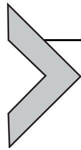

CHAPTER ELEVEN

Intuitive sociology

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Abstract

How do humans intuitively understand the structure of their society? How should psychologists study people's commonsense understanding of societal structure? The present chapter seeks to address both of these questions by describing the domain of "intuitive sociology." Drawing primarily from empirical research focused on how young children represent and reason about social groups, we propose that intuitive sociology consists of three core phenomena: social types (the identification of relevant groups and their attributes); social value (the worth of different groups); and social norms (shared expectations for how groups ought to be). After articulating each component of intuitive sociology, we end the chapter by considering both the emergence of intuitive sociology in infancy as well as transitions from intuitive to reflective representations of sociology later in life.

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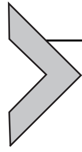


1. Introduction

Psychologists often divide commonsense cognition into components corresponding to familiar academic disciplines. A great deal of commonsense cognition research has focused on the natural sciences, including intuitive biology (e.g., Carey, 1985; Hatano & Inagaki, 1984) and intuitive physics (e.g., McCloskey, 1983; Spelke, Breinlinger, Macomber, & Jacobson, 1992). Of course, psychologists have also spent time researching people's commonsense understanding of psychological phenomena—intuitive psychology (e.g., Heider, 1958; Wellman & Gelman, 1992). More recently, other social science fields have captured interest, especially sociology (e.g., Hirschfeld, 2013; Rhodes, 2012). Mirroring their academic disciplinary counterparts, it is often easier to define the phenomena of relevance to the intuitive natural sciences than it is to define the phenomena of relevance to the intuitive social sciences. Roughly, we can agree what intuitive physics and intuitive biology involve (Shtulman & Walker, 2020; Wellman & Gelman, 1992). Intuitive sociology[a] is less intuitive this way.

For a field to come together there needs to be a focus on a core set of phenomena, and a sufficient empirical base over which to develop theories of those phenomena. Intuitive psychology came together as a topic of study with an agreement on the central phenomena. Theory of mind (Premack & Woodruff, 1978)—with its focus on how people represent, reason about, and act on mental states—defined a field and motivated a set of research programs (e.g., Baron-Cohen, 1995; Call & Tomasello, 2008; Gopnik & Meltzoff, 1994; Saxe & Kanwisher, 2003; Wellman, 1990; Wimmer & Perner, 1983). There were strong theoretical motivations for focusing on theory mind (drawing on philosophy of action; Dennett, 1978) as well as strong empirical foundations (research on perspective taking and metacognition; Flavell, 1985). Given the volume of studies referring to "intuitive sociology" (or "naïve sociology")[b], it seems we may have a substantial empirical base for defining a field. Is there a central set of phenomena

[a] The discipline of sociology is principally concerned with understanding the structure of society, hence our (and others') adoption of the phrase "intuitive sociology." In using this term, we of course do not deny that psychologists—especially social psychologists—also study social structure, including group representations and processes.

[b] We will refer to commonsense sociology as "intuitive sociology" throughout this piece. By intuitive, we mean to capture thinking about social groups that comes naturally to those without formal training in the academic discipline of sociology. Other researchers have used "naïve sociology" (or, less commonly, "folk sociology," or "lay sociology") to refer to similar ideas.

underlying this base? We believe there is, or at least that we can begin to describe the beginnings of such a set.

As used in the literature, intuitive sociology is centrally concerned with social groups (Hirschfeld, 1999, 2001, 2013; Rhodes, 2012; Shutts, 2015). While intuitive psychology is about individuals, intuitive sociology is about classes or kinds of individuals. Intuitive psychology in its theory-of-mind form has a clear formulation for what counts as an individual: this is a theory of rational agents (Wellman, 1990). Intuitive sociology could be about groups of rational agents, but that characterization seems too broad. There are an infinite number of classes of rational agents, only some of which count as social groups. Foundational to intuitive sociology is distinguishing social groups from "mere" collections of individuals.

We propose that intuitive sociology consists of three inter-related sets of beliefs or representations of social groups: types (identification of relevant groups and their attributes), value (differential valuation of groups), and norms (shared expectations for how groups ought to be). In the remainder of this introduction, we characterize types, value, and norms, and explain why we take these to be central phenomena of intuitive sociology. We then review the empirical literature on the early origins and later developments of these phenomena. Throughout the piece, we will raise—and, when possible, address—questions of origin and specificity: Which aspects of intuitive sociology are innate and which are learned? What mechanisms underlie learning?

1.1 Central components of intuitive sociology

1.1.1 Social types

Intuitive sociology includes beliefs about the significant groups in society. People are able to: (1) identify social groups in their environments (e.g., jocks, nerds) and (2) form expectations about the features those groups (and their members) display (e.g., jocks are dumb but strong; nerds are smart but awkward). Of course, identifying categories and predicting features of category members are general features of category learning. Yet, in the realm of intuitive sociology, there are certain clusters that seem to function as more than the sum of their parts and that play foundational roles in guiding our social thinking. The classic example of a special social group is gender, which organizes myriad expectations about social life. Thus, a central question for psychological research on intuitive sociology is whether there are special mechanisms for ascribing significance to social groups. For example, what leads children to identify a social group as meaningful in the first place?

Basic associative learning is one mechanism, but there may be social-specific learning mechanisms (e.g., "coalitional computation" Kurzban, Tooby, & Cosmides, 2001). How does learning about social groups go beyond a faithful record (albeit with the possibility of skewed data from media or ideology)? Are there social-specific expectations and interpretations of observed associations?

1.1.2 Social value

Part of an individual's intuitive sociology is a system of valuation of groups—knowing which groups are good or bad, important or unimportant, privileged or stigmatized (e.g., jocks are the dominant, popular group in school and nerds are the low-status group). Where do such notions originate? It is likely that beliefs about a group's characteristics and the evaluation of that group will interact (e.g., that disfavored groups will be assumed to have more negative features and vice versa; see Nisbett & Wilson, 1977). However, value is distinct from learning social types; a group's value is not simply a summary of its features. For example, "stigma" is more than just a summary of the negative attributes associated with a social group (see Coleman, 1986). An account of the development of intuitive sociology should address the origins of this kind of valuation. Where does social value come from? When do children begin to attach different value to social groups?

1.1.3 Social norms

The third element of intuitive sociology is a set of prescriptive expectations about social groups. There are certain features that social groups (and their members) ought to possess, ways they should behave, and standards for how they interact with other groups. Nerds have no business running for class president; jocks should not be studying on a Saturday night. It is wrong, an error, for certain groups to behave in some ways, but right, appropriate, for other groups to behave in those same ways. These standards apply to the self and not just to others; at least to some degree, people are motivated to adhere to normative expectations for their group. Sociologists (e.g., Goffman, 1959; Mead, 1934) have emphasized the performative, role-like, character of social groups, but when and how do people come to see groups as prescriptions for proper behavior? Sociologists have also often argued for a sharp discontinuity between human and non-human conceptions of society (e.g., Durkheim, 1982). Norms for evaluating one's own and others' behavior are prime candidates for the source of this discontinuity. Are there uniquely human mechanisms underlying this aspect of intuitive sociology?

1.2 Individuals vs groups

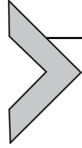
A common thread running through each of the three components of intuitive sociology is the relation between individual and group. We take the subject matter of intuitive sociology to be kinds or classes of social actors. But, of course, people form beliefs about types of individuals (e.g., personality), ascribe differential value to individuals (e.g., friends), and enter into normative relationships with individuals (e.g., promises). It is an open empirical question whether these processes are the same or different for groups and for individuals. Is there a clear boundary between an intuitive psychology of individuals and an intuitive sociology of groups? What does seem clear is that negotiating between individuals and groups is part of the process of acquiring an intuitive sociology. Developing an intuitive sociology requires distinguishing information relevant to an individual (John is nice) from information relevant to a group (boys are nice). What are the mechanisms that lead people to form representations of groups rather than individuals?

A second aspect of this individual vs group dynamic is a distinction between idiosyncratic and shared representations. Each learner will have their own reactions to their unique social experiences. However, it is also critical that they acquire the common, shared, representations of social groups. While any one individual may have had overwhelmingly positive interactions with strangers, the conventional representation of "stranger danger" is part of people's intuitive sociology. As important as recording one's own actual experience, is recognizing the "standard," conventionalized, representations of social groups. Developmentally, this aspect of intuitive sociology points toward mechanisms of social learning (e.g., testimony, Harris, 2012) rather than individual learning (e.g., associative or statistical learning). How do children balance their own (direct) experience of social groups with established (communicated) beliefs?

1.3 The rest of the chapter

Having previewed what we see as the three key components of intuitive sociology, we next to turn the developmental literature relevant to each component. We begin our chapter by focusing on preschool and young school-age children. Academic sociologists take their subject matter to be social meanings, linguistic representations of social information. While we are not committed to defining the subject matter of intuitive sociology in this way, many of the key distinctions and constructs are at least much more

evident when you can talk to children about what they think. We then turn to the literature on infancy and consider what is known about precursors of intuitive sociology in childhood. Finally, we briefly consider research focused on adolescence and the development of more critical perspectives on social life. The very end of the chapter considers open question for future research on intuitive sociology.



2. Childhood

2.1 Social types

The average preschooler knows a lot about the structure of their social world. They know about some of the relevant social groups in their society (e.g., girls, Hindus) and what kinds of properties are associated with members of those groups (e.g., what girls and Hindus look like, what girls and Hindus know and care about, how girls and Hindus spend their time; e.g., Ellwood-Lowe, Berner, Dunham, & Srinivasan, 2019). Over their lifetime, they will of course come to know more about more social groups: Most 4-year-old children do not have a concept of "assistant professor," but most university students do. Rounding out social knowledge is a continuous process throughout the lifespan (see reviews of *stereotype* development: e.g., Martin & Ruble, 2010). The same process of acquiring more and more information about the world occurs for non-sociological content as well. In this review we will focus primarily on development of beliefs about foundational social types. What leads children to pick out some groups as significant in their social environment? How do children learn the important features those groups and their members display? The focus will be on prediction—what do we learn about someone by knowing their social group? Which groups are most informative?

2.1.1 Identifying social types

Basic principles of associative learning will lead children to identify clusters in the class of people they encounter. In the developmental literature such clusters are often characterized as "appearance-based," the idea being that young children depend on readily apparent features to form categories and detect category members (Keil & Batterman, 1984; Sloutsky, 2003). The classic example in the social category literature is young children thinking that anyone with long hair and a skirt is a girl (Kohlberg, 1966). These are *stereotypes* or sets of characteristic properties a young child could notice and associate with the term. Later, as children become more knowledgeable,

and less bound to immediate experience (Springer, 2001), they come to appreciate deeper features truly central to the category.

The question of when and how deeper features come to guide children's thinking remains somewhat of an open issue (e.g., the contrast between "theory-based" and "similarity-based" classification, Feeney & Wilburn, 2008; Gelman & Medin, 1993; Kalish & Thevenow-Harrison, 2014; Sloutsky, 2010; Smith, Jones, & Landau, 1996). We will address the question of whether basic perceptual and associative learning accounts for early social representations further in Section 3. We note here, however, that the general consensus is that although children are certainly capable of noticing perceptual clusters in their environment (e.g., that three people share the same skin color), such clusters are neither necessary nor sufficient for them to infer the presence of a rich social category (e.g., Baron, Dunham, Banaji, & Carey, 2014).

Perceptual similarity does not, directly, distinguish between meaningful and arbitrary groups. Social psychologists study this distinction in terms of "entitativity"—the idea that some collections of individuals seem groupier than others (Hamilton, Sherman, & Lickel, 1998; Lickel, Hamilton, & Sherman, 2001). A smaller body of literature has addressed children's entitativity judgments. Five-to-six-year-old children distinguish among various types of social collectives even without linguistic cues such as labels. Thus, people who are building a house together are judged to be more of a group than those waiting for trams together (Plötner, Over, Carpenter, & Tomasello, 2016). There is some evidence that the basis for entitativity judgments may shift over development, with children focusing on the level of interaction between group members and adults focusing on the importance members ascribe to the group (Svirydzenka, Sani, & Bennett, 2010). One other source of entitativity may be coalitional interactions, or patterns of cooperation and competition among people (e.g., Jordan, Brey, Kalish, & Shutts, 2015; Kurzban et al., 2001; Rhodes & Brickman, 2011). For example, Jordan et al. (2015) found that aligning perceptual features of individuals with cues to coalitions (e.g., showing children that people wearing red hats collaborate with another and compete with people wearing green hats) led children to use perceptual features to make group inferences. We address coalitional cognition in greater detail in Sections 2.3 and 3.

A central way that children learn about the groups in their environment is through language and communication. The most direct implication of learning about social categories through language is broadened exposure. Children can hear about many categories they many not ever encounter

in person. More specifically, linguistic structures help pick out significant kinds via labeling. Young children are sensitive to the syntactic framing of a class: referring to someone as "a carrot-eater" vs "someone who eats carrots whenever they can" has important cognitive consequences (Gelman & Heyman, 1999). A label is a signal that a set of individuals is more than an accidental collection; there is a meaningful group about which there is likely more to learn (LaTourrette & Waxman, 2019; Waxman & Markow, 1995; see Lupyan, 2012). For example, Waxman has found that introducing an individual person with a label (e.g., "This one is a Wayshan") leads children to infer that other people who look like that target share properties in common with the target (Waxman, 2010). Further, Hirschfeld (1996) has argued that children learn about social categories primarily through communication (e.g., racial labels) rather than by observing clusters of correlated attributes.

2.1.2 Learning about the properties of social groups

Encountering social information in linguistic form changes not just the quantity, but the quality of that information as well. Social categories become distinct objects, not just collections of individuals. This point is most evident in work on generic language (Gelman & Roberts, 2017; Leslie, 2008). Generics are understood to be statements about categories themselves, as distinct from their instances. So, for example, "Doctors deliver babies" is a true statement about doctors even though most doctors do not deliver babies (and many babies are not be delivered by doctors). Generics represent knowledge about the category or kind rather than statistical expectations about associations (Brandone, Gelman, & Hedglen, 2015). There may be many attributes just as statistically associated with being a doctor as "deliver babies" (e.g., "own swimming pools") that are nonetheless not part of the category representation. Extra-statistical knowledge can involve beliefs about the conditions for membership or the centrality of features in various categories. Verbal toddler and preschool-age children distinguish between more and less necessary attributes: knowing about medicine is more important for being a doctor than is giving out lollipops, even though both might be equally associated (frequent) in children's experience (Kalish & Lawson, 2008). Errors in centrality judgments are often diagnostic of *stereotypes*. For example, thinking that women cannot be doctors is a mistake about the central attributes.

The representations involved in generic language and centrality judgments may be products of "psychological essentialism," the belief that there are deep causal properties determining category membership

(Gelman, 2005; see also Cimpian & Salomon, 2014). While psychological essentialism is a general orientation to categories, it seems particularly relevant to intuitive sociology. An essentialist view of social categories implies they are immutable and fixed at birth. Race and sex are classic essentialized categories. On an essentialist view, race is determined by the biological qualities of one's parents, and cannot be changed over the course of one's life. Young children may be disposed to essentialize social categories, extending this model beyond adults (of their culture). For example, young children seem to essentialize language: A baby will grow up speaking the language of its parents regardless of the environment (Hirschfeld & Gelman, 1997; see also Kinzler & Dautel, 2012). Figuring out the appropriate scope and limits of essentialism (matching one's cultural practices) is a protracted process—we should expect children to make "errors."

A second feature of essentialized categories is the expectation of inductive richness (Gelman, 2005). Categories indicate important similarities among members, and important differences across categories. The underlying essence produces characteristic properties. Members of the same category are expected to be alike in ways both known and unknown. This expectation underlies another feature of *stereotypes*: the tendency to generalize to a group from observations of an instance. If underlying essences produce attributes of category members, then observing an attribute of one member suggests it will be present in others sharing that essence. If one girl likes pink dresses, others will as well. However, expectations of inductive richness can also influence beliefs about underlying causes. If all girls are very similar to each other, there must be something that makes them that way. Causal structure and inductive richness are mutually reinforcing.

Although young children may be generally disposed to essentialize social types, they are sensitive to evidence in their environment. For example, children show stronger essentialism when their parents use more generic language (Rhodes, Leslie, & Tworek, 2012). Whether and how a category is labeled affects beliefs about its inductive significance (Gelman & Heyman, 1999): Children are more likely to *stereotype* and generalize a category used to organize their social environment. For example, hearing "First the girls line up, then the boys" seems to convey there is something generally important about this distinction that will be informative beyond line behavior (Bigler & Liben, 2007). The particular social context a child encounters will determine which groups are seen as important, inductively rich, and essentialized (e.g., race in the U.S., caste in India; Mahalingam, 2007). For example, parents' differential essentializing of ethnicity or religion predicts their

children's tendencies to use those categories as the bases for property inferences (Segall, Birnbaum, Deeb, & Diesendruck, 2015). The types of intuitive sociology have functional significance—indicating different roles, responsibilities, and expectations. In Section 2.3, we return to this idea and note that social functions may pick out a very different set of social types than those defined by intrinsic causes or essences.

2.1.3 Types and individuals

In addition to figuring out which groups are really important types, developing an intuitive sociology also requires distinguishing information about types from information about individuals. This is the "boundary" between intuitive sociology and intuitive psychology discussed earlier. Children are actively engaged in learning about the individuals in their environment, whether forming representations of unique personalities, or figuring out how specific situations influence specific behaviors. While this challenge holds for non-social content as well (e.g., learning about dogs or about Fido), individual humans are, arguably, more complex and interesting than individual non-humans. For social information, the individual is an attractive and plausible level of organization.

When encountering a new fact about an object, a learner must decide how that fact generalizes: is it true of just this individual (in this context) or for others of a like kind (and if so, which kind)? Young children are more likely to generalize properties from one individual to someone who shares a group label than to someone who shares features (e.g., shared preferences or appearance; Diesendruck & HaLevi, 2006). The way an individual is described will influence this generalization: referring to a person with a proper name implies the property may be unique while using a category label may promote generalization to other objects of the same kind (Riggs, Kalish, & Alibali, 2014). Children also use patterns of consistency and consensus to attribute features to groups or individuals (Riggs, 2019; see Kelley & Michela, 1980). Although language and statistical patterns may provide some guide, these will not be perfectly reliable. Preschool-age children seem particularly apt to generalize from one category member to another and may even expect more consistency between group members than in the same individual across time (Kalish, 2012; Lawson & Kalish, 2006). Somewhat older, school-age, children are more likely to see individuals as having distinctive and stable traits that can be used to predict their behavior (Rholes & Ruble, 1984; Ruble & Dweck, 1995). It is important to note that the shift from being more category-focused to being more

individual-focused may reflect culturally specific forms of socialization. For example, individualistic cultures encourage explanations in terms of unique personalities (Miller, 1997).

We may expect children to make many mistakes in generalizing social information. Another feature of *stereotypes* is that people ascribe to the group feature that are only observed (or true) for an individual. For example, some social categories are obligatory, automatically encoded (Kurzban et al., 2001; Weisman, Johnson, & Shutts, 2015). Thus, children may notice gender and use it as the basis for generalizing social information even in the absence of explicit labels. Seeing Joe, a blonde American boy, behave in a certain way may lead to the expectation that other boys will act the same way (rather than other blonde children, or just Joe). Whether or not social categories are particularly difficult and complex in this way is not really clear. However, generalization is certainly seen as more problematic for social than non-social categories. People rarely worry that their child has mistaken a feature of one chair as true for all chairs, or that they have mistaken a property of wooden things for a property of chairs. But this kind of error or confusion is central to socialization around social categories. Thus, there are many studies aimed at disabusing children of the notion that certain properties are true of all members of a category (e.g., "counterstereotyping"; Abad & Pruden, 2013; Gonzalez, Steele, & Baron, 2017; King, Scott, Renno, & Shutts, 2020; Lenton, Bruder, & Sedikides, 2009).

The challenge of attribution illustrates a second aspect of the individual-group distinction in intuitive sociology: To what extent are children forming representations of their own experience vs acquiring conventional knowledge? Some of the failures or limitations of interventions designed to reduce prejudice and stereotyping (Aboud et al., 2012) can be understood in light of this distinction. A child might learn that individuals they have encountered have a particular property (e.g., these out-group members are nice). That specific experience is not, directly, incompatible with the general, shared *stereotype* (out-group members are mean; "subtyping"; Hewstone, 1994). This is another feature of generic language: The truth of a generic does not depend on its accuracy for specific instances (Leslie, 2008). Children are biased to attend to information that seems general and shared, rather than idiosyncratic and unique (Sabbagh & Henderson, 2007; Sabbagh & Shafman, 2009). Efforts to undo *stereotypes* may run against children's tendencies to learn the rule rather than the exceptions. Put another way, for a novice social learner it will be more productive to understand the general case (doctors do X…) and leave it to experts to worry about the details (…but my doctor does Y; see Kalish, 2012).

2.1.4 Summary

Young children's intuitive sociology contains beliefs about which groupings of individuals are important and meaningful—the types of people. Such beliefs are influenced by a number of factors including: perceptual salience, linguistic marking, essentialist intuitions, social utility, and inductive potential. Which social types end up as part of intuitive sociology will likely depend on the confluence of factors operating in a specific cultural/historical context. Some social types are over-determined, supported by almost all mechanisms of type generation (e.g., gender). Others social types are more contingent, or borderline. For example, some social groups may be linguistically marked, but not particularly salient or inductively rich (e.g., political party affiliations for young children). It is also very much an open question whether there are innate predispositions toward some social types. For example, are babies prewired to divide the world by gender, or are they born into a gendered world? We address the nature/nurture question further in Section 3.

A second major question remaining from this review is whether (or how) social types are distinct from non-social types. Non-social types also derive from direct and communicated experience, intuitions about causality and inductive richness, and practical utility. It is likely the differences are ones of degree rather than kind (e.g., essentialism may be more powerful for social content). One area of intuitive sociology that may be somewhat distinctive is the assessment of the types identified. Children learn about many types of things, but types of people are not just useful for prediction. The typologies of intuitive sociology are imbued with value: There are better and worse types.

2.2 Social value

From an early age, children are in the business of evaluating social groups (see Rhodes & Baron, 2019 and Skinner & Meltzoff, 2019, for recent reviews). Preschool-age girls prefer to play with girls over boys (Maccoby, 1998; Shutts, Roben, & Spelke, 2013); young English children believe English people have more positive qualities than American and German people do (Barrett, Wilson, & Lyons, 2003); and American children think dentists are more important than dental hygienists (Liben, Bigler, & Krogh, 2001). What causes children to think some groups are better or more important than others? Why is membership in some groups more desirable than membership in others?

Ascribing value to groups—including ranking some above others—is partly a natural extension of learning about properties and *stereotypes* (i.e., see previous section). To the extent that children value a particular property and believe members of a group have that property while members of another group lack it, they might value the former over the latter group. For example, children who learn (via direct observation or via testimony from another person) that members of one group are nice while members of another group are mean evaluate the former group more positively than the latter (Charlesworth, Kurdi, & Banaji, 2020; Kang & Inzlicht, 2012). This kind of relative evaluation based on attributes is perfectly general to non-social types as well: Candy is a better treat than broccoli; hamsters are better pets than biting flies. In the case of social groups, however, valuation often goes beyond responding to the properties of the individuals in those groups: There is the sense that some social types are better, more important, powerful, legitimate than others—and this sense is not purely a function of learning about groups' specific properties. What are the developmental origins of this kind of social evaluation?

2.2.1 Ingroup favoritism

One source of social value is the ingroup vs outgroup distinction. In general, people are disposed to think of groups they belong to more positively than those to which they do not belong (Brewer, 2017). Although children both like their ingroups and dislike outgroups, ingroup favoritism seems to appear earlier in development and be more fundamental to children's intergroup evaluations (Aboud, 2003; Cameron, Alvarez, Ruble, & Fuligni, 2001). Ingroup favoritism has roots in identity development and the construction of self-concept (Hogg, 2016; Reynolds, 2017). Although researchers originally thought children derived a positive evaluation of themselves from a positive evaluation of their ingroups, modern evidence suggests that the reverse pathway is more likely to be true—that is, children's positive views of themselves lead them to positively evaluate the groups to which they belong (see Dunham, 2018, for review and discussion).

The best evidence that evaluations of social groups are influenced by conceptions of self comes from studies conducted using the "minimal groups paradigm" (Tajfel, 1970). In the minimal groups paradigm (Dunham, 2018; Otten, 2016), participants are assigned to be members of a novel group on the spot (e.g., "you're in the blue group"). In the most "minimal" version of the paradigm, participants never meet or learn anything about the individuals in their group or any other groups. Multiple studies reveal that the

minimal groups paradigm engenders robust ingroup favoritism in children as young as 3 years of age (Dunham, 2018; Richter, Over, & Dunham, 2016): Children who are assigned to the blue group like the blue group better than the red and those assigned to the red group show the opposite pattern of preferences. Mere membership in a group gives that group high value even when the assignment of groups is completely arbitrary and even when children know the assignment is arbitrary (Yang & Dunham, 2019). Further, children's favoring of their minimal group over other groups is evident across multiple measures, not just on measures of their attitudes: Young children will provide members of their novel ingroup with more resources (Sparks, Schinkel, & Moore, 2017) and express more empathy toward novel ingroup members (Masten, Gillen-O'Neel, & Brown, 2010).

Thus, although children can certainly learn that one group is better than another group via processes that are general (e.g., evaluative conditioning; testimony), research on children's reactions in the minimal groups paradigm highlights an evaluative process that seems truly special to intuitive sociology: mere membership. Just belonging to a social group gives that group value—value that is not tied to knowledge of a group's properties. Indeed, children's mere membership in a group actually leads them to infer their group has positive properties (e.g., to think their group is smarter, nicer; Patterson & Bigler, 2006). Further, children's mere membership colors future learning about their group's properties: children will give their ingroup the benefit of the doubt in ambiguous situation (Dunham & Emory, 2014) and will also seek out positive stories about their ingroup (Over, Eggleston, Bell, & Dunham, 2018).

2.2.2 Status hierarchies

Ingroup favoritism provides a powerful answer to why children evaluate some groups more positively than others, but not all of children's differential evaluations of groups can be explained by appeal to ingroup favoritism. As acknowledged earlier, children sometimes favor groups to which they do not belong. Further, at times, children do not exhibit ingroup favoritism—rather, they favor groups that appear to have higher status in their society. A good example of children's sensitive to social groups' differential status comes from classic studies conducted by Clark and Clark in the middle of the 20th century. When the Clarks asked Black children in the U.S. to indicate which dolls—Black or White—were better, Black children often pointed to White dolls rather than Black dolls (their "ingroup"; Clark & Clark, 1947). A common interpretation of the Clarks' findings (as well more

recent, but similar, findings: see Dunham, Chen, & Banaji, 2013; Shutts, Kinzler, Katz, Tredoux, & Spelke, 2011) is that children's seemingly natural tendency to value their own group can be attenuated, or even eliminated, by children's beliefs about their groups' relative position in society (e.g., Rhodes & Baron, 2019; Shutts, 2015).

Some research indicates children can learn about groups' relative positions by simply observing links between groups and salient markers of status (e.g., by observing that members of their group tend have fewer or lower-quality resources than members of another group; see Horwitz, Shutts, & Olson, 2014). Here is another instance of a tension between individual experience and shared social representations. For members of stigmatized groups, there is a conflict between individual processes of self-conception ("my group is good") and messages about conventionalized meanings ("your group is bad"; Banaji, Baron, Dunham, & Olson, 2008; Newheiser, Dunham, Merrill, Hoosain, & Olson, 2014). Such conflict is a cost of stigma: Consistency of self- and shared-representations is a manifestation of privilege.

Research on children's social evaluations has tended to focus on outcomes such a liking, ascription of positive traits, and affiliation (e.g., wanting to be friends; thinking that other people in the same group want to be friends; Martin, Fabes, Evans, & Wyman, 1999; Shutts et al., 2013). Broadly, we can characterize these outcomes as social preferences. But there are other kinds of evaluations, other components of stigma and significance besides preferences. Social psychologists often distinguish three broad classes of motivation: affiliation, achievement, and power (McClelland, 1985; Schultheiss, 2008). While generally understood as motives for self-action, we can also use this typology to consider other forms of social evaluation.

Children are remarkably attuned to an array of cues to power in their environment. For example, children detect individual differences in wealth (resource amounts or resource quality), physical dominance (being larger and/or more physically powerful), decision-making power (getting one's way) and prestige (being admired for one's competence)—and they infer that those higher on each dimension are more likely be powerful or "in charge" (Enright, Alonso, Lee, & Olson, 2020). There is also some evidence that children distinguish among different types or manifestations of status, and further that children's perceptions and reactions to status change over development (Gülgoz & Gelman, 2017). For example, while young children generally prefer individuals who win conflicts, toddlers do not like individuals who win by force (Thomsen, Thomas, Sarnecka, Lukowski, &

Abrayam, 2018); yet, older children like individuals who win fights (Castelain, Bernard, Van der Henst, & Mercier, 2016).

In addition to detecting and representing differences in status between individuals, children also understand that groups can differ in status. Studies discussed earlier comparing levels of ingroup favoritism shown by children from lower vs higher-status racial groups make this point (e.g., Dunham et al., 2013; Shutts et al., 2011). However, research provides evidence that children think about status outside the domain of race and outside the context of affiliation preferences: By age 6, girls are less likely than boys to think that members of their gender ingroup are brilliant, and older children think that "masculine" professions are higher in status (Bian, Leslie, & Cimpian, 2017; Liben et al., 2001; see also Charafeddine et al., 2020). Young children also recognize that age is often correlated with status (e.g., that adults are more powerful, Laupa & Turiel, 1986) and appreciate that the status groups have depends on context (e.g., teachers have more authority than parents at school; Yau, Smetana, & Metzger, 2009).

Although young children are aware of status inequalities among social groups, it is less clear how children react to, or evaluate, such differences. Some research suggests they tend toward "system justification": Observed inequities must reflect some appropriate distinction (e.g., Hussak & Cimpian, 2015). Other work suggests young children apply moral principles of fairness and justice. Systematic inequality between groups is suspect (Rizzo & Killen, 2020). The issues are complex, with some kinds of status discriminations being seen as problematic and others acceptable. We suggest that evaluation of sociological constructs is a place where intuition is especially impacted by formal instruction and explicit ideology. How do people feel about status distinctions? Are social types really predictive? Are norms for proper behavior fair? We discuss this kind of reflective evaluation of intuitive sociological constructs in Section 4.

2.2.3 Summary

Children's intuitive sociology contains beliefs about which groups are better and more important than others. As in other domains, children can form evaluations of category members by attending to their own experiences or by listening to the testimony of others. However, a particularly robust and potentially special mechanism by which children come to evaluate social groups is via their own membership; just belonging to a group makes that group good. In addition to a tendency to favor their own group, children's evaluations of groups are guided by groups' relative social positions, though children do not always favor individuals or groups that are higher in social rank.

A clear conclusion is that social evaluations are not unidimensional—children appreciate distinct aspects of status and hierarchy. Powerful groups are not always the nicest, for example. The implications of status are further complicated by the observer's own social position. In sorting out these implications, it is important to distinguish judgments of status from judgments or expectations of appropriate behavior. People do not aspire to all forms of social status, and high status is not an infallible guide to social evaluations. For example, consider a doctor's office. The doctor has the highest status in terms of power. The nurse may have a higher status in terms of affiliation and warmth. The patient is largely subordinate. Yet, the patient should not act like the nurse or the doctor, nor would they aspire to. Social status is quite different than social appropriateness or correctness. In our final section we turn to this aspect of intuitive sociology: appreciation of social norms.

2.3 Social norms

Formal theories of sociology emphasize the distinctive focus of their field (e.g., Comte, 2009; Durkheim, 1938): Sociology is something other than the study of expectations about patterns of features (social types) and evaluative ratings (social value). Such expectations and ratings are too individual, too psychological, to constitute the subject matter of sociology. On this view, at least two things are missing from our characterization so far. The first is that sociological representations of social categories are shared: I may have my own ideas about what doctors are like and how important they are, but such expectations and evaluations are only sociological to the degree they are common knowledge. Sociological facts are widely shared understandings of social categories. A second characteristic of sociological facts is that they are reflected upon and influential precisely because they are shared. This aspect is emphasized in social role theories (e.g., Mead, 1934; Parsons, 1951). A social category structures people's thoughts and behavior not just as a summary of associations and preferences, but as a kind of standard. Thus, for example, people reflect on the accepted, shared, expectations of the "doctor" category when shaping their own behavior (doctors) or when interacting with others (e.g., patients and nurses). To capture this sense of social categories as *shared standards for behavior*, we will refer to "social norms." A social category provides a shared standard against which one's own and another's behavior can be assessed. People are motivated to follow such standards through mechanisms of internal and external norm enforcement. Understanding the prescriptive norms of one's society is a central part of intuitive sociology.

Formal accounts of sociology have always faced a developmental question: Social roles, facts, and "meanings" were understood to be distinctively human. To the extent sociologists thought about children (see Mead, 1934), there was also the question of how preverbal infants gain access to mature sociological conceptions. The clearest answer to both these phylogenetic and ontogenetic questions comes from the work of Tomasello (2020a, 2020b), who locates the origins of human sociality in capacities for engaging in interactions of shared intentionality. Around 18 months of age (though building on earlier capacities; see Gergely & Csibra, 2003 and Kalish, 2020), humans start to cooperate with each other in ways that require joint perspectives and shared goals. Although infants and non-humans can interact and even cooperate in the service of individual goals (I want to achieve X, so I will work with you to get there), toddlers cooperate in the service of shared goals (*WE* want to achieve X together). Such joint interactions lead naturally to concepts of roles (Tomasello, 2020c): In the service of our shared goal, I will do my part and you will do yours. These roles are shared standards. Each participant understands their own and the other's "part," is motivated to do what is expected of them, and will hold their partner accountable for doing theirs. On Tomasello's account, these cooperative interactions begin as local agreements between individual partners (Tomasello, 2020a). As children gain more experience with cooperative interactions, as they engage in a broader variety with a broader array of partners, they recognize the generality and stability of some of these goals and roles. For example, the cooperative interactions at school are not negotiated afresh each day, but are reliably structured by a set of social roles such as teacher and student.

2.3.1 Norms for social groups and their interactions

A significant body of research on the development of social cognition has focused on children's knowledge of scripts (Fivush, 1984; Lewis, 1989; Nelson, 1981). Scripts are representations of typical patterns of interaction in some context, for example the "doctor's office script." This work, and the term "script," has tended to focus on the sequential structuring of event memory. However, scripts also emphasize the inter-related nature of social categories. A script represents one role in the context of others: The doctor's office script encodes how doctors interact with patients, nurses, and so on. Scripts are often characterized almost as simple mnemonic devices, and contrasted with deeper explanatory knowledge (e.g., Carey, 1985). Indeed, although there is considerable evidence that young children represent typical

sequences of role interactions (e.g., bath time, school routines), there is less work on scripts as shared standards of normative expectations.

Children's representation of normative standards for social groups has been a major focus of work in the context of gender (Eccles, Jacobs, & Harold, 1990; Fagot & Leinbach, 1993; Ruble, Martin, & Berenbaum, 2007), where researchers have distinguished between descriptive *stereotypes* (what people of different gender typically do; see "social types," above) and prescriptive *stereotypes* (what people of different genders can or ought to do; Koenig, 2018; Signorella, Bigler, & Liben, 1993). Gender is a domain of active guidance and sanction: Both children and adults hold strong beliefs about what kinds of traits and behaviors are appropriate for males and females (Bauermeister, Connochie, Jadwin-Cakmak, & Meanley, 2017; Carter & McCloskey, 1984; Mayeza, 2018; Sullivan, Moss-Racusin, Lopez, & Williams, 2018). There is some evidence that negative evaluations of gender nonconformity increase from early to middle-childhood (Carter & McCloskey, 1984). There is also evidence that children view at least gender-linked preferences (e.g., for toys and games) as matters of personal choice outside the scope of regulation by authorities (Conry-Murray, Kim, & Turiel, 2020). It is likely children are acquiring nuanced judgments about just which aspects of gender are prescriptive (e.g., toy choice vs career choice) and what forms of sanction are acceptable (e.g., informal "disapproval" but not legislation by an authority).

Gender does not appear to be a special case. Young children recognize norms as central to many social categories. Doctors have an obligation to care for sick people; brothers are supposed to eat meals with their families (Kalish & Lawson, 2008). They are quick to associate norms even with novel social groups, and tend to expect norms to hold for all members of a given group (Kalish, 2012; Kalish & Lawson, 2008). Norms for social groups are an instance of conventional norms (Turiel, 1989): In contrast to moral principles, understood to be universal, conventional norms only apply to certain kinds of people. For example, Srinivasan and colleagues found that 9- to 15-year-old children in India recognized different norms governing the behavior of Muslims and Hindus, while also recognizing moral principles (avoiding harm) as applying equally to both groups (Srinivasan, Kaplan, & Dahl, 2018). Preschool-age children accept that the rules of a game apply to the group of players, but not members of other groups (Schmidt, Rakoczy, & Tomasello, 2012). Young children seem to be quick to assume that novel behaviors are norms applying to people in virtue of their social group or position (Roberts, Gelman, & Ho, 2017; Schmidt, Butler,

Heinz, & Tomasello, 2016). However, they are sensitive to distinctions between individual preferences and group norms (Riggs, 2020). In sum, the intuition that social groups are governed by normative standards seems to be an early emerging component of intuitive sociology.

2.3.2 Types of social roles

So far we have presented social roles as elaborations of the kinds of social configurations discussed earlier. Children identify groups and their properties (e.g., girls, mothers, doctors) and interpret (some of) those properties as normative expectations of group membership. However, a slightly different perspective is that intuitive sociology is characterized by classes of norms organized functionally or relationally (see Kaufmann & Clement, 2014)—that there are certain basic forms of social interaction governed by characteristic norms. For example, people cooperate with each other or compete with each other. Cooperation and competition are basic forms of social interaction. Knowing how to cooperate and compete is part of intuitive sociology. Indeed, young children have robust intuitions about the "right" way to cooperate and compete. For example, one should preferentially help a fellow cooperator over a member of a competitor group; it is worse to harm a cooperator than a competitor (Rhodes & Chalik, 2013). Intuitions about loyalty, conformity, and support organize expectations for proper behavior toward in-group and out-group members (Rutland, Killen, & Abrams, 2010). The point is that intuitive sociology is less a matter of specific group identities, and more a matter of types of interactions (Kaufmann & Clement, 2014). On this perspective, intuitive sociology concerns not just whether you are a girl, a mother, or a doctor; but also whether you are competing or cooperating, leading or following, buying or selling.

Research on social identities has tended to focus on a core set: Race and gender primarily, but also kinship, age, occupation, nationality, and religion (at least to some degree). Although developmental psychologists have studied a number of relationships, they have not generally theorized about the set or organization of basic types. Attachment theory could be understood as characterizing the intuitive sociology of the caregiver/cared-for relationship (e.g., working models; Bretherton & Munholland, 2008). There is a large literature on the development of children's friendship relations (Dunn, 2004; Fink & Hughes, 2019). An emerging area of study addresses infants' and children's perception and understanding of dominance relations (see Section 2.2.2 above and Section 3 below). However, it is not clear how many distinct types relationship there are, or how they are organized.

Sociologists often refer to Nisbett's (1970) classic typology of social relations: exchange, competition, cooperation, conflict, and coercion. Parsons (Parsons & Bales, 1955) distinguished between "expressive" roles focused on nurturance and well-being, and "instrumental" roles focused on resource acquisition and problem-solving. Fiske (1991) has proposed a four-part organization of social interaction in his relational models theory: communal sharing, authority ranking, equity matching, and market pricing. There has been some work demonstrating the psychological significance of these four types (see Haslam, 2004; also Clark & Mills, 1979 on communal and exchange relationships). However, there is little consensus or theorizing in the developmental literature about the core competencies or organization for representations of social relationships.

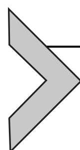
One perspective that has been influential in the developmental literature is work on coalitional psychology (Kurzban et al., 2001; Pietraszewski & German, 2013), the hypothesis that humans have evolved cognitive mechanisms for representing and reasoning about social arrangements underlying collective action. People form complex and shifting alliances—teams, partnerships, clubs, etc. According to the coalitional psychology perspective, tracking those alliances, and individuals' participation in them, is really the purpose of social cognition. Thus, people seem particularly attuned to evidence about group membership as well as to defection or cheating (Cosmides & Tooby, 2005; Kurzban et al., 2001; Riggs & Kalish, 2016). Work on cooperation/competition norms (Rhodes & Chalik, 2013) and in-group/out-group expectations (Rutland et al., 2010) would fit within the general focus of coalitional psychology. Human communication is a critical kind of cooperative relationship, with its own demands and expectations (Harris, Koenig, Corriveau, & Jaswal, 2018; Tomasello, 2010). Coalitional psychology typically carries the connotation of specific innate cognitive mechanisms: It may be that certain components of intuitive sociology derive from something like a universal grammar of social relationships (Durkee, Lukaszewski, & Buss, 2019).

2.3.3 Summary

Children's intuitive sociology contains beliefs about how people in different groups should behave—including toward one another. Gender is a domain where children both experience and perpetuate normative expectations about how groups should act, but children recognize appreciate norms for other groups as well. Although developmental and social psychologists have tended to focus on characterizing normative expectations for specific

group identities (e.g., boys, adults), another perspective is that intuitive sociology is organized more functionally around expectations about the ways people are supposed to interact with each other in different contexts (e.g., cooperators, followers).

Thus far, we have implied that the norm is that one ought to favor studies of children when charactering intuitive sociology. However, children's intuitions about the social world appear to have their roots much earlier in life. The study of infants' apprehension of the social world—including their capacities to detect and learn about others' properties, evaluate others, and develop normative expectation for others' behavior—has grown significantly in recent year. We turn next to consider this body of work, before returning to consider later developments and transitions from intuitive to reflective representations of sociology.



3. Infants

3.1 Types

Infants are interested in other social beings from an early age. Young infants prefer to look at faces (and face-like stimuli) as well as displays of human biological motion (vs non-faces and non-biological motion, respectively; Farroni et al., 2005; Fox & McDaniel, 1982). Infants also discriminate individuals from one another, both in terms of their identifying features (e.g., this voice belongs to my mother and this other voice does not; DeCasper & Fifer, 1980) and in terms of their particular goals and actions on the world (e.g., person A's goal is the doll while person B's goal is the truck; Woodward, 1998). In summary, infants are clearly interested in, and skilled at perceiving and reasoning about, *individuals* from an early age.

Infants are also capable of recognizing that some individuals are more alike than others. Paralleling research designs used to demonstrate that infants categorize cats as different from dogs (Quinn, 2002), researchers have shown that infants are sensitive to the markers that older children and adults use to pick out social types (e.g., men vs women; Asian people vs White people; Anzures, Quinn, Pascalis, Slater, & Lee, 2010; Hock, Kangas, Zieber, & Bhatt, 2015; Quinn, Yahr, Kuhn, Slater, & Pascalis, 2002). Further, the way infants perceive and react to social group markers varies as a function of their social exposure (e.g., Bar-Haim, Ziv, Lamy, & Hodes, 2006). In addition to detecting visual markers of social group membership, infants are able to learn about the behavioral propensities of

individuals who are similar to one another. For example, infants know that women's voices tend to be higher in pitch (Richoz et al., 2017) and toddlers associate wearing ties with men (Poulin-Dubois, Serbin, Eichstedt, Sen, & Beissel, 2002).

None of the findings reviewed so far from the infant social categorization literature point to anything unique about how infants learn about social groups (vs animal kinds or artifact classes, for example). One way in which infants' learning about social groups could be special is that infants, because of their intense interest in people and their actions (see above), may learn more rapidly or easily about social groups vs other kinds of groupings in the world. To our knowledge, no one has tested this possibility. More pointedly, though, none of the capacities reviewed thus far invoke notions specific to sociological reasoning. Is there any evidence that infants learn about people using a sociological lens?

One special feature of social groups is that they can be identified—and even defined—by characteristics that are manifested only in terms of how individuals relate to one another (rather than by shared visual features or internal properties). Conversely, social groups can be good cues to how individuals are likely to relate to one another. New research provides initial evidence that infants are capable of thinking about social groups in these unique ways. For example, 8-month-old infants use synchronous motion (e.g., entities moving together, contingently) and spatial proximity (e.g., entities being close to another another) to infer the presence of a social group—and, correspondingly, they expect members of that group to behave in similar ways to one another (Powell & Spelke, 2013). Further, toddlers expect members of the same group to behave prosocially toward one another (Jin & Baillargeon, 2017) and use cooperation and competition as cues for forming social categories (Ferera, Baron, & Diesendruck, 2018).

3.2 Value

Infants certainly like and feel closer to some *individuals* than to others. For example, most infants will approach their mother over a stranger when given a choice (Corter, 1973). Additionally, laboratory studies reveal that infants develop and express preferences for individuals based on their actions—for example, favoring those who have behaved prosocially (Hamlin, Wynn, & Bloom, 2007) as well as those who mirror infants' own actions and choices (Mahajan & Wynn, 2012). But, do infants like and feel closer to *groups* of people?

Young infants gaze preferentially at faces that are similar to those they see in their environments. For example, presented with a White and a Black face, Ethiopian babies will look longer at the latter (Bar-Haim et al., 2006). Presented with a male and a female face, infants will look longer at the face that matches the gender of their primary caregiver (Quinn et al., 2002). However, as many have noted (Kinzler & Spelke, 2011; Rhodes & Baron, 2019; Shutts, 2015), preferential attention to a face does not provide clear evidence that infants like such people.

Kinzler, Dupoux, and Spelke (2007) have demonstrated that infants will preferentially reach toward objects offered by people who speak the language of their caregivers—and have argued that such effects demonstrate that infants prefer such people. We do not quibble with that interpretation, but our view is that such findings fall short of demonstrating that infants' choices are choices in favor of a social *group*. Certainly, older children and adults represent language as a social category and feel strong ties to their linguistic ingroup (see Kinzler, 2020 for review). But, infants' reaching behavior could be described as a preference to engage with people who share a particular feature with familiar people in their environment (e.g., I want to engage with this person because she sounds like what my grandmother and father sound like when they talk). In other words, infants' preferential engagement with individuals who possess certain features (e.g., speaking French) do not clearly demonstrate that infants evaluate social *groups* positively or negatively. That said, newer research focused on infants' expectations about how people from the same language group will behave toward one another (e.g., that two English speakers will embrace one another; Liberman, Woodward, & Kinzler, 2017) suggests that infants at least view use of the same language as a cue that people are socially connected to one another.

New research also shows that infants use a different sociological relationship—namely, status differences—to guide their evaluations of others. Building on research showing that infants detect and represent status relations (Mascaro & Csibra, 2012; Pun, Birch, & Baron, 2017; Thomsen, Frankenhuis, Ingold-Smith, & Carey, 2011), Thomas and Sarnecka (2019) recently investigated infants' interest in affiliating (via their reaching) with winners (high-status) vs yielders (low-status) in zero-sum conflicts. They found that 10-month-olds reached preferentially for puppets who yielded, while 16-month-old infants reached for winners. Thus, like older children (see previous section), infants (at least at older ages) prefer those who are high in status. To our knowledge, however, no studies have probed whether infants prefer *groups* that are higher in status.

3.3 Norms

As reviewed above, infants certainly have expectations about how individuals will behave—both as individuals in their own right as well as in relation to one another. Further, infants appreciate that people who share the same features (e.g., who move together, who have long hair) will engage in similar behaviors. They also prefer actors who display certain behaviors (e.g., prosocial vs antisocial, Hamlin et al., 2007). Whether these expectations and preferences also involve normative judgments remains unclear. There are clear precursors in infancy of social groups and social evaluations. What is the evidence for appreciation of social norms?

One relevant line of work explores the significance of imitation and conformity for infants' social judgments. As noted above, infants expect people who share behaviors to affiliate: Shared behavior is a cue to social groups (Powell & Spelke, 2013). Some work suggests that the kind of shared behavior matters. Shared arbitrary actions are more indicative of group membership than are actions with a clear instrumental purpose (Liberman, Kinzler, & Woodward, 2018). In such cases, the motivation to engage in shared behavior would seem to be conformity to the group, rather than achievement of some functional goal. Infants seem to prefer individuals who conform to the group (imitate, Powell & Spelke, 2018). But at the same time, there is evidence that infants prefer efficient to non-efficient actors (Colomer, Bas, & Sebastian-Galles, 2020). This raises the question of whether inefficient, but conforming, action would be preferred for group members (but not for others).

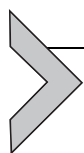
In childhood, some of the best evidence for appreciation of norms comes from reactions to violations, especially punishment or correcting (see Rakoczy, Warneken, & Tomasello, 2008). It is difficult to elicit punishment or correction from infants: Surprise and looking-time preferences are the classic responses to violations. Infants do seem to prefer (to look at) agents who act to enforce proper behavior. For example, they prefer agents who intervene to stop an aggressive interaction (Kanakogi et al., 2017). They may even show a specific preference for intervention on the part of those in positions of power or leadership (Stavans & Baillargeon, 2019). The one existing study we are aware of found that 16-month-old infants would reward those who shared fairly, but did not punish those who were unfair (Ziv, Whiteman, & Sommerville, 2021).

In truth, it is difficult to confidently ascribe normative significance to social groups given methods available for testing infants. Take, for example, the finding that infants expect that an individual from a larger group will win

a right-of-way competition over an individual from a smaller group (Pun, Birch, & Baron, 2016). What sort of reasoning underlies infants' longer looking (i.e., at displays where the individual from the smaller group wins)? For example, do infants look longer at such displays because they think it is *wrong* for the member of the smaller group not to yield? Because they have an abstract representation about how groups are s*upposed* to be behave? Because they know how groups *usually* behave? Looking-time methods can reveal what infants find more interesting or surprising about the behavior of individuals or groups, but such methods do not—and perhaps cannot—distinguish, for example, descriptive vs prescriptive reasoning, judgments about what usually happens vs what ought to happen, and so on. A similar debate plays out in the comparative literature, where the question of whether non-humans understand norms depends largely on definitions of "norm" (see Andrews, 2009).

3.4 Summary

Infants are interested in other people right from the start. They represent people as individuals; they recognize that some individuals are more similar to others; and they can reason about how individuals relate to another in different ways (e.g., affiliation, dominance). Further, they are sensitive to some of the features that at least older children and adults take as indicating social groups. To the extent that understanding social groups involves appreciating social connections between individuals, infants show evidence of this critical aspect of intuitive sociology. Further, at any age, understanding social groups will involve some general learning capacities—which infants evidence in abundance. But, the study of infants' intuitive sociology is still in its infancy. More studies and methodological advances may provide clearer information about whether and how infants reason about social groups per se.



4. From intuitive to reflective sociology

Intuitive sociology consists of considerable knowledge about social groups and social actors. This knowledge can become quite elaborate over the course of development, but still remain intuitive. People come to recognize a large number of social groups and their properties. People develop nuanced preferences and rankings for groups. Finally, an intuitive sociology contains normative expectations about proper behavior—both standards for evaluation of members vis a vis groups they belong to (e.g., conformity) as

well as expectations about how members of different groups ought to interact (social roles). The fundamental conceptual elements are apparent early in childhood. Later development consists of elaboration: learning about more groups and more details about those groups.

Beyond simple elaboration, however, sociological knowledge can become enriched in ways that push the boundaries between intuitive and more formal conceptions. Clearly, people can go to school and learn "Scientific" Sociology (in the same way they can study Biology or Psychology). However, intuitions may be transformed by cultural forces other than science and schooling. It is not clear where intuition leaves off and ideology begins, but there seem to be two markers. The first is cultural and historical specificity: Arguably ideas about "types" of people, rankings of those types, and normative standards for social behavior are human universals. If people's thinking about sociology contains more unique elements, then it is no longer intuitive. For example, intuitive representations may be enriched and transformed by legal, religious, or scientific (e.g., neuroscience) influences. A stronger marker, though, is the attitude toward one's knowledge. Intuitive sociology is commonsense: It is unquestioned, automatic, and obvious; there is little explanatory content: what but not how or why (Rozenblit & Keil, 2002). Non-intuitive beliefs are more reflective (see Dienes & Perner, 1999; Sperber, 1997); they involve justification and skepticism (or at least uncertainty), and admit explanation. Just these kinds of beliefs have been a central focus not just in scientific sociology, but also in work on adolescent development. Researchers have asked how people can go beyond intuition to develop a critical consciousness about society (Diemer, Rapa, Voight, & McWhirter, 2016).

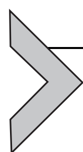
One way intuitive sociology becomes enriched is with an understanding of institutions and systems. Although young children recognize types of people, ascribe value to these types and evaluate behaviors against expectations for types, they tend to have a very individualistic understanding of social mechanisms (Emler & Dickinson, 1985; Furnham & Stacey, 1991). People's social identities and positions may be inherent (e.g., biological) or acquired through behavior (e.g., hard work), but they are still individual. The idea of systematic or structural forces seems to be a later emergence. Part of this development is coming to understand institutions and the idea that institutions may have interests and agency apart from their individual members (see Noyes, Keil, & Dunham, 2020). An eight-year-old may know what a bank is, but will not really understand the function of the institution. They know how people behave in a bank, but not why. For example, the bank teller may be seen as generous for giving out money. The idea that the

teller serves some institutional interest is opaque. The psychological mechanism of intentional action is the most readily available source of explanation for social behavior, especially for young children. Educators struggle to teach students to think about complex interactions between structural forces in society (Montanero & Lucero, 2011; Samuelsson & Wendell, 2017). It is important to note that most of the research demonstrating an individual-to-structural shift in thinking has been conducted in Western, individualistic cultures. We should expect elaborations on intuitive sociology to be even more culturally and historically conditioned than core elements.

A common theme in research on sociological conceptions in adolescence, and even into adulthood, is that people tend to explain social behavior and social structure in personal terms. For example, income inequality is due to some people having skills and others lacking. Structural attributions for social phenomena (e.g., racial inequality) increase from earlier to later adolescence (Bañales et al., 2020; Flanagan et al., 2014; Seider et al., 2019) and are associated with more egalitarian preferences for resource distribution (Kornbluh, Pykett, & Flanagan, 2019). While structural thinking is not completely absent in early childhood, this perspective is more characteristic of older children and adults (Vasilyeva, Gopnik, & Lombrozo, 2018). Of course, attributions to social structure vary by social position, culture, and experience (Flanagan et al., 2003; Seider et al., 2019). However, at least in populations most studied, the tendency to favor personalistic over structural explanations is not limited to early childhood. For example, children are especially likely to understand prisons and the criminal justice system in terms of individual decisions. However, adults also tend reason that some people just do bad things and need to be punished (Dunlea & Heiphetz, 2020). Structural explanations, of disadvantage, of economic power, of racism, are non-intuitive. A functionalist perspective seems a distinct conceptual achievement—society is no longer made up of groups of individuals, but rather impersonal forces that operate independently of (and even determine) people's beliefs and attitudes.

The focus on psychological vs structural accounts of social phenomenon is particularly important because of its implications for blame and justification. The general idea is that if social position is determined by an individual's preferences and attitudes, then it is justified. Poor people are poor because they lack drive and talent. Research does suggest that a naïve perspective on society involves just this kind of "system justification" (Hussak & Cimpian, 2015). Structural explanations admit more critical perspectives: Society is not necessarily fair, people may not deserve what they get.

A considerable amount of research has focused on understanding, and fostering development of, a critical consciousness about society (Diemer et al., 2016). Critical consciousness that social arrangements are somewhat arbitrary, historically conditioned, and alterable contrasts with the general structure of intuitive beliefs (natural, objective, and neutral). Rather than taking intuitive sociological perspectives as explicitly naturalizing, it is probably best to characterize them as agnostic. An intuitive sociology does not include beliefs about the justification or legitimacy of social arrangements. Knowing what social groups exist, how they are valued, and how they ought to interact is intuitive. Knowing why such groups exist, and whether such social arrangements are justified, is not intuitive and requires explicit education and intervention.



5. Conclusions

Here we have worked to characterize humans' commonsense understanding of social groups, focusing on three key components: types, value, and norms. Although there has been enough research to date to merit a chapter on intuitive sociology, it is also the case that we, as a field, have a great deal to learn about how humans understand diverse social groups. Of particular use would be additional research with infants as well as research with children living in different kinds of societies. Such work can shed light on which aspects of intuitive sociology are fundamental to our thinking about social groups and which are the result of learning the particularities of one's social world. In this context, it is also worth mentioning that much of what we know about children's (and adults') thinking about social groups comes from studies focused on a rather limited set of groups—often, race, gender, and age ("the big three"; see Kinzler, Shutts, & Correll, 2010). Broadening our consideration of other kinds of groups would enrich our understanding of principles and mechanisms underlying our intuitive sociology.

The three components of intuitive sociology that we have identified map on, not uncoincidentally, but also not perfectly, to three concepts that will be more familiar to most readers—namely, *stereotypes*, prejudice, and discrimination. For this chapter, we chose types, value, and norms over *stereotypes*, prejudice, and discrimination because the latter terms are subject to colloquial notions that fail to fully capture what is encompassed by each component; further, the more familiar terms tend to be reserved for thinking and behavior with pointedly negative outcomes. Nevertheless, it is worth

recognizing that although our intuitive sociology is critical for helping us navigate the social world from an early age, our natural tendencies to represent social types, ascribe value, and appreciate standards can sometimes lead us to engage in thoughts and behaviors that harm individuals—for example, to exclude someone from our social circles or to assume someone would not be the right fit for a job in our institution. This realization can go some distance in explaining why it has proven difficult to overturn our social group biases at any age (Scott, Shutts, & Devine, 2020), and why doing so takes considerable knowledge, effort, skill, and practice (Devine, Forscher, Austin, & Cox, 2012).

The literature on intuitive sociology is vast. Children's understanding of their social environment is recognized both as an important research area in its own right, and as a component of developmental mechanisms involved in social learning. In organizing this literature, our review (briefly) addressed classic issues of domain specificity, human uniqueness, and innateness. However, we take the central contribution to be the division between social types, value, and norms. Our review attempted to highlight relatively distinct developmental processes in each area (e.g., category learning, self-conception, joint intentionality). One direction for future research is to study the interactions between types, value, and norms. For example, is it the case that the most essentialized social groups are also the ones assigned the most significant social value (whether positive or negative)? Can interventions in one area affect the others? Would adopting more egalitarian norms minimize perceptions of group distinctiveness and value? This review also illustrated the different kinds of social groups studied in the literatures. Work on social types tends to take stable social identities such as race or gender as models. In- and out-groups are central to work understanding social value. Functional groups (professions or relational roles) lend themselves most naturally to analysis in terms of social norms. We started the review with the problem that the domain of intuitive sociology may not be as neatly specified as the domains of other intuitive theories. That complexity is likely a reflection of the central importance of social conceptions in children's lives.

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