). Thus, identifying the processes that lead children to apply natural kind beliefs to social categories is critical for determining how to prevent the development of these negative social phenomena.

**INTUITIVE THEORY 2: SOCIAL CATEGORIES AS MARKERS OF SOCIAL OBLIGATIONS**

As reviewed above, young children are aware of many social categories that they do not view as natural kinds (ranging from those based on race to those based on novel labels and shirt colors). Yet, although children do not view these categories as natural kinds, they may still serve important, functional roles in early social cognition. Indeed, many of the social categories that adults treat as meaningful and informative—team memberships, political parties, interest groups, and so on—are not categories that they generally think of as natural kinds (Haslam, Rothschild, & Ernst, 2000). Thus, recent work has aimed to discover whether a second intuitive theory of the social world might also contribute to the development of social categorization.

To determine what such a theory might be, it is useful to consider that although the inferential role served by natural kind categories—supporting inferences that category members are similar to each other—is important, some of the ways in which social categories contribute to human behavior do not stem from within-category similarity. For example, in daily life, social categories contribute to social relationships and interactions, shaping who will be friends or enemies, cooperate or compete, or help or harm each other. Thus, another key conceptual role that social categories could serve is to support inferences about how people relate to one another.

Recent work has tested whether young children have a second intuitive theory about the structure of the social world—that social categories mark people who are obligated to one another—that shapes the development of social categorization. This intuitive theory includes abstract expectations that members of a category have intrinsic obligations to each other (e.g., to protect and not harm each other) that do not extend beyond category boundaries (see also Kalish & Lawson, 2008). This theory thus allows predictions and explanations of obligation-relevant behaviors and relationships, for example, that members of the same category will be friends (and not enemies) with each other, and that people will refrain from harming members of their own (but not necessarily of other) categories.

In support of this proposal, Rhodes (2012) found that children use social categories to predict patterns of social interactions. Children aged 3 and older were introduced to novel social categories that were marked by labels (“Flurps” and “Zazes”) and t-shirt colors. At all ages, they reliably used the categories to predict social interactions. Children predicted that agents would refrain from harming (e.g., hitting, teasing) members of the agents’ own category, and instead would direct harmful actions toward members of contrasting categories. Children aged 3–5 did not use the categories to predict nice behaviors; however, they predicted that agents would engage in nice behaviors (e.g., sharing, hugging) toward members of their own and other categories equally often. (Reliable predictions of within-category nice behaviors developed around age 6.)

This pattern is consistent with the proposal that children treat some social categories as marking people who are obligated to one another. Harming violates social obligations; thus, children predict that agents will refrain from harming people with whom they share category membership. Nice behaviors—although positively valued—are not obligated (Knobe, 2010); thus, a basic intuitive theory that categories mark people who are obligated to one another does not support predictions about these behaviors. In further support of this interpretation, Rhodes and Chalik (in press) found that 4-year-olds evaluate harm among members of the same category as wrong, regardless of whether there are rules in place prohibiting the harmful actions, suggesting that they view members of the same category as intrinsically obligated not to harm one another. In contrast, children’s evaluations of harm between members of different categories depended on the presence of explicit rules, suggesting that they view intrinsic obligations not to harm as stopping at category boundaries.
Providing further evidence of this second intuitive theory, Shutts et al. (in press) found that preschool-age children use racial categories to predict social relationships, but not individual preferences. Also, Kalish and Lawson (2008) found that children expect novel social categories to be characterized by distinct obligations, but not distinct psychological properties.

In contrast with the substantial input required for children to treat social categories as natural kinds (reviewed above), very limited input is needed to trigger children’s use of categories to predict social interactions. In one condition of Rhodes (2012), 3-year-olds did so robustly (more than 70% of the time) based only on labels and shirt colors. Thus, children readily map their intuitive theory that categories mark people who are obligated to one another onto new categories they encounter, without the need for additional linguistic input or cultural experiences. In addition to these novel categories, children also use familiar social categories in this manner, including those based on language differences (Rhodes & Chalik, in press) and race (Rhodes, in press; see also Shutts et al., in press). Thus, children appear to apply their theory that social categories mark obligations much more broadly than their theory that certain social categories are natural kinds.

**REFERENCES**


**SUMMARY**

Children’s social categories provide a window into the abstract theories they use to make sense of a highly complex social world. Children rely on at least two intuitive theories to make sense of this environment. Understanding how children map each of these theories onto categories across development and use them to understand and predict human behavior are critical to our understanding not only of conceptual development but also of the development of a range of critical social phenomena.


