CHAPTER 22

Managing Ingroup and Outgroup Relationships

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HUMANS ARE DISTINCTIVELY "ultrasocial" (Campbell, 1983; Richerson & Boyd, 1998): Unlike the vast majority of other species, individuals who are not closely genetically related work cooperatively to achieve common goals. This cooperation takes diverse forms, including hunting of large game (Hawkes, 1993; Lee & DeVore, 1968), construction of goods for individual use (Chagnon, 1997), and large-scale military contests in which individuals sacrifice themselves to benefit others (Keegan, 1994).

Social interactions with conspecifics obviously carry large potential fitness benefits but also entail enormous potential fitness costs, such as agonistic conflict and communication of pathogens. Any given interaction also carries opportunity costs, as limits on the size of an individual's social network mean that a particular social interaction precludes some others (Dunbar, 1993; Tooby & Cosmides, 1996). Social organisms, therefore, should not be promiscuously social, interacting without selectivity. Choosing from among the possibilities for social interactions thus represents a critical class of adaptive problems, and natural selection would, therefore, have favored cognitive mechanisms designed to make good decisions about an individual's social interactions and social interactants.

In short, we should expect humans to exhibit *discriminate sociality* (Kurzban & Leary, 2001) and to possess psychological mechanisms designed to preserve the benefits of sociality and simultaneously limit its costs. We argue that these adaptations are complex and sensitive to various elements of social context and lead people to adopt specific criteria for selecting the members of their groups, attune themselves to threats arising from both within their groups and from other groups, and occasionally inflict costs on those who threaten the benefits of sociality. We suggest that these evolved, domain-specific mechanisms collectively lead to phenomena that fall under the rubrics of social exclusion, stigmatization, and discrimination.

FUNCTIONAL SPECIFICITY IN SOCIAL COGNITION

The traditional social-cognitive approach applies broad principles drawn from cognitive psychology—categorization, schemas, memory models—to stimuli in the social world: people. This approach takes the "functions" of cognitive systems to be very general ones: making sense of the world, storing information efficiently, generating inferences, and so on.

In contrast, we believe that the mechanisms underpinning social cognition have been designed to serve specifically *social* functions and that these functions are likely to be varied and numerous (Cosmides & Tooby, 1992; Tooby & Cosmides, 1992). For example, whereas many social scientists have traditionally conceptualized stigmatization and prejudice as simple devaluations of others, an implication of a functionally specific adaptationist view is that because different individuals and groups might be perceived to pose qualitatively different profiles of threats, they should also elicit qualitatively different profiles of stigmatizing and prejudicial reactions.

Another entailment of our view is that one prevalent conceptualization of "group"—most simply, two or more individuals who influence one another—is likely inadequate. For example, the intergroup relations literature within social psychology has focused on groups in a nonspecific way, as implied by general terms such as *in-group favoritism* and *outgroup homogeneity.* This literature implies that relations between members of different gender groups, families, ethnic groups, work teams, and college majors operate similarly: A group is a group is a group. In contrast, we believe it is important to recognize that there exist qualitatively different types of groups that the mind treats differently from one another (e.g., Lickel et al., 2000).

A good example is ethnicity. Gil-White (2001) has argued for a domain-specific species like construal of ethnic groups (or *ethnies*), suggesting that ethnies are essentialized in the same way that the mind essentializes species (Gelman, 1996). Other social categories, such as professions, for example, he argues, are not treated in this way (see also Rothbart & Taylor, 1992).

CHOOSING SOCIAL PARTNERS

Choices for social interactants are constrained by personal history because an individual is born to a particular kin group in a particular location, with preexisting alliances and political structures. Social life is complex, however, and opportunities arise for the restructuring of affiliations, the formation of subcoalitions, and the migration of individuals from one place to another. There is, and presumably historically has been, significant opportunity for individuals to choose their social partners.

Such choices are neither arbitrary nor random because individuals who were unable to extract the benefits of social interactions were disadvantaged relative to those better positioned to reap these benefits. Humans, who appear to be designed to cooperate in groups, should have adaptations for selecting carefully among possible groups and group members. In particular, we should expect humans to have adaptations designed to prefer associating with individuals who are likely to deliver fitness benefits because of either their ability or inclination to do so. Because skills, access to resources, and social networks make people more or

less valuable to a particular individual, a well-designed cognitive system should seek out those individuals and those interactions that make the most out of others' idiosyncratic altruistic capacities and proclivities (Berscheid & Reis, 1998).

In short, individuals should have preferences for certain kinds of people over others—the basis of discrimination. In some instantiations—the hiring of employees based on ethnicity—discrimination is salient and controversial. In other forms—the selection of acquaintanceships based on apparent agreeableness—the discrimination is nearly invisible and noncontroversial. Yet, both are based on preferences and are fundamentally discriminatory. In this section, we consider some preferences that drive people as they choose social partners, drawing on theories designed to explain cooperation, including kin selection (Hamilton, 1964), reciprocal altruism (Trivers, 1971), and cultural group selection (Boyd & Richerson, 1985).

Kin

Numerous accounts of Hamilton's (1964) theory of kin selection are available (e.g., Dawkins, 1982), so we do not discuss it here. In general, natural selection leads to adaptations designed to deliver benefits to kin provided the associated costs are small relative to these benefits. Humans clearly possess such adaptations (Daly, Salmon, & Wilson, 1997; Daly & Wilson, 1988). Because an individual's kin are likely to be motivated to take opportunities to benefit the self, human preferences can be expected to make kin among the most appealing social partners, as observed in nepotistic inheritance and the selection of coalitional allies (Chagnon, 1975; Chagnon & Bugos, 1979; but see Patton, 2000). For a thorough review of human kin selected adaptations, see Kurland and Gaulin (Chapter 15, this volume).

Cooperative and Trustworthy Types

Because humans form groups with distantly related others, people should prefer to interact with those possessing traits likely to make them good partners for cooperative activity. Individuals differ substantially when faced with options to behave altruistically or selfishly. Research on "social value orientation," for example, suggests that some people consistently choose to behave cooperatively, competitively, or in a purely self-regarding fashion in experimental games (McClintock, 1972; Van Lange, Otten, De Bruin, & Joireman, 1997). Similarly, within the context of social dilemmas, some individuals seem predisposed to behave consistently selfishly (Kurzban & Houser, 2005). This tendency has important implications for group dynamics: When a small number of people choose to cooperate very little, this reluctance seems to spread over time to other group members (e.g., Komorita, Hilty, & Parks, 1991; Kurzban & Houser, 2005).

People care about these differences. Cottrell, Neuberg, and Li (2005) had students contemplate a range of different interdependent groups (work project team, basketball team, fraternity, etc.) and rate how important it is for members of these groups to possess a variety of personal characteristics. Regardless of the group's task, *trustworthiness* and, to a lesser extent, *cooperativeness* were rated as highly important, with very little across-group or within-group variance. Other characteristics (e.g., intelligence, extraversion, physical

attractiveness, conscientiousness) did not show this consistency. These results highlight the particular importance of trustworthiness and cooperativeness in the context of interdependent coordination.

AVAILABILITY FOR FUTURE INTERACTION

Analyses of dyadic cooperation show that reciprocally cooperative strategies are more successful as the probability of future interaction increases (Axelrod, 1984). This might have an analog in multiindividual interactions: In some models of cooperation, variants of reciprocal strategies enjoy success when groups of individuals consistently interact with one another over time (Boyd & Richerson, 1985; Gintis, 2000; Nowak & Sigmund, 1998; Panchanathan & Boyd, 2003).

It therefore seems plausible that human psychology is tuned to cues suggesting that an individual is in a long-interacting group, conditioning his or her cooperation on these cues (Keser & van Winden, 1997; see also Gintis, et al., 2003). These considerations also highlight the importance of maintaining one's reputation as an altruist or cooperator and imply that we should expect people to choose to be more cooperative when they believe they are being observed: If reputations matter, people should have mechanisms designed to preserve them (e.g., Frank, 1988).

Indeed, selfish or antisocial behavior is more common under conditions of anonymity: When people feel "deindividuated," minimizing reputational concerns, they are more likely to take advantage of opportunities to be selfish (e.g., Prentice-Dunn & Rogers, 1980; Zimbardo, 1970). For example, children in Halloween costumes obscuring their identity take more candy than those who are identifiable (Diener, Fraser, Beaman, & Kelem, 1976). Similarly, when adult experimental subjects are assured of anonymity from other subjects and from experimenters, they behave more selfishly (Burnham, 2003; Hoffman, McCabe, Shachat, & Smith, 1994). Conversely, such subjects behave more altruistically when more identifiable (Andreoni & Petrie, 2004). The effects of identifiability suggest that prosocial behavior is motivated in part by the effects of having a positive reputation and the reciprocal benefits this entails.

Related to anonymity is the perception that an individual is involved in an interaction that will not continue, and the experimental economics literature suggests that people are sensitive to this factor (e.g., Fehr & Gächter, 2003). Evidence from the Prisoner's Dilemma suggests that people cooperate more when they believe their interactions will be repeated and exhibit "end game" effects, such that previously cooperative individuals choose to defect when the end of the game looms (Andreoni & Miller, 1993; Keser & van Winden, 1997).

Even under the worst conditions for cooperation, however—one-shot, anonymous interactions—people do sometimes choose to cooperate (e.g., see the "strangers" condition in Andreoni & Miller, 1993). It may be that the systems designed for altruism were designed for a world in which repeat interaction was common, therefore, reflecting a tendency to behave in a way that embodies the assumption that cooperation generally provides gains in trade (Burnham & Hare, in press; Burnham & Johnson, in press). If human psychology is designed to make inferences about the probability of additional future interactions, complementary adaptations might exist designed to persuade potential relationship partners that one is indeed going to be available for future interactions. In other

words, there may exist adaptations designed to commit oneself to certain kinds of future behaviors. In formal analyses, commitment has long been recognized as an important parameter influencing a broad range of strategic interactions, and work continues in this area (Kerr & Kaufman-Gilliland, 1994; Kurzban, McCabe, Smith, & Wilson, 2001; Nesse, 2001; Schelling, 1960). Commitment to social groups can take the form of tattoos, scars, or even the public performance of rituals or the endorsement of beliefs idiosyncratic to the group; because such badges and behaviors reduce the likelihood that an individual will be accepted by a rival group, it serves as a signal of commitment to his or her present group.

Finally, familiarity—a sign that an individual has been around in the past, and thus perhaps a cue that he or she is likely to be around in the future—increases prosocial action. For example, people are socially attracted to those they believe to be familiar and are more likely to help them (Schroeder, Penner, Dovidio, & Piliavin, 1995). Further, parents not only appear to encourage their children to behave prosocially toward familiar others but also attempt to curb their children's prosociality toward those who are unfamiliar (Peterson, Reaven, & Homer, 1984).

In sum, when selecting group members, people seek those who exhibit cues suggesting they will be around in the future, such as familiarity and indices of commitment.

Ability to Coordinate

Multi-individual cooperation often requires computationally complex coordination. Individuals should thus prefer interaction partners with whom successful coordination is easier (due to shared language, etc.). Conversely, the importance of coordination might explain the stigma that attaches to certain kinds of conditions, such as mental illness, which undermine predictability and thus coordination (Kurzban & Leary, 2001). Indeed, along with trustworthiness and cooperativeness, emotional stability—one indicator of predictability—appears to be valued in partners across a range of interaction contexts (Cottrell et al., 2005).

Some have argued that the need for coordination explains the central position of *norms*—the rules that govern how social transactions are conducted—suggesting that people are often best served by adopting the norms that others are using, thereby allowing coordination with the largest number of possible others (Boyd & Richerson, 1985). Gil-White (2001) has extended this argument to the case of ethnicity, suggesting that the distaste for interacting with those outside an individual's ethnic group is a preference that evolved due to the fitness losses associated with the costs of attempting to coordinate with people with different norms.

Finally, the ability to coordinate might also be tied to individual histories with others. As people learn more about others' idiosyncratic traits and preferences, coordination should be made easier because of the ability to anticipate others' actions and read their intentions (Tooby & Cosmides, 1996). This should lead to momentum in social dynamics, as individuals become better interaction partners simply by virtue of shared history.

Taken together, these arguments suggest that selection pressures associated with coordination partners might have led to psychological systems designed to prefer those whose behavior is most predictable, including coethnics and familiar others.

GENERATION OF POSITIVE EXTERNALITIES

In the language of economics, externalities are unintended consequences to one agent that result from another agent's pursuit of his or her goals (Samuelson, 1970). For example, motorcyclists generate the negative externality of noise pollution when traveling from one place to another. When other people work toward their own idiosyncratic social goals, they generate positive and negative externalities. People benefit by associating with those who emit positive externalities, such as those with multiple skills, material resources, social connections, kin networks, and the like (Tooby & Cosmides, 1996). Conversely, human social psychology might be designed to avoid those who are likely to generate few positive externalities.

SUMMARY

Individuals who prefer associating with those who possess characteristics heuristically associated with the provision of fitness benefits should be at an advantage relative to individuals who are indiscriminately altruistic toward others. For example, because familiar individuals—those who have been seen frequently in the past—are also more likely to be around in the future, they should be more desirable as interactants than less familiar individuals, even though the link between familiarity and likelihood of prosocial future interaction is imperfect.

Evolved preferences for some types of interaction partners necessarily entail discrimination against the disfavored alternatives. In addition to discriminating in whom they interact with, humans also discriminate in how they interact with others, imposing costs and delivering or extracting benefits on some more than others. We now turn to this important issue.

MANAGING INGROUP RELATIONSHIPS

Humans have an array of evolved affective/cognitive mechanisms because different social threats, like different physical threats, must be recognized and responded to appropriately (e.g., Schaller & Neuberg, 2003). Physical threats (e.g., an incoming projectile) are identified through heuristically associated cues (e.g., rapid increase in an object's size), activating appropriate goals (e.g., escape) and action (e.g., jumping to the side). Social threats are no different. We identify the presence of a threat (e.g., disease by contagion) through its heuristically associated cues (e.g., bodily fluids), which then activate emotional reactions (e.g., disgust), beliefs (e.g., person is diseased, contaminated), goals (e.g., noncontact, distance), and behavioral inclinations (e.g., avoidance; Frijda, 1986; Izard, 1991; Plutchik, 1980; Roseman, Wiest, & Swartz, 1994; Tomkins, 1963).

Stigmatization must, therefore, be conceptualized as more than simple devaluation of another, as it has traditionally been conceived (e.g., Crocker, Major, & Steele, 1998). Although several perspectives recognize the multifaceted emotional texturing of stigma (e.g., Brewer & Alexander, 2002; Dijker, 1987; Fiske, Cuddy, Glick, & Xu, 2002; Goffman, 1963; Mackie, Devos, & Smith, 2000), we conceive of the different stigmatizing reactions as manifestations of function-specific adaptations designed to respond to individuals who pose different threats (Cottrell &

Neuberg, in press; Kurzban & Leary, 2001; Neuberg & Cottrell, 2002; Schaller, Park, & Faulkner, 2003).

Further, if different mechanisms are involved for different threats, then different contextual factors can be expected to moderate them. Just as loud noises are especially startling in the dark (Grillon, Pellowski, Merikangas, & Davis, 1997), in-group betrayal might elicit particularly intense reactions within the context of intergroup competition.

In this section, we discuss several threats group members can pose, the evolved mechanisms hypothesized to counter them, and individual difference and sociocontextual variables that potentially facilitate and attenuate these reactions.

Free Riding and Punishment

The breadth of peoples' desire to punish those who enjoy cooperation's benefits without paying associated costs remains mysterious (Fehr & Gächter, 2002). For dyads, adaptations designed to punish those who defect are relatively well understood, as models of the evolution of cooperation in dyads that interact over time (Trivers, 1971) and subsequent simulations (Aktipis, 2004; Axelrod, 1984) have helped to inform the search for the cognitive mechanisms that underpin cooperation. Punishing cheaters in social exchanges is sensible if doing so prevents them from doing so again in the future (Cosmides & Tooby, 1992). Experimental evidence reliably shows that even in one-shot, two-person bargaining games, people will endure costs to inflict costs on those who are perceived to be insufficiently fair or generous (e.g., Roth, 1995), a result that obtains even when the stakes are high (Hoffman, McCabe, & Smith, 1996). Why people punish, even in nonrepeated interaction, remains the subject of debate, but data from a vast empirical enterprise investigating this issue testify to the strength of the human psychology of punishment (Fehr & Fischbacher, 2003; Henrich et al., 2001).

Findings from Public Goods games similarly indicate that anger and the desire to punish free riders emerge in group contexts. In a typical experiment using the "voluntary contribution mechanism" (e.g., Isaac & Walker, 1988), subjects are randomly assigned to groups of generally between four and eight people and must divide money provided by the experimenter into two accounts. Money placed into one of the accounts, the private account, is kept while money placed in the group account is increased by a commonly known constant ($h > 1$) but shared equally among all group members. For suitably chosen values of h, each unit invested in the group account increases the aggregate group payoff but decreases the investing individual's payoff. A player's contribution to the group account is, therefore, an index of cooperation.

When this game is repeated and players observe the total contribution by the group in previous rounds, a frequently replicated result is that the total contribution to the group account begins at roughly 50% of the total aggregate endowments. This initial inclination toward group contribution contrasts with the prediction derived from standard economic theory—that players will contribute nothing toward the group account—and is remarkably robust, being observed across relatively wide parameters of the game (Ledyard, 1995). Contributions to the group account do tend to decrease from round to round toward zero.

The ability to punish defectors, however, increases cooperation. Yamagishi (1986) introduced a sanctioning system so that after observing other players'

contributions, individuals could, at a cost to themselves, reduce the income of the lowest contributor to the public good. When sanctioning was relatively inexpensive (costing the low contributors twice what punishers paid to sanction them), the sanctioning system was used and contributions were quite high, over 70% by the end of the series of rounds. These results have recently been replicated and extended (Carpenter, 2002; Fehr & Gächter, 2000, 2002), suggesting not only that people are willing to punish at a cost to themselves but also that this punishment is effective at removing much potential free riding.

Anger appears to be a critical force underlying the punishment of free riders. Fehr and Gächter (2002) found that in reacting to hypothetical scenarios, people estimated that they would be angry in proportion to the extent to which others contributed less than they themselves did. In the extreme hypothetical scenarios, nearly half of the participants were at ceiling on a seven-point Likert scale. Similarly, college students in a series of studies were asked to characterize the threats that different groups in the United States pose to the nation (e.g., to physical safety, property, values) and to report how they felt about these groups. Groups perceived to purposely take more than they contribute elicited anger (Cottrell & Neuberg, in press; Neuberg & Cottrell, 2002). And in a small groups competition experiment in which an experimental confederate posed one of several threats to the group's success, anger was the focal participant reaction toward confederates who free-rode on their teammates' efforts (Wilbur, Shapiro, Neuberg, Goldstein, & Hofer, 2003).

From the point of view of standard analyses of cooperation in groups, these results represent something of a puzzle. If public goods games are conceptualized as good models for understanding the evolution of cooperation in groups, then strategies that punish should be at a selective disadvantage relative to strategies that do not, as punishment entails a cost that benefits all group members, who stand to gain from the benefits that punishment brings to cooperative groups (Boyd & Richerson, 1988; Oliver, 1980). Because ostracism—excluding individuals from a group—is a subcategory of punishment, it is subject to the same problem.

The solution to this problem is the topic of considerable recent debate. Boyd, Gintis, Bowles, and Richerson (2003) presented one solution that turns on an interesting asymmetry: The fitness disadvantage of being a punisher depends on the number of free riders; if defectors are rare, punishers only infrequently have to punish and thus bear only a small fitness cost. Boyd et al.'s (2003) simulations show that the small individual disadvantage to punishing allows group selection to favor groups with substantial numbers of individuals who both cooperate and punish noncooperators.

Other possible explanations for punitive sentiments are on offer. Price, Cosmides, and Tooby (2002) argued that desires to punish those who are free-riding in the context of group cooperation seem to be designed to decrease the fitness advantage enjoyed by those who do not pay the costs of cooperating. Alternatively, some have suggested that anger at defection against the group—which motivates punishment—is a by-product of affective systems designed in the context of dyadic interactions (Neuberg & Cottrell, 2002). As indicated earlier, anger and desire for punishment might help support mechanisms designed for gains in trade by preventing individuals from being exploited (Cosmides & Tooby, 1992). Considerable debate continues surrounding these issues, de-

tailed discussions of which are available elsewhere (e.g., Gintis, Bowles, Boyd, & Fehr, 2003).

In sum, the empirical evidence strongly suggests that there is a robust psychology of retribution in the context of both dyads and groups. Debate remains, however, about the correct theoretical explanation for adaptations designed to punish noncooperators.

Intentional Free Riding via Inability

Taking benefits without contributing to group welfare is not always voluntary. For instance, children fail to contribute proportionately to groups (e.g., Hill & Kaplan, 1999), yet elicit little anger or punishment (for failure in this particular respect). Similarly, individuals unable to contribute to group welfare because of disability might burden their groups, yet often elicit empathy and pity instead of anger (e.g., Dijker & Koomen, 2003; Weiner, Perry, & Magnusson, 1988).

On a strict cost-benefit analysis, the reason for a free rider's noncontribution shouldn't matter. However, if punishment psychology is designed to induce future cooperation (see earlier discussion), it should be designed to incur costs of sanctioning only if it is likely to do some good: Punishing those who can't contribute will obviously not cause increased contribution in the future.

Another possibility is that the inability to contribute is often a temporary state, and helping such individuals makes more likely returned help in the future. Indeed, helping people in need might be cost effective, as it is often possible to deliver benefits that come at a relatively small cost to self but that are very valuable to the recipient. Natural selection might, therefore, have favored affective and motivational systems designed to succor those in temporary need over a more indifferent system by virtue of the subsequent benefits in the form of reciprocal actions once the target individual is sufficiently recovered from his or her state (Tooby & Cosmides, 1996).

From this view, empathy, pity, and prosociality should be elicited more readily when helping the target is seen as a good investment, as when those with infirmities give cues that suggest that their infirmities are transient and remediable and/or are judged not responsible for their plight and, therefore, less likely to be in the needy position again (Weiner et al., 1988). In contrast, nonobvious infirmities (e.g., depression, learning disabilities) should less readily elicit empathy and pity and thus help (Weiner et al., 1988). However, help is context dependent: As the marginal cost of help increases, willingness to do so should decrease. For instance, some nomadic peoples kill the very young and very old if they interfere with the travel necessary for subsistence (e.g., Alvarsson, 1988; Condon, 1987; de Coccola & King, 1986; Graburn, 1969).

Laboratory experiments clearly show that differences in perceived defector intentions influence how they are treated. When players' moves are perceived as outside their control, both positive reciprocity—reward—and negative reciprocity—punishment—are reduced (Blount, 1995; Falk, Fehr, & Fischbacher, 2000; Rigdon, McCabe, & Smith, 2003).

In sum, anger and punishment in response to free riding might be deactivated under certain conditions, occasionally even replaced by empathy and prosociality, possibly in the service of future group cooperation.

PHYSICAL ATTACK

For social creatures, protection from attack by conspecifics constitutes an important selection pressure. Cues to physical threat from others—angry facial expressions, rapid approach, weapons, and so forth—should activate the appropriate emotional, cognitive, and behavioral mechanisms. Moreover, because of the importance of intergroup competition (see later discussion), cues to outgroup membership might also activate these adaptations (Schaller & Neuberg, 2003).

Ethnic outgroups indeed elicit distinctive physiological (Hart et al., 2000), cognitive (Judd & Park, 1988), and behavioral responses (Sidanius & Pratto, 1999). Furthermore, consistent with arguments that it is particularly male cooperative coalitions that constitute aggressive threat (Keegan, 1994; Tiger, 1969), prejudices of White Americans toward Black Americans, and the stereotypes of criminality and aggressiveness are directed disproportionately toward males in their teens and 20s—and not toward younger, female, and older African Americans (e.g., Quillian & Pager, 2001; see also Sidanius & Veniegas, 2000).

Individual differences and context moderate such reactions. Whites who believe that the world is a dangerous place detect anger in neutrally expressive male African American (but not in similarly neutral White or female) faces (Maner et al., 2005). Further, in a dark room, the more a person believes the world is a dangerous place, the higher he or she rates traits that connote physical danger (e.g., "hostile") but not danger-irrelevant traits (e.g., "lazy") as "part of the popular cultural stereotype of Blacks" (Schaller, Park, & Mueller, 2003; see also Schaller, Park, & Faulkner, 2003).

In sum, there exist powerful adaptations designed to counter physical threats in humans, and these influence intragroup relations. These adaptations also appear to be intimately bound together with in-group/outgroup psychology, suggesting that serious threats from conspecifics also came from outside, rather than just inside, an individual's relevant group.

HEALTH

Because parasites are selected to exploit their particular host species (e.g., Anderson & May, 1982), extreme sociality seriously exacerbates the problem of keeping free of parasites. We therefore expect there to exist adaptations designed to minimize exposure to and maximize distance from individuals who present cues to parasitic infection.

Disgust constitutes a critical affective element of this system, elicited most readily by those who exhibit external cues associated with disease—discharged bodily fluids, and, more generally, deviations from the species-typical morphology (e.g., skin conditions, facial and bodily asymmetries, absence of limbs, unusual behaviors; Ginsburg & Link, 1993; Kurzban & Leary, 2001; Park, Faulkner, & Schaller, 2003; Rozin, Markwith, & Nemeroff, 1992; Schaller, Park, & Faulkner, 2003).

These cues elicit physical disgust with its associated facial responses (narrowed eyes, protruding tongue, etc.; Rozin, Lowery, & Ebert, 1994) and the tendency to avoid contact with the apparently diseased individual and his or her bodily secretions.

These systems are cue-based and heuristic—they respond to imperfect cues in the proximate stimulus, not to the "objective" probability of disease transmission. Further, because the cost of failing to identify a potential transmission threat is high, these systems might be biased in the direction of overperception of threat (Haselton & Buss, 2000). Peoples' overzealous reactions to certain kinds of conditions (AIDS or cancer) might be understood in this context (e.g., Rozin, Markwith, & Nemeroff, 1992), particularly for those who see themselves as vulnerable to disease (Park et al., 2003; Schaller, Park, & Faulkner, 2003).

Potentially contagious others also elicit empathy and pity (see earlier discussion), sometimes leading to a certain degree of ambivalence (Cottrell & Neuberg, in press). Indeed, people report ambivalent feelings toward persons with physical disabilities (e.g., Katz, 1981; Katz, Wackenhut, & Hass, 1986), and avoidance appears to be the primary means of dealing with disabled individuals (e.g., Hardaway, 1991; Kleck, Ono, & Hastorf, 1966; Perlman & Routh, 1980; Snyder, Kleck, Strenta, & Mentzer, 1979; Stephens & Clark, 1987). As discussed earlier, perception of the severity and the degree to which someone is *intentionally* placing others at risk should mediate responses to potentially contagious others.

In sum, there seem to be mechanisms designed to protect people from contagion. These include an aesthetic system designed to prefer the normal phenotype and affective and behavioral systems designed to motivate avoidance of those seen as likely to transmit parasitic infections.

Socialization Threats

Common norms of behavior facilitate coordination and the gains from cooperation, and a signal feature of human groups is the transmission of information that enables norm sharing. This fact might partially explain why humans prefer to interact with those who share an individual's norms, to copy his or her group's norms, and, critically, to react negatively to those with different norms (Boyd & Richerson, 1985).

Value differences indeed create prejudices of many sorts (e.g., Biernat, Vescio, Theno, & Crandall, 1996; Katz & Hass, 1988; Rokeach, 1972), eliciting disgust and a desire to separate the violators from other group members (Cottrell & Neuberg, in press), mirroring physical disgust (Rozin, Haidt, & McCauley, 2000; Rozin, Lowery, Imada, & Haidt, 1999).

It is interesting that people respond negatively to norm violations that have no obvious effects on their own interests, suggesting that the underlying psychology is more specific than simple cost-benefit computations. These effects seem to be particularly pronounced, as we might expect, when those with discrepant norms have the potential to be models for subsequent social learners within the group (Neuberg, Smith, & Asher, 2000). For example, despite increasingly favorable attitudes in the past 25 years, people have remained relatively unenthusiastic about homosexuals in two potentially influential social positions—elementary school teachers and clergy ("Americans growing more tolerant of gays," 1996; Newport, 2001). Similarly, certain grade- and secondary-school movements away from public education and toward private religious schools, charter schools, and home schooling appear to be driven not only by traditional education concerns but also by concerns related to "value education."

SUMMARY

We've presented several threats that emerge in the context of human sociality; there no doubt exist many others. Our thesis is that just as humans have evolved mechanisms for choosing selectively among those who would likely be valuable versus costly group members, we also possess evolved mechanisms for addressing those threats often posed within social groups. These systems include sensitivity to features associated with these threats, conditions (both personal and socioenvironmental) under which certain threats may be especially likely to emerge or be damaging, and a functional set of emotional, cognitive, and behavioral responses designed to mitigate or eliminate these threats. Stigmatization is neither random nor arbitrary but designed to enhance the fitness benefits of highly interdependent group living.

INTERGROUP RELATIONS

Intergroup conflict seems a ubiquitous feature of human life (Keegan, 1994; Sumner, 1906), and the historical association between groups and the most severe forms of violence have led to multiple, evolution-based accounts of intergroup conflict (e.g., Alexander, 1987; Eibl-Eibesfeldt, 1979). Here we discuss three broad classes of explanations for the mechanisms that underlie this pervasive feature of social life. Two of these explanations suggest that adaptations designed for other purposes—general cognition and within-group cooperation—have the side effect of intergroup conflict. The third explanation posits that intergroup conflict is a result of evolved cognitive mechanisms designed for precisely this purpose.

INTERGROUP COMPETITION AS A BY-PRODUCT OF DOMAIN-GENERAL COGNITIVE MECHANISMS

A predominant view in the social psychological literature holds that intergroup processes such as stereotyping, prejudice, and in-group favoritism derive from a small number of relatively general cognitive mechanisms (e.g., categorization) and motivations (e.g., self-enhancement). One prominent example is Social Identity Theory (e.g., Tajfel & Turner, 1979, 1986), a perspective derived largely from the findings of experiments employing the so-called minimal group paradigm. Here, individuals are randomly assigned to membership in a "group" of no previous personal relevance (e.g., dot "overestimators" versus "underestimators") and, subsequently, in the absence of personal contact or incentives for favoring one group versus the other, are given the opportunity to allocate benefits or costs (often "points" with no economic value) to individual members of the groups. Findings suggest that some individuals discriminate in favor of those placed into the same category. From such findings, the conclusion is often drawn that the simple act of social categorization, coupled with relatively basic motivations for self-enhancement, can explain intergroup phenomena (Tajfel & Turner, 1986).

These findings and conclusions are vulnerable, however, on several grounds (Yamagishi, 2003). First, even when in-group favoritism is observed, it tends to be of only modest magnitude; indeed, many participants show a preference for equal splits of points when possible. Second, the effect is very fragile, breaking down, for example, when it is costs rather than benefits to be allocated (Mummendey

et al., 1992) or when there are three groups rather than two (Hartstone & Augoustinos, 1995).

Further, categorization per se might not be as important as perceived interdependence in generating in-group favoritism. When participants believe they will receive their allocation from an outgroup member, they exhibit outgroup favoritism (Rabbie, Schot, & Visser, 1989), and when they believe that their allocations come not from a fellow in-group member but instead from the experimenter, they allocate rewards evenly (Karp, Jin, Shiotsuka, & Yamagishi, 1993). In another experiment, participants were asked the following question: "Did you think that your own group members would allocate you more if you allocated more to a member of your own group?" Only those who answered in the affirmative showed in-group favoritism, strongly suggesting a kind of groupwise, reciprocal psychology (Jin, Yamagishi, & Kiyonari, 1996). Taken together, these results suggest that, instead of categorization per se, the key element in peoples' decisions to favor fellow in-group members might be the perception that group members are mutually dependent on one another (Rabbie et al., 1989; Yamagishi, 2003).

More generally, although it is possible that relatively domain-general cognitive mechanisms are responsible for the exceedingly rich and complex dynamics that characterize intergroup relations, such a possibility strikes us as remote. While general cognitive processes related to categorization, storage, retrieval, and so on are relevant to social cognition, a full explanation of intergroup processes is likely to require that theoreticians move beyond simple considerations of domain-general processes to consider the specific domains of social life. The task of understanding the complexities of behavior in "minimal groups" provides a case in point: Categorization alone seems insufficient in the absence of considering the concept of mutual outcome dependence of group members.

Intergroup Competition as a By-product of Intragroup Cooperation

Human cooperative psychology might have evolved because of the benefits group living affords, but it is plausible that these adaptations might, as a side effect, contribute to intergroup conflict (e.g., Boehm, 1999; Brewer, 2001; Campbell, 1967).

Earlier we argued that assessing the quality of potential cooperation partners directs attention to cues to a potential partner's availability for future interactions. This might have the side effect of leading us to initially characterize members of other groups as low-quality, potential cooperation partners because outsiders are unlikely to be familiar or to bear markings of in-group commitment. As a consequence, individuals should be relatively unlikely to act prosocially toward outsiders. Indeed, Eibl-Eibesfeldt (1979) puts it simply: ". . . in all cultures, they [strangers] are met with a certain reserve. Fear and rejection of strangers develop even in the absence of bad experiences with them" (p. 105). In and of themselves, preferences for familiar in-group members do not imply the necessity of outgroup hostility (Brewer, 1979, 2001).

In a world in which groups come into contact with one another and compete for scarce resources, intragroup preference and cooperation can turn into intergroup hate and conflict. Research from the realistic group conflict theory tradition—the idea that intergroup conflict is driven by competition for scarce resources—indicates that intergroup prejudices and conflict increase as real competition between groups for valuable resources increases (e.g., Bonacich, 1972;

Brewer & Campbell, 1976; Sherif, Harvey, White, Hood, & Sherif, 1961/1988), and recent survey research reveals few prejudices in the absence of perceived tangible outgroup threats, but considerable prejudices in the presence of such threats (e.g., Cottrell & Neuberg, in press; Neuberg & Cottrell, 2002). This implies that the more an individual is invested in and dependent on his or her own group—and therefore, identifies with it—the more he or she should be prejudiced and discriminate against outgroups; this idea has received ample support (e.g., Branscombe, Ellemers, Spears, & Doosje, 1999; Hodson, Dovidio, & Esses, 2003; Perreault & Bourhis, 1999).

However, even in the absence of tangible threat or competition, when in-group norms are given moral weight—as Gil-White (2001) has argued that they are—outgroup members become the target of moral ire simply by following their own norms. Hence, Gil-White's (2001) model entails conflict between ethnies as a downstream consequence of the evolved preference for coethnics who share an individual's norms.

Finally, it has been argued that the same threat-based framework useful for predicting the suites of stereotypical beliefs, emotional reactions, and action tendencies elicited by threatening in-group members can predict the suites of stereotypical beliefs, emotional reactions, and action tendencies elicited by parallel outgroup threats. Just as individuals who are perceived to illegitimately take another's valuable resources elicit anger and the desire to aggress, outgroups perceived to threaten in-group resources elicit anger and the desire to aggress; just as individuals who hold differing values elicit moral disgust and the inclination to avoid, groups who hold differing values elicit disgust and the inclination to avoid (e.g., Neuberg & Cottrell, 2002; Schaller & Neuberg, 2003; Schaller, Park, & Faulkner, 2003). The parallel nature of the in-group stigma syndromes and intergroup prejudice syndromes is consistent with the possibility that intergroup conflict emerges as a by-product of adaptations designed to solve problems of intragroup relations.

INTRAGROUP COOPERATION AS AN ADAPTATION FOR INTERGROUP COMPETITION

Some have argued that multiindividual cooperation might be specifically designed for intergroup conflict. Models of this type face the usual difficulties associated with explaining free riding: Individuals are better off allowing others to bear the costs of competing, especially if competition entails violent competition in which injury or death is possible.

Tooby and Cosmides (1988) suggest that, under particular conditions—including uncertainty about who is likely to be killed and reasonably equitable division of the acquired fitness benefits—mechanisms designed to exploit the reproductive resources of other groups (i.e., reproductive females) might be selected for even when cooperation for this purpose places the lives of individual group members at risk. This model implies that intergroup conflict is a male phenomenon.

Whether this model is correct or not, it does seem plausible that the potential fitness gains obtainable through the particular forms of cooperative, coordinated activities in which males and females differentially engaged—including cooperative aggression (e.g., in warfare) and hunting among males—seem to have led to a more pronounced "coalitional psychology" among men (Kurzban & Leary, 2001).

Most transparently, warfare is a distinctly male phenomenon (Keegan, 1994). Females have occasionally assumed support roles in conflict, but males have historically been the exclusive participants as combatants in warfare.

Differential selection pressures such as these might help explain some sex differences, including the finding that males tend to be more prejudiced against outgroups than are females (e.g., Sidanius, Cling, & Pratto, 1991; Watts, 1996) and that males tend to be seen as the prototypical outgroup member (Zárate & Smith, 1990). It also might go some of the way toward explaining discrimination on the basis of sex. Clearly, such discrimination exists: Historically, women have been excluded from positions of political power (Sidanius & Pratto, 1999), excluded from or discriminated against in the context of economic production, and systematically barred from certain occupations or professions (Daly & Wilson, 1983) and particular kinds of groups and associations (Tiger, 1969). Male psychology might be designed to seek control of political power and resources and, moreover, seek out other males as cooperative partners in these activities (Sidanius & Pratto, 1999; Tiger, 1969).

There are a number of findings from the laboratory that link multi-individual cooperation and intergroup conflict. In a number of environments, people choose more competitive options when they are playing a Prisoner's Dilemma game as a member of a group rather than as an individual (Insko et al., 1987; Insko & Schopler, 1998), and groups are (often correctly) perceived to be competitive (Fiske & Ruscher, 1993).

Although intergroup conflict is apparently ubiquitous, widespread, violent conflict and intense emotions of hate are restricted to certain kinds of social identities. Gil-White (2001) points out that architects and lawyers do not riot one against the other. Kurzban and Leary (2001) make a similar point about groups such as the obese, who are, to be sure, the target of negative beliefs and prejudices, but have never been subject to the kind of attacks associated with nations, ethnies, or even supporters of athletic clubs. Not all kinds of groups elicit the desire for conquest or extermination, and not all kinds of groups motivate cooperation for the purpose of intergroup competition and conflict. The most severe forms of antisocial behavior seem, instead, to be restricted to groups that are construed as potentially coordinated, cooperative sets of individuals. This may frequently be true of ethnies, which share norms and practices that allow close coordination.

Summary

It seems unlikely that intergroup prejudices and conflict emerge simply from a small constellation of simple domain-general cognitive and affective processes, as some traditional social science theorizing suggests. More likely, they derive both from adaptations designed specifically for this purpose and as a by-product of mechanisms designed for other purposes, including within-group cooperation. It seems unlikely, however, that intergroup conflict, with its attendant affective, cognitive, and behavioral components, derives solely from adaptations designed for within-group cooperation. The intensity of emotion associated with intergroup conflict and its historical omnipresence is consistent with the view that there are specific adaptations serving the function of group-based competition.

DOMAIN SPECIFICITY REVISITED AND EXTENDED

Mackie et al. (2000) asked: "Why does one outgroup attract fear or contempt while another becomes the target of anger?" (p. 602). Our answer is straightforward: Because different groups activate different adaptations designed to cope with different social problems. Those coalitions and ethnies perceived to threaten physical safety elicit fear, those perceived to threaten health or morals elicit disgust, and those perceived to free-ride on others or to take what is not rightly theirs elicit anger. As much as we might prefer parsimony, there is no single system that can address effectively the many social challenges people face. Rather, problems of sociality are addressed by a set of distinct, and functionally relevant, cognitive, affective, and behavioral adaptations.

Earlier we suggested that the monolithic concept *group* should be replaced by a set of more useful concepts. Wilder and Simon (1998) observed that "an overview of the various definitions of *group* employed by social psychologists reveals a tale not unlike that of the blind men trying to describe an elephant by touching only one part of the animal" (p. 29). We agree with this general assessment of the confusion in the literature but suggest a slightly different cause: There's more than one animal in the room.

Granted, we believe it possible, even likely, that perceivers apply categorization systems of relatively broad functional scope for classifying and understanding certain social groupings: "People wearing white shoes," for example, is a category that might well be constructed much the same way that categories such as "artifacts under 5 pounds" are constructed. Nonetheless, it's likely that perceivers bring to bear distinct and proprietary categorization systems for classifying and understanding other kinds of social groupings, such as cooperative coalitions and ethnies. If so, it should be possible to distinguish among these different types of groups by looking at the array of processes associated with social cognition—how targets are categorized, the inferences people make based on group membership, the affective systems that are engaged as a function of the nature of the outgroup, and the behaviors different types of outgroup members evoke.

Kurzban, Tooby, and Cosmides (2001) addressed specificity of this type by showing that, for coalitions, categorization may be driven less by perceptual similarity—as general categorization systems might be—than by cues to coordinated, cooperative action. Similarly, Gil-White (2001) suggested and provided evidence that the parsing of ethnies is performed by a proprietary system originally designed to categorize species. Sidanius and colleagues' recent work (Sidanius & Pratto, 1999; Sidanius & Veniegas, 2000) suggests that simple, and apparently straightforward, models of "cross-categorization" need to take into account the qualitative nature of the group categories being combined. For example, because both Blacks and females face discrimination, we might expect that Black females would face the greatest discrimination. Instead, discrimination is worst for Black males (Sidanius & Veniegas, 2000). This finding not only resonates with the argument that coalitional psychology is designed for predominantly male group conflicts, but also illustrates the more general principle that investigations of in-group favoritism and outgroup discrimination should take into account the nature of the particular groups involved and the threats they are seen to pose.

CONCLUSIONS

We have suggested throughout this chapter that social exclusion, stigma, and discrimination are far from monolithic constructs, defined simply in terms of negative affect and avoidance tendencies. Rather, they reflect an array of qualitatively discrete suites of affective, cognitive, and behavioral adaptations that have evolved to solve diverse problems associated with sociality. An important consequence is that there might be different underlying cognitive representational systems for handling different kinds of collections of people.

Additional work should continue to clarify the important distinctions that human psychology makes among the different ways in which people can be represented—as categories (obese people), coalitions (the Miami Dolphins), and ethnies (Jews). In short, just as *social exclusion, stigma, prejudice,* and *discrimination* represent more than just monolithic constructs, so, too, for the case of *groups.* Because each of these may lead to stigmatization, exclusion, or prejudices of different sorts, it is important to understand how cues to different kinds of groupings and the threats they may appear to pose map onto different stigma and prejudice syndromes (Schaller & Neuberg, 2003).

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