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The conceptual structure of social categories: The social allegiance hypothesis

Marjorie Rhodes

New York University

Social categorization plays a critical role in early social cognition, influencing memory (Shutts & Kinzler, 2007), social inferences (Diesendruck & haLevi, 2006), preferences (Kinzler, Dupoux, & Spelke, 2007), and behavior (Rhodes & Brickman, 2008). The early emergence of these category-effects is particularly noteworthy given the great amount of variability in social categorization. People are categorized in numerous ways (e.g., based on gender, race, personality, interests, language, religion, sports teams, hair color, height; Bigler & Liben, 2007), and these categories vary in the extent to which they are informative beyond the criteria used to define them. For example, gender categories have implications for a range of inferences about biological, social, and psychological properties (Taylor, Rhodes, & Gelman, 2009); in contrast, categories based on hair color are relatively uninformative.

To make sense of this variability, when children confront a new way of categorizing people, they must distinguish categories that capture fundamental information about identity from those that are less informative. This chapter presents a proposal regarding the conceptual framework that children rely on to solve this problem. This proposal—referred to as the social allegiance hypothesis—asserts that children attribute special status to cooperative social allegiances, such that they view categories that are defined by distinct allegiances as informative, fundamental components of identity. Evidence supporting the social allegiance hypothesis will be reviewed, including evidence that children view cooperative allegiances as (a) fundamental and informative components of identity, (b) determining unique moral obligations, and (c) conferring membership in social kinds. Subsequently, the process by which allegiance information could contribute to social categorization across development will be discussed, and the social allegiance hypothesis will be compared to several theoretical alternatives.

### **Evidence of the conceptual status of cooperative social allegiances**

The work summarized below involves preschool-age children (ranging in age from 3-6 years). The preschool years provide an opportunity to examine children's earliest beliefs about social categories, before exposure to formalized schooling or to a great deal of group-based experiences. In all of this work, children are introduced to novel categories of people. The novel categories are marked visually (by shirt color) and are given novel labels ("Flurps" and "Zazes"). While holding these perceptual features constant, different conditions vary the extent to which the categories are described as reflecting distinct cooperative allegiances.

### **Children view cooperative allegiances as fundamental and informative**

Rhodes and Brickman (2011) provide evidence that children view groups defined by distinct allegiances as fundamental and informative components of identity. In this work, children were introduced to two novel categories. In some conditions, the groups reflected distinct allegiances; each group was engaged in within-group cooperative activities directed towards a goal, and the goals of the two groups were mutually exclusive (e.g., each group wanted to get a resource, and there was only enough for one group to succeed). Thus, these categories marked groups of people with distinct allegiances. In other conditions, the groups were described as engaging in identical behaviors, but there was enough of the resource for both groups. Thus, the groups had a shared (non-mutually exclusive) goal, and the categories did not reflect patterns of distinct allegiances (i.e., having an allegiance to one group did not mean that one could not also have an allegiance to the other group).

Describing the groups as marking distinct allegiances dramatically influenced preschoolers' inferences. Children in the distinct allegiances conditions viewed category membership as stable (i.e., as a permanent, unchangeable component of identity), whereas children in the non-distinct allegiances conditions did not. Also, children in the distinct

allegiances conditions viewed category membership as playing an explanatory role in individual behavior. For example, in response to the question, “Why should a Flurp share toys with another Flurp?”, children in the distinct allegiances conditions responded by referencing category membership (e.g., “Because they are both Flurps.”) In contrast, children in the non-distinct allegiances conditions referenced general social obligations (e.g., “Because it is nice”).

Children in the distinct allegiances conditions were also more likely to predict that category membership would constrain individual behavior. Children in these conditions responded that group members should help members of their own group (not members of the other group), and that it might be acceptable to harm a member of the other group (but not a member of one’s own group). In contrast, children in the non-distinct allegiances condition relied on categories to guide their inferences in a much narrower manner; they responded that individuals should help their own group but could also help the other group, and said that it was unacceptable to harm, regardless of group membership.

### **Children view cooperative allegiances as determining unique moral obligations**

Recent work suggests that preschoolers also use cooperative allegiances to understand moral obligations, such that they view moral prohibitions against harming as applying more strongly among members of the same allegiance-based group. For example, when preschoolers were asked to predict when harmful actions (e.g., stealing a toy, hitting, social exclusion) would occur, preschoolers expected harm to occur more often between members of different allegiance groups than between members of the same group. Children also explained moral infractions that occurred across group lines by appealing to group membership (e.g., “Why did a Zaz steal a toy from a Flurp?” “Because he’s a Zaz, but he’s a Flurp... They’re not the same kind”), whereas they explained moral infractions that occurred within groups by appealing to individual moral

shortcomings (e.g., “Why did a Zaz steal a toy from a Zaz?” “Because he’s a very mean boy”).

Also, on an implicit evaluation task, preschoolers evaluated harmful actions that occurred among members of the same group more harshly than harmful actions that occurred between members of different groups. In all of these studies, children’s moral thinking varied by group membership only when the groups were defined as cooperative allegiances; they did not do so when groups were perceptually marked and labeled but were not characterized by within-group cooperation.

### **Children view cooperative allegiances as conferring membership in social kinds**

Another recent set of studies (Rhodes, Brickman, & Gelman, 2009) examined whether children use cooperative allegiances as a basis for categorization. This work used a “switched-at-birth” method (Hirschfeld, 1995). Children were introduced to two novel groups, were told that a baby was born to parents from one group but raised by parents from another, and were asked to predict the category membership, physical properties, and novel behavioral properties of the adopted child. Thus, children must determine whether membership in a novel social kind is determined by birth (and thus should match the birth parents) or by participation in activities with the adoptive family (and thus should match the adoptive parents). Across conditions, this study varied whether the novel groups were defined by patterns of distinct allegiances (i.e., cooperative allegiances working towards group-specific goals), or in control conditions, by distinct social practices (i.e., as groups with different customs and preferences).

Figure 1 presents the probabilities of adoptive parent predictions, separately by condition and property type. There were four key findings. First, children expected the child to take on the category membership of the adoptive parents, indicating that they viewed kind identity as determined by participation in a social group (instead of by birth). Second, children made these inferences more strongly when the groups were defined by distinct allegiances, as compared to

by distinct social practices, indicating that they viewed cooperative experiences as particularly important types of social experiences for determining category membership. Third, only when the groups were defined by distinct allegiances, children used the categories to make inferences about novel behavioral properties. Fourth, although children expected category membership and behavioral properties to be determined by the adoptive parents, they expected physical properties to be determined by birth. Interestingly, children made differentiated predictions about physical properties and category membership even in a follow-up condition in which the two groups differed in skin color. Thus, children predicted that individuals would have the skin color of the birth parents but the category membership of the adoptive parents. Together, these data suggest that children prefer to base categorization decisions on participation in a cooperative allegiance, rather than on birth or physical features.

### **Cooperative Allegiances and the Development of Social Categorization**

The studies summarized above document that children view allegiance patterns as indicating fundamental and informative social categories. How could attributing special conceptual status to social allegiances contribute to the development of social categorization? Cosmides and colleagues (2003) have proposed that because allegiances are often not directly observable, people track observable markers that predict allegiance patterns, which can include categorical indicators like race, language, religion, and so on, depending on one's environment. Building on this work, the social allegiance hypothesis predicts that the development of social categorization proceeds as children identify particular markers as predictors of social allegiances in their environment, and then view those markers as informative criteria for categorization. Within this framework, the development of social categorization is dependent on particular types of input, and is flexible across time and contexts.

## **Comparison to Theoretical Alternatives**

### **Domain General Accounts**

Domain general accounts of categorization emphasize the role of general features—such as perceptual similarity and labeling—to account for why children view some categories as more informative than others (see Sloutsky & Fisher, 2008). In the present work, these features (e.g., perceptual markers, linguistic labels) were held constant across conditions. Thus, differences in general category salience cannot explain why children viewed the novel categories as more informative when distinct allegiances were emphasized. Nevertheless, these features undoubtedly play an important role by allowing children to track and recognize category members. Thus, the features identified by domain general accounts contribute to the development of social categorization—by facilitating category learning and recognition—yet cannot fully explain why children view some categories as more informative than others.

### **Prepared Categories**

Prepared categories proposals suggest that children are predisposed to view certain social categories (e.g., gender, race, ethnicity, linguistic groups) as fundamental and informative (Gil-White, 2001; Kinzler et al., 2007). From this perspective, children are prepared to see particular categories as meaningful because these categories served critical organizing roles in human societies throughout the course of human cognitive evolution. In contrast, the social allegiance proposal does not require that any particular categories be prepared for; instead, categories take on significance if they are experienced as markers of allegiance patterns in one's environment.

Yet, some blending of the prepared categories and social allegiances proposals is possible. For example, children may be predisposed to view some categories as informative (e.g., gender and age, due to their special significance in organizing patterns of human reproduction),

whereas other categories (e.g., race) may take on significance through the processes described by the social allegiance proposal (cf. Kurzban, Tooby, & Cosmides, 2001). This distinction maps on to patterns of developmental and cross-cultural variability in social categorization. For example, Rhodes and Gelman (2009) found that preschoolers view gender categories as fundamental, even in communities where adults have more flexible gender beliefs, suggesting that the effects of cultural input on children's beliefs about gender may be limited. Yet, they also found that children view race as fundamental only later in childhood, and only in some cultural contexts, suggesting that racial categories depend on a more protracted and input-dependent developmental process.

### **Social Essentialism**

Social essentialism suggests that the development of social categorization is guided by beliefs that categories are defined by intrinsic, stable qualities (the category "essence"; Gelman, 2003). In some descriptions, this essence has been described as determined by birth (Hirschfeld, 1995). Thus, just as children assume that a tiger is a tiger because it inherited a "tiger essence," children also assume that a person is Irish, for example, because he inherited an "Irish essence" (Atran, 1990). On this account, children will construe categories that fit their essentialist intuitions (e.g., those in which membership appears to pass from parents to children) as fundamental and informative social kinds.

The data described above from Rhodes et al. (2009) are inconsistent with the proposal that young children view social category memberships as necessarily determined by birth. Yet, there are several ways that the social allegiance proposal and social essentialism might be integrated. For example, other accounts of social essentialism assert that essentialism may not require the belief that membership is determined by birth (Gelman & Hirschfeld, 1999); rather,



people may think broadly about how the essence is acquired. Thus, one possibility is that individuals believe that participating in cooperative allegiances is a process by which individuals obtain the category essence. From this perspective, the social allegiance hypothesis and social essentialism speak to different components of social categorization: children attend to allegiance patterns to identify informative categories, but once these categories are identified, children represent them in an essentialist manner. Alternately, social essentialism and the social allegiance hypotheses might apply to different categories. For example, social essentialism may best describe the ways that children represent some categories (e.g., gender categories) and the social allegiance proposal may best describe how they represent other categories (e.g., team memberships, cultural groups).

### **Conclusions**

Understanding the development of social categorization has been a challenge for cognitive and developmental psychologists. Theoretical accounts must describe a conceptual system that is flexible enough to allow for great variability in social categorization across contexts and historical time, yet constrained enough to allow for the rapid acquisition of social categories in early childhood. The social allegiance hypothesis fits both of these criteria. Thus, a promising area for future work will be to examine how attention to cooperative allegiances drives the development of social categorization across childhood.

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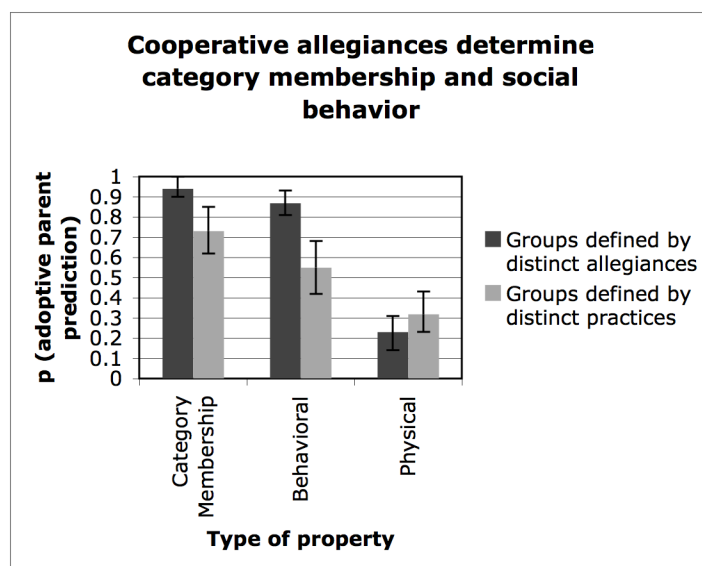


Figure 1. Probabilities with 95% CIs of adoptive parent predictions, Rhodes et al. (2009).