

Elements of a Lay Theory of Groups: Types of Groups, Relational Styles, and the Perception of Group Entitativity

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Discussion in this article is on the elements of perceivers' intuitive theory of groups. The first element of the theory concerns perceivers' intuitive taxonomy of different types of groups. We discuss research examining this intuitive taxonomy, as well as the group properties that define different types of groups within the taxonomy. A second important element in the lay theory concerns perceivers' beliefs about how people within different types of groups regulate social interactions with one another. We discuss research examining the relation between perceivers' beliefs about different types of groups and how people within those groups are expected to relate to each other. Finally, we discuss how people use their intuitive theory of groups when making social judgments pertaining to groups.

Imagine the following scene: While eating in a restaurant you observe four men, each 20 to 30 years of age, eating lunch together. Their discussion is animated and full of laughter. When the bill is brought to the table, they each take a brief look at the bill and then throw in equal amounts of money to be left on the table for the waiter. As they leave, you overhear one say to the others, "So, are you guys up for cards next week? It's my turn to have you guys over." The other men seem to agree that this is a good idea, and as they leave the restaurant you can hear them say goodbye to each other until next week.

Do you have a sense of the nature of this group? It is likely, for example, that you have inferred that these men are friends, and have been so for some time, that there is little formal organization in the group, and that there is no clear leader. You might also be able to make inferences about how similar the personalities of the men are likely to be and how much the men value their

membership in this group. Yet the actual information on which you can base your impression is quite modest. How are you able to take the bits of information about these men and develop a coherent and elaborated image of their group? In this article, we suggest that you rely on an intuitive theory of groups that allows you to assemble the information in the scene and make inferences beyond what you observed.

An intuitive theory is a system of interconnected beliefs that lay people hold about some domain. People use these theories to understand events and to make inferences about the world around them. Psychologists have investigated the intuitive theories held by perceivers in a wide range of psychological domains. For example, there is evidence that people have an intuitive theory of physics that guides their interpretation of physical events (Carey & Spelke, 1994). There is also evidence for an implicit personality theory that guides people's inferences about the nature of personality traits and the relations among personality traits that a person might possess (Dweck, Chiu, & Hong, 1995; Schneider, 1973). Developmental psychologists have extensively examined how children (and adults) make sense of other people's minds and are able to make inferences about people's beliefs, desires, and intentions based on the scant behavioral data that are available during social interactions (Gopnik & Meltzoff, 1997; Wellman, 1990). Social psychologists (e.g., Heider, 1958; Ross, 1977) also discussed the in-

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tuitive theories that lay people use to make causal attributions for events. Thus, psychologists have very usefully applied the idea of lay theories to many domains of human judgment.

Previous writers have also applied the idea of lay theories to groups. For example, a number of researchers have hypothesized that perceivers possess a theory of group essentialism. This research has examined perceivers' beliefs that certain groups possess a biological or essential nature and has considered the consequences of these beliefs (e.g., Haslam, Rothschild, & Ernst, 2000; Hirschfeld, 1995a, 1995b; Rothbart & Taylor, 1992; Yzerbyt, Rocher, & Schadron, 1997). Other authors have considered the extent to which there are cultural differences in beliefs about group agency (i.e., the extent to which groups are considered to be coherent, agentic units) and examined the consequences of these cultural differences on causal and dispositional judgments pertaining to groups (e.g., Menon, Morris, Chiu, & Hong, 1999; Morris & Peng, 1994).

In this article, we describe elements of perceivers' intuitive theory of groups that extend beyond the concepts considered in past work. In making the argument that lay people possess an intuitive theory of groups, what sort of claim are we making? Drawing on past discussions of lay theories (e.g., Gopnik & Wellman, 1994; Morris, Ames, & Knowles, 2000; Murphy & Medin, 1985), we highlight several criteria that seem particularly important for defining the content of an intuitive theory of groups.

First, intuitive theories contain an ontology or taxonomy of discrete entities that define a given psychological domain. In implicit personality theory, for example, perceivers possess beliefs about the specific personality traits (e.g., friendly, smart) humans can exhibit. With regard to groups, we discuss research (Lickel, Hamilton, Wierzchowska, et al., 2000; Sherman, Castelli, & Hamilton, 2001) indicating that perceivers distinguish between several qualitatively different types of groups. The components of perceivers' intuitive taxonomy (i.e., types of groups) are defined by descriptive properties (e.g., the group's size, its duration, the degree of interaction observed among group members, etc.) that are observable to perceivers. Based on our research, we describe perceivers' beliefs about the properties that define and characterize the different types of groups in the taxonomy.

A second element of many intuitive theories is that they describe how components of the taxonomy (in this case, types of groups) operate. Thus, we also discuss perceivers' beliefs about how different types of groups operate and their relational features; that is, how people within different types are expected to relate to one another (Clark & Mills, 1979; Fiske, 1991). With regard to this aspect of the lay theory, we also discuss evidence

that people's theory of groups assumes an interconnection between the properties that define different types of groups and how people within each different type of group are expected to relate to one another.

The final important feature of intuitive theories is their use by lay people to make inferences. Theories are interpretive devices that people use to predict, explain, and justify events that occur in the world. Thus, an intuitive theory of groups, reflecting rich conceptions of various types of groups, can be used to interpret information observed and acquired about groups and to guide judgments and behavior toward members of groups a perceiver encounters.

Varieties of Social Groups

Social psychologists use the word *group* to describe a staggeringly wide array of social entities. Thus, women, a family, General Motors, Harvard University students, and people who like the paintings of Kandinsky can all be referred to as groups, even though these groups differ from each other in ways that seem quite fundamental. Previous writers have suggested some conceptual distinctions among different types of groups. Lewin (1948), for example, argued that social categories (e.g., African Americans) were a qualitatively different kind of group than dynamic groups, such as families and work groups. However, relatively little research has examined how lay people think about the broad spectrum of groups that they encounter in everyday life and what distinctions, if any, they make among groups (Wilder & Simon, 1998). Our contention is that people, as everyday perceivers of a rich and complex social world, may have intuitive theories about groups such that the generic concept of group is differentiated into several types of groups that differ in their properties, functions, styles of interaction, and the like. If so, then it is likely that these theories of groups would influence other processes, such as judgments of groups and behavior directed toward group members, depending on the nature of the group. Thus, in our view, understanding the distinctions that lay people make among different types of groups and the properties they associate with those different types may have important implications for a variety of concerns involving perceptions of groups, behavior within groups, and relations between groups.

These issues have been the focus of some of our recent work (Lickel et al., 2000). Specifically, in two parallel studies (one conducted in the United States, the second in Poland) we investigated the distinctions that perceivers make among groups. We did so using two different methods. First, participants in these studies rated a sample of 40 groups on a set of eight group properties. These properties included group member

similarity, the amount of interaction among group members, the extent to which members shared common goals and outcomes, the importance of the group to its members, group size, the duration of the group's existence, and group permeability (i.e., the ease of entry and exit from the group). The property ratings assigned to each group were then used statistically to identify clusters of groups with similar property profiles. The second method used to identify different types of groups was a sorting task in which participants sorted the sample of 40 groups into categories based on their own intuitive perceptions of which groups went together as a distinct type. Cluster analyses were then conducted based on participants' sorting responses.

Interestingly, these two methods produced very similar results, generating the same basic clusters of groups. These clusters consisted of intimacy groups (e.g., family, friends, romantic partners), task groups (e.g., a work team, a jury), social categories (e.g., women, Blacks), and loose associations (e.g., people who like classical music, people in line at a bank). Furthermore, when we subsequently conducted clustering analyses based on the ratings of groups to which participants personally belonged (Lickel et al., 2000, Study 3), the same four basic clusters—intimacy groups, task groups, social categories, and loose associations—were again identified.

Both of the tasks used in this research relied on fairly explicit, consciously driven tasks to derive the structure of lay people's intuitive taxonomy of groups. However, Sherman et al. (2001) recently demonstrated that this group typology is spontaneously and implicitly used when encoding social information. Using a variant of the recognition memory paradigm developed by Taylor, Fiske, Etcoff, and Ruderman (1978), they found that perceivers implicitly organize information in memory according to the type of group that is being perceived. For example, when recalling faces of individuals belonging to different types of groups, participants were more likely to make identification errors within a particular type of group than between different group types (Sherman et al., 2001, Study 1). Thus, for example, a face paired with the label *Frenchman* (a social category) would be more likely to be misidentified later as Presbyterian (another social category) than as a member of a jury (a task group) or a member of a family (an intimacy group).

In sum, there is evidence using both somewhat explicit measures (Lickel et al., 2000) and a more implicit measure (Sherman et al., 2001) that lay people possess an intuitive taxonomy of groups consisting of intimacy groups, task groups, social categories, and loose associations. In our view, these group types comprise the structural components of people's intuitive theory of groups. The evidence that they are manifested in both deliberative and spontaneous tasks provides some con-

fidence that these types are distinct, widely shared, and broadly used in perceiving and comprehending social behavior within group contexts.

The Lickel et al. (2000) studies also provide evidence concerning a proposed aspect of the lay theory of groups that we introduced earlier, specifically, that each type of group has certain properties associated with it, properties that differentiate it from other types of groups. Specifically, evidence from the group rating task indicated that intimacy groups were perceived as having a long duration; as being small and impermeable; and as having high levels of interaction, common goals, common outcomes, importance, and group member similarity. Social categories were also perceived as having long duration and low permeability but were rated as very large in size and fairly low in group member interaction, common goals, common outcomes, importance, and group member similarity. Task groups were perceived as small in size; moderate in duration and permeability; and moderately high in interaction, common goals, common outcomes, importance, and similarity. Finally, loose associations were marked by very high permeability; fairly short duration; and low levels of interaction, common goals, common outcomes, importance, and similarity. Thus, distinct but relatively complex patterns of group properties defined the different types of groups.

The four different types of groups also differed in the extent to which they were perceived as possessing *entitativity* (Brewer & Harasty, 1996; Campbell, 1958; Hamilton & Sherman, 1996; Hamilton, Sherman, & Lickel, 1998; Lickel et al., 2000), the extent to which a group is perceived as being a coherent unit in which the members of the group are bonded together in some fashion. Participants in Lickel et al.'s (2000) studies rated each of the 40 groups on the extent to which it qualified as a group, a measure of perceived entitativity in these studies (for converging evidence using other measures, see Lickel, 2000; Thakkar, 2000). Parallel analyses of the studies conducted in the United States and Poland revealed very similar findings. Analyses of participants' ratings of entitativity demonstrated that intimacy groups were highest in entitativity, followed by task groups, social categories, and loose associations. Thus, different types of groups also vary in the extent to which they are perceived to possess the quality of "groupness."

In this research, we also examined the extent to which particular properties of groups predicted perceptions of entitativity. Correlational analyses for both samples showed that group member interaction, common goals among group members, common outcomes among group members, group importance, and group member similarity were all strongly correlated with perceived entitativity. Group size, duration, and permeability had weaker relations to perceived

entitativity. Regression analyses in both studies indicated that perceptions of the degree of group member interaction was the single strongest predictor of perceived group entitativity.

Group Types and Relational Styles

The findings summarized thus far establish that perceivers develop and use distinctions among different types of groups (intimacy, task, social categories, loose associations) that are viewed as having different patterns of attributes (e.g., degree of interaction among members, shared goals and outcomes, duration of the group, group size, permeability of group membership). These distinctions form the foundation components of perceivers' intuitive theory of groups. As we noted in an earlier section, a lay theory of groups would also include perceivers' beliefs about the way in which people within groups relate to one another. We now turn to that question regarding perceivers' beliefs about different types of groups.

As indicated earlier, the extent of interaction among group members is one of the key variables contributing to perceptions of group entitativity. Moreover, participants in the Lickel et al. (2000) studies viewed the four types of groups as differing systematically in the extent to which group member interaction was characteristic of the group (intimacy groups were perceived to have high levels of interaction, followed by task groups, social categories, and loose associations). Thus, the extent of interaction among group members appears to be an important feature used by lay people when perceiving groups.

Beyond the mere quantity of interaction among group members, it may be that the quality or style of interaction is also an important element of people's intuitive beliefs about different types of groups. The quality or style of an interaction is reflected in the principles by which people regulate the interaction (Deutsch, 1975; Fiske, 1991). For example, when one person on a stock exchange sells stock in a company to a single bidder (out of many) who is willing to buy the stock at the highest price among all bidders, he or she is attempting to maximize personal outcomes from the interaction. However, when a child asks a parent for food and he or she gives it to him, the parent is acting out of love and generosity rather than economic calculation.

For perceivers, observing the way in which people in a group regulate their interactions with one another may be a substantial source of information about the entitativity of the group. Moreover, perceivers may assume there is an association between the way in which people in a group relate to each other (i.e., the relational style that is used) and the nature of that group and its properties. Because of this assumption, differ-

ent types of groups may be perceived as being regulated by different relational styles.

We have recently conducted several studies investigating these ideas. However, before describing these studies, we briefly review past work on relational styles, particularly the framework of Fiske (1991, 1992) that we have employed. Researchers have developed a number of concepts and frameworks for describing how humans organize their relationships and interactions with one another. Foa and Foa (1974, 1981) argued that social interactions are organized around the satisfaction of a set of basic needs (love, status, information, money, goods, and services) and that social interactions and relationships could be categorized according to the need(s) served. Deutsch (1975) suggested that people use qualitatively different social rules in interactions depending on the interactants' goals. For example, if productivity is the goal then equity principles should guide the interaction, whereas a goal of harmony would evoke an equality rule. Clark (1984; Clark & Mills, 1979) argued that there are at least two basic social relationships (exchange vs. communal) around which humans organize social interactions.

Recently, Fiske (1991, 1992) synthesized much of the past theoretical and empirical work regarding types of social relationships and developed a framework in which he proposed four basic models of how humans organize social interactions. These relational models (or, as we refer to them, relational styles) are communal sharing, equality matching, market pricing, and authority ranking.

Communal sharing, according to Fiske (1991), is marked by a fusion of the self to the group. In communal sharing relationships, individuality is lessened and the group, as a unit, is psychologically dominant. Work is regulated by a "pitch in and help" attitude in which individual contributions are not highly monitored. Exchange is regulated simply through group membership. If you are a member of the group, you are able to use the resources you need without expectation that you will return resources of greater or equal value. Decisions are made according to a principle of unity; in its idealized form the goal in decision making is unanimity.

Equality matching, as the name suggests, is marked by a principle of matching. In trade, the goal is to balance exchanges between individuals. This matching need not take place immediately, but may instead consist of turn-taking behavior over time. Equality matching is to some degree captured in what Americans call "neighborliness." You simply are not a good neighbor if you are not willing to let others borrow a bit of flour or a tool when they need it. Likewise, it would be strange to request or even accept payment for the use of these things. The phrase "it all evens out in the end"

captures the spirit of these trades. Yet, and this is important to note, this is different from communal sharing. If a neighbor repeatedly asks for things, consuming the products of your household without somehow matching what they borrow, you resent it in a way that you do not when your son constantly consumes household resources.

Market pricing is marked by a calculated effort to maximize the value of exchange, work, and other interactions. Efficiency and maximization, rather than unity or equality, are the key motivations. Although people may engage in a series of trades over time, market pricing interactions differ from equality matching interactions in that participants attempt to maximize their individual outcomes from these interactions rather than seeking to match their outcomes to that of the other person.

Authority ranking is marked by the presence of status differences between individuals that are used as a basis for regulating social interactions. High-ranking individuals may take what they wish from those below them, but they are also expected to care for and protect those below them. Superiors direct and control the work of underlings and determine the distribution of rewards. Decision making is accomplished through a chain of command, with directives coming as a decree from the leader. Those who are lower in status obey those who are of higher status. Fiske (1991) argued that it is incorrect to view authority ranking as coercive. People often seek to create social structures based on authority ranking. The use of brute or coercive power to control the behavior of others is treated by Fiske as asocial rather than social behavior.

In addition to Fiske's (1990, 1991) extensive ethnographic analysis of the Moose culture (a West African cultural group), a number of empirical studies have provided support for Fiske's model. Most relevant for this article is research showing that the four relational styles are used to cognitively organize information about social relationships. For example, Fiske, Haslam, and Fiske (1991) examined natural errors that people made when they called someone by an incorrect name, incorrectly remembered with whom they had engaged in a social interaction, or directed an action at an incorrect person. They found that, when people made these natural errors, there was a strong tendency to err by interjecting another person with whom the participant shared the same basic type of relationship. Thus, people with whom the participants shared a communal sharing relationship would be incorrectly interjected with another person with whom the speaker also had a communal sharing relationship (for other empirical investigations of Fiske's framework see Fiske, 1993; Fiske & Haslam, 1997; Haslam, 1994; Haslam & Fiske, 1992).

Links Between Relational Styles and Other Group Properties

The studies by Fiske et al. (1991) on natural substitution errors provide a useful parallel to the research by Sherman et al. (2001) summarized earlier. These two sets of studies used the same general paradigm, and the spontaneous nature of the (mis)identifications observed in this paradigm is particularly informative. Both sets of findings are indicative of perceivers' spontaneous organization of social information, and these results reveal effects of perceivers' theories about the nature of social groups. That is, Sherman et al.'s (2001) findings support the idea that perceivers spontaneously encode groups (and group members) in terms of the type of group to which they belong, and Fiske et al.'s results suggest that perceivers intuitively comprehend interactions among group members in terms of certain relational rules by which those interactions are governed. Thus, both of these frameworks may represent components of perceivers' intuitive theory of groups. In our next studies, we sought to determine the relations between these components.

In these studies (Lickel, Hamilton, Sherman, & Rutchick, 2001), we investigated the extent to which perceivers believed that the different types of groups (i.e., intimacy groups, task groups, social categories, and loose associations) identified in our past work were associated with particular relational styles. We hypothesized that the four types of groups identified in our past research would differ in the way in which perceivers believe that interactions in each type of group are regulated. In the absence of specifically relevant theory, our hypotheses were somewhat tentative and were based to some degree on intuition.

Because intimacy groups generally consist of long-lasting groups in which the members are highly interdependent, they were predicted to be perceived as particularly high in communal sharing, moderate in equality matching and authority ranking, and low in market pricing. Task groups—because many are hierarchically organized and because membership in many is based around employment—were hypothesized to be high on authority ranking and also market pricing, but low on communal sharing. Social categories were hypothesized to have moderate levels of all the relational styles, with the possible exception of authority ranking because many social categories have leaders that are either elected (e.g., the President leads the citizens of the United States) or ordained (e.g., the Pope leads Catholics). Finally, because of their low levels of group member interaction and their generally permeable and transient nature, it was expected that loose associations would be perceived as using low levels of all the Fiske relational styles, with the possible exception of market pricing. In general terms, these hypotheses

were also consistent with Fiske's (1992) hypothesis that people tend to increase their use of communal sharing (and decrease their use of market pricing) as the duration and the degree of interaction in a relationship increases.

Effects of group properties on perceptions of relational styles. If, as we have argued, people possess an integrated theory of group types, perceivers should be able to make inferences about the nature of the social relations within those types of groups based on an abstract description of a group's properties. That is, when given a description of a group in terms of its basic properties, people should be able to make inferences about how people in the group are likely to relate to each other.

To test these ideas, participants were presented with descriptions of four groups, each of which was described in terms of four group properties (size, duration, permeability, and degree of group member interaction). These descriptions were designed to be roughly equivalent to the pattern of these variables observed for the four different types of groups identified in the Lickel et al. (2000) research. Thus, for example, one of the groups was described as being small, impermeable, long in duration, and high in group member interaction. This corresponds to the pattern in these variables that was associated with intimacy groups. A second group was described as being of small size, of moderate permeability and duration, and high interaction (the pattern of properties corresponding to the property profile associated with task groups). A third group was described as being very large in size, low in permeability and long in duration, and as having moderate levels of interaction, which is the pattern of properties associated with social categories. Finally, a fourth group was described in terms of the property profile of loose associations (i.e., small in size, short in duration, highly permeable, and low in group member interaction).

Each participant read descriptions of all four groups (the order of presentation was counterbalanced across participants). After reading each description, participants evaluated how they thought people in the group would relate to one another by completing a rating scale that was developed by Haslam (1994) to identify the four relational styles. This rating scale consisted of 24 items, 6 of which indexed each of the four relational styles. For example, items designed to index communal sharing consisted of statements such as "A person in the group would be likely to give the shirt off his back for another member of the group." Equality matching was indexed by statements such as "The relationship between people in the group is likely to be organized on a 50:50 basis." Items designed to index

market pricing consisted of statements such as "People in the group are likely to act toward each other in a purely rational way." Finally, items designed to index authority ranking consisted of statements such as "One person in the group would probably tend to lead." For each target group, composite measures of communal sharing, equality matching, market pricing, and authority ranking were created by averaging participants' responses to the six items designed to index each relational style.

Analyses of these relational style measures indicated that the manipulation of the group property information did influence participants' inferences about the way in which people within each of the groups would be likely to relate to one another. Describing a group with properties that characterize intimacy groups led participants to rate the group as very high in the extent to which people in the group would relate using communal sharing. This target group was also rated moderately with regard to the extent to which people in the group would use equality matching, but much lower in market pricing and authority ranking. The target group described with the property profile corresponding to a task group resulted in a quite different pattern of relational style ratings. This group was rated as being most likely to be regulated according to authority ranking, with moderate levels of equality matching and market pricing and low levels of communal sharing. The target group described with the property profile corresponding to social categories did not show clear differentiation with regard to the relational styles likely to be used within the group (all four relational styles were rated as moderately likely to regulate interactions within this type of group). Finally, the target group described with the property profile of a loose association was rated as being most likely to be regulated according to market pricing, with moderate levels of equality matching and authority ranking and low levels of communal sharing. Thus, this study indicates that people have some capacity to make inferences about the extent to which a particular relational style is used in a group based on knowing a few general features (i.e., size, duration, permeability, and degree of interaction) of the group.¹

¹We have also conducted a study in which participants rated the relational styles of specific groups belonging to each of the four different types of groups (drawn from the sample used in Lickel et al., 2000). Relational style ratings of the different types of groups in this task were quite similar (with some differences in degree) to the ratings from the experiment in which abstract descriptions of each type of group were provided. Thus, perceivers made relatively similar relational style inferences when judging abstract group descriptions as when judging concrete exemplars.

Effect of relational styles on perceptions of group properties. The previous study showed that, given knowledge of a group's properties, people's intuitive theory of groups permits inferences about the kinds of interaction rules that are likely to govern behavior in the group. We also ask a second question regarding people's beliefs about the relation between group types and interaction styles: Does the intuitive theory of groups enable perceivers to move inferentially in the opposite direction, from relational style to group type? That is, when a perceiver observes that the members of a group have used a particular relational style, does the perceiver then make inferences about other features of the group, such as the nature of the group and its properties, as well as the degree to which the group is a coherent entity?

To investigate these questions, participants in a second study were presented with descriptions of four different groups in which each group was portrayed as using one of the four different relational styles. These group descriptions were adapted directly from the items in the survey used to identify the four different relational styles developed by Haslam (1994) that was described in the prior study. However, rather than using these items as dependent measures, the items were used as group descriptions. Thus, one group was characterized by six statements that reflect communal sharing (e.g., "A person in the group would be likely to give the shirt off his back for another member of the group."). Correspondingly, each of the three other groups was described with six items reflecting one of the other three other relational styles. Each participant read descriptions of all four groups (the order of presentation was counterbalanced across participants). We were interested in the extent to which this manipulation of relational style information would influence perceivers' inferences about the properties of the group (e.g., its size, degree of interaction, etc.) as well as the group's entitativity.

The results indicated that the manipulation of relational style information did in fact influence perceivers' inferences about the other properties of the group. For example, participants rated the likely degree of interaction among the members of the group quite differently depending on how people in the group were portrayed to relate to each other. The group described in terms of communal sharing was rated as being likely to have higher levels of interaction than the group described in terms of equality matching or authority ranking, which, in turn, were rated as higher in interaction than the group described in terms of market pricing. Likewise, participants made different inferences about the likely size and permeability of the group depending on which relational style was used to describe the group. The target group described in terms of communal sharing was rated as being smaller and less permeable than the groups described with the

other relational styles. The group described in terms of market pricing, on the other hand, was rated as being larger in size and more permeable than the target groups described with the other relational styles.

Participants also made different inferences about the entitativity of the target group depending on the relational style used to describe the group. Describing the group in terms of communal sharing led to higher ratings of entitativity (as assessed by several measures such as qualifying as a group and being a unified group) compared to descriptions of the group in terms of equality matching or authority ranking. Groups described in terms of equality matching or authority ranking were in turn rated higher in entitativity than groups described in terms of market pricing.

The results of these studies indicate that lay people are able to make fairly rich connections between the properties defining different types of groups and the way in which group members are likely to relate to one another. Moreover, these connections can be the basis for inferences in a bidirectional manner. On the one hand, different types of groups (even when described with a very abstract description consisting of the target group's size, duration, permeability, and degree of group member interaction) are perceived to be regulated according to different relational styles. On the other hand, perceivers are also able to make inferences about the structural properties of a group and the group's entitativity when they learn information about the way in which people in the group relate to one another. Thus, perceivers' intuitive theory of groups includes not only differentiation among types of groups and their properties but also beliefs about the style with which people in different types of groups are likely to interact with one another.

Influence of the Intuitive Theory on Judgments of Responsibility

To this point, we have described some of the content of people's intuitive theory of groups. However, for the most part, we have not discussed how people may use their theory of groups to make social judgments that are typically the focus of social psychological research. One of our major assumptions is that people use their intuitive theory of groups to help them predict, interpret, explain, and justify events that occur in the social world around them. Thus, it is likely that this intuitive theory is used by perceivers in many domains of social judgment. For example, there is substantial evidence that perceivers' beliefs about the coherence, or entitativity, of a group influence how they process behavioral information and make trait judgments about members of that group (for a review, see Hamilton, Sherman, & Castelli, *in press*). In this ar-

ticle, we discuss another domain in which perceivers' intuitive theory of groups appears to strongly influence how they make judgments. This concerns how people make judgments of collective responsibility. *Collective responsibility* occurs when the members of a group are held responsible and are sanctioned for the actions of a single member of the group. For example, if one member of a group of friends starts a fistfight, the other members of that group may be considered responsible (and perhaps even be attacked) for actions of their fellow group member.

Recently, we (Lickel, 2000; Lickel, Schmader, & Hamilton, 2001) have investigated people's judgments of collective responsibility. With regard to the intuitive theory of groups that we have discussed in this article, one important issue concerns the extent to which perceivers believe that members of different types of groups should be held responsible when another member of the group commits a wrongdoing. To investigate this, Lickel (2000, Study 1) had participants rate a sample of 30 groups on the extent to which membership in each group should entail collective responsibility if one member of the group committed a wrongdoing. Participants also rated these groups on a variety of other group properties, including those examined in the Lickel et al. (2000) research described earlier. Clustering analyses based on the participants' ratings of the groups replicated the clusters identified in past research (Lickel et al., 2000). Furthermore, analyses indicated significant differences between the different types of groups in the extent to which group membership entails collective responsibility. Intimacy groups were rated by far the highest in collective responsibility, followed by task groups. Participants rated both social categories and loose associations as entailing lower levels of collective responsibility than task groups. Thus, the group typology we have discussed here is strongly related to perceivers' beliefs about collective responsibility—the four types of groups systematically differ in the extent to which perceivers judge that group membership entails collective responsibility.

But why do perceivers believe that groups differ in this respect? In attempting to answer this question (as well as understanding the process by which collective responsibility judgments are made), we have found it particularly important to investigate perceivers' beliefs about the extent to which members of groups are interpersonally interdependent with one another. Several aspects of interpersonal interdependence among members of a group (e.g., interaction, communication, behavioral influence, common goals, common outcomes, interpersonal bonds) are features of groups that past research has identified as particularly important with regard to the perceived entitativity of groups (Gaertner & Schopler, 1998; Lickel et al., 2000; Welbourne, 1999). Furthermore, high levels of interpersonal interdepen-

dence particularly characterize intimacy groups, the type of group that perceivers rate as entailing the highest degree of collective responsibility for wrongdoings committed by group members.

We predicted that collective responsibility would be greatest when members of a group are perceived to be highly interdependent with each other. However, congruent with our current discussion of how people use intuitive theories to interpret events in the social world, we further hypothesized that perceptions of interdependence would influence judgments of collective responsibility because these perceptions influence how perceivers construe and make inferences about situations in which collective responsibility might apply to a particular target group. Our research has focused on two inferences that lay people may rely on when making a judgment of collective responsibility. The first is an inference of responsibility by commission. *Commission* refers to an inference that members of the group may have encouraged or tacitly facilitated the act committed by their fellow group member. To refer to the earlier example, friends of the person who started the fistfight may be held responsible in part because they are perceived to share the attitudes of their fellow group member and may have indirectly encouraged him to begin the fight. The second inference is an inference of responsibility by omission. *Omission* refers to a failure of the members of the group to prevent their fellow group member from engaging in the act. To again refer to the example of the fistfight, members of the group may be held responsible for not restraining their friend and preventing him from starting the brawl.

The extent to which perceivers make these inferences of commission and omission is hypothesized to be influenced by perceptions of interpersonal interdependence among members of the target group. In turn, these inferences of commission and omission influence the extent of collective responsibility assigned to members of the group. Thus, the relation between perceptions of interdependence and judgments of collective responsibility is hypothesized to be mediated by inferences of commission and omission.

Several studies support this proposed model of how perceivers make collective responsibility judgments. First, in the correlational study described earlier (Lickel, 2000), participants rated groups with regard to collective responsibility, perceived interdependence, and the extent to which inferences of commission and omission could be applied to each of the groups when a wrongdoing was committed by a single group member. Results of this study showed that perceptions of interdependence were highly predictive of collective responsibility and, furthermore, that inferences of commission and omission largely mediated this relation. An experimental study (Lickel, 2000, Study 2) demonstrated that manipulating perceptions of interde-

pendence had an effect on collective responsibility judgments and that this effect was largely mediated by participants' inferences of commission and omission.

Furthermore, the model has been found to be useful in making sense of people's collective responsibility judgments for a real-world event. In this research (Lickel, Schmader, & Hamilton, 2001), we assessed participants' reactions to the shootings that occurred at Columbine High School in Littleton, Colorado, during April 1999. In one study, participants evaluated 14 groups that media reports indicated might be considered by perceivers to share some responsibility for the event. For each group, participants rated the extent to which the members of the group were interpersonally interdependent with the shooters, may have contributed in some way to the killings (commission), should have prevented the killings (omission), and should be held accountable and responsible for the killings (collective responsibility). Analyses of these data revealed a number of interesting findings. As we expected, people who shared an intimacy-type group membership (specifically, family and friends) with the killers were considered most responsible for the killers' acts. Using a more fine-grained analysis, we found that perceivers' judgments of group responsibility for the Columbine shootings were strongly predicted by the extent to which members of each group were perceived to be interpersonally interdependent with the killers. Furthermore, regression analyses indicated that the relation between interdependence and responsibility was strongly mediated by perceivers' inferences of commission and omission with regard to the killings. Although much remains to be understood concerning judgments of collective responsibility, it seems clear that perceivers' intuitive theory of groups plays a strong role in the process by which judgments of collective responsibility are made.

Summary and Further Questions

Our goal in this article was to describe some elements of lay people's intuitive theory of groups. We described several proposed features of this intuitive theory and discussed research examining those features. Although much remains to be investigated regarding these issues, some findings seem fairly clear. First, research does indicate that lay people possess an intuitive taxonomy of groups, and that these groups are defined by different properties (Lickel et al., 2000; Sherman et al., 2001). Second, evidence also suggests that people have an intuitive understanding of how people within these different types of groups are likely to relate to one another. As we discussed, perceivers are able to make inferences about the relational styles used within a group when provided with an abstract de-

scription of the general properties of the group. Furthermore, perceivers are also able to make inferences about the properties of a group when they learn how people in the group generally relate to one another (Lickel, Hamilton, Sherman, et al., 2001; see also Greenberg, 1983). Thus, there appear to be rich interconnections between people's beliefs about different types of groups and their beliefs about the various ways in which people can regulate interactions with one another (i.e., relational models; Fiske, 1991, 1992). Finally, people clearly use their intuitive beliefs about groups when making social judgments, including trait judgments and moral judgments such as judgments of collective responsibility. However, much remains to be understood regarding the nature and use of perceivers' intuitive theory of groups. In what follows, we discuss several key issues that remain for future investigation.

One important issue concerns the range of psychological phenomena that may be influenced by perceivers' understanding of the different types of groups. As we discussed, relatively little research has examined the way in which intragroup and intergroup phenomena are influenced by the type of groups that is involved. For example, consider the issue of intergroup conflict. Research from diverse traditions demonstrates that relations between groups are rife with conflict (e.g., Brewer & Campbell, 1976; Insko & Schopler, 1998; Sherif, Harvey, White, Hood, & Sherif, 1961; Tajfel, Billig, Bundy, & Flament, 1971). However, we are aware of no research that has systematically investigated the extent to which conflict between groups occurs because of the same reasons, or through the same processes, when the two groups that are engaged in the conflict are of a distinct type. Thus, understanding the extent to which conflict between two task groups is psychologically equivalent to conflict between two intimacy groups or between two social categories would seem to be of considerable practical and theoretical value. Other issues, such as the social identity value of different types of groups (Sherman, Hamilton, & Lewis, 1999), would also appear to benefit from a consideration of the psychological distinctions that lay people may make among different types of groups.

In considering the preceding issues, another important concern is raised, namely the relation between the types of groups (intimacy, task, social categories, and loose associations) identified in our (Lickel et al., 2000) past work and the relational models (market pricing, equality matching, communal sharing, and authority ranking) identified by Fiske (1991, 1992). Our recent research (Lickel, Hamilton, Sherman, et al., 2001) indicates that there clearly is an association between these two sets of psychological constructs, but this relation does not appear to be a simple one. It does

not appear to be the case, for example, that each type of group (e.g., social categories, intimacy groups) is predominantly associated with a single relational style. However, the full interplay between these two sets of psychological constructs is not currently well understood. For example, Sherman et al. (2001) demonstrated that perceivers' organization of information about individual persons was influenced by the type of group (task group vs. intimacy group vs. social category) that was associated with that personal information. This is similar in some ways to the results of Fiske et al. (1991), who found that when people made social substitution errors it was common to err by interjecting another person with whom the participant shared the same basic type of relationship. Thus, both different types of groups and different relational models appear to influence how social information is stored in memory. Understanding the interplay between people's understanding of the different kinds of social groups and the different relational models is a crucial issue for future research.

A related issue concerns the role of relational style information in the perception of group entitativity. As indicated by research discussed in this article, there appears to be an association between people's perceptions of the relational style used in a group and their perceptions of the entitativity of that group (Lickel, Hamilton, Sherman, et al., 2001). However, much more remains to be understood about how this information is used. In particular, it is important to understand the extent to which the degree versus the quality of interaction is causally important in perceptions of entitativity. Past research (Lickel et al., 2000) has shown a strong association between the degree of interaction among members of a group and the perceived entitativity of that group. Our more recent research (Lickel, Hamilton, Sherman, et al., 2001) has also shown a strong relation between perceptions of the relational style used in a group and perceptions of entitativity. However, it is not currently known which of these elements of interaction (quantity vs. quality) is most important in determining perceptions of entitativity. For example, if the members of a group are portrayed to use communal sharing to govern all of their interactions, does the actual quantity of interaction (extensive vs. sporadic) have any effect on the perceived entitativity of the group? Given the important role of entitativity in judgments of groups, understanding the answers to such questions is crucial.

Finally, we believe that it is crucial to investigate the extent to which there are cultural differences in people's intuitive theory of groups. Clearly, one important cultural difference concerns the manner in which social groups are perceived to organize social life in collectivistic and individualistic cultures. Growing evidence indicates that there are important

differences in people's understanding of social groups in such cultures. For example, Menon et al. (1999) demonstrated that people in collectivist cultures are more likely to make dispositional inferences pertaining to groups (rather than individual persons), whereas people in individualistic cultures are more likely to make dispositional inferences to individuals (rather than to groups). However, much more remains to be understood about how this cultural difference (and others) influences people's judgments of groups. For example, do cultural differences in dispositional attributions to groups appear for all types of groups, or do these differences appear for only certain types of groups (or only for groups with a particular level of entitativity)? Another important question concerns the extent to which perceivers in different cultures base their perceptions of group entitativity on the same features of groups. For example, is the degree of interaction among members of a group an equally important factor in determining perceptions of entitativity in collectivist and individualistic cultures? Addressing questions such as these will allow social psychologists to better understand the mechanisms by which perceivers employ intuitive theories of groups during social perception and the manner in which these mechanisms may be modified by cultural differences (e.g., Chiu, Morris, Hong, & Menon, 2000).

As the research presented in this article illustrates, people have rich intuitive ideas about social groups. People have beliefs about the properties of different kinds of groups and how people within different types of groups are likely to relate to one another. People's beliefs about these aspects of groups are richly interconnected and are used to guide inferences about many phenomena, such as collective responsibility. Much remains to be understood about the content, structure, and function of lay people's intuitive theory of groups. Hopefully, this article is a fruitful step toward this goal.

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