CHAPTER 18

Conflicting Interests in Social Life

UNDERSTANDING SOCIAL DILEMMA DYNAMICS

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AT THE HEART OF MANY EXPERIENCES in social life lies a social dilemma—a fundamental conflict between the short-term interests of individuals and the longer-term interests of the groups of which they are a part. The "dilemma" is that self-interested behavior has higher payoffs for individuals in the short-run regardless of the decisions made by others, but everyone is better off in both the short and long term if everyone cooperates than if everyone acts selfishly (Dawes, 1980). Kollock (1998, p. 183) captured the essence of the problem posed by social dilemmas when he identified them as situations "in which individual rationality leads to collective irrationality. That is, individually reasonable behavior leads to a situation in which everyone is worse off than they might have been otherwise."

In this chapter we review experimental research regarding two classes of social dilemma: public goods dilemmas and common resource dilemmas (often called commons dilemmas). Public goods dilemmas are situations in which contributions are required by parties to create a good of benefit to a discrete group of stakeholders (the "public"). When two companies agree to participate in a joint venture, they are confronted with a public goods dilemma. If one party makes only a nominal contribution to the effort—and even exploits the opportunity to gather competitive intelligence about its partner—it may maximize its short-term payoffs. However, if its partner chooses to do the same, then the joint venture will yield little benefit to either party and may even have a net cost to each. The joint venture is more likely to yield continuing positive returns if both partners contribute. In this case

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the "public good" would be the positive synergies and outcomes produced by the joint venture. Not-for-profit institutions like symphony orchestras and hospitals, charitable efforts like programs for street youth and famine relief, and positive environments like clean air or healthy workplaces can all be characterized as public goods.

Common resource dilemmas are the structural inverse of public goods dilemmas. Public goods dilemmas involve decisions about how much to *contribute* to a joint resource. Common resource dilemmas, on the other hand, involve decisions about how much to take, or *harvest,* from a joint resource. Fish stocks are a good example of a common resource dilemma. It is in the short-term interest of each individual fisherman to harvest as many fish as possible from the fishery. Yet communities of fishermen that collectively act in "individually" rational ways devastate fish stocks so that everyone who earns a livelihood from fishing is worse off.

The pervasive nature of social dilemmas has prompted researchers from every branch of the social sciences to invest energy and resources in trying to understand their dynamics (e.g., Agrawal, 2002; Ostrom, 1998). This chapter focuses on experimental research from the fields of social psychology, organizational behavior, and, to a lesser degree, economics.

The Early Days of Experimental Social Dilemma Research

The inspiration for experimental research related to social dilemmas can be traced to the early days of game theory and Von Neumann and Morgenstern's groundbreaking book, *Theory of Games and Economic Behavior* (1944). Game theoretic ideas were introduced into social psychology in formal modeling terms by Luce and Raiffa in their book *Games and Decisions* (1957), and into psychological theorizing by Thibaut and Kelley in *The Social Psychology of Groups* (1959). There was a subsequent explosion of interest in two-person experimental games (mostly prisoners' dilemmas) and a growth of interest in extending theory to multiperson contexts and applied problems that were seen to be analogous to "prisoners' dilemmas," like international relations during the cold war (e.g., Osgood, 1962). During this period, experimental economists and social psychologists pursued different interests. Whereas economists remained focused on rules, institutions, and formal modeling (cf. Roth, 1995), psychologists began to pursue more psychological and contextual factors like individual differences (e.g., Kelley and Stahelski, 1970; Messick and McClintock, 1968), communication (e.g., Dawes, McTavish, and Shaklee, 1977), and changes to the payoff structure of a dilemma (e.g., Kelley and Grzelak, 1972).

The breadth of this rapidly expanding field makes a comprehensive review of the literature impossible here. Interested readers are referred to several

more comprehensive reviews (Dawes, 1980; Kollock, 1998; Komorita and Parks, 1996; Kopelman, Weber, and Messick, 2002; Ledyard, 1995; Messick and Brewer, 1983b; Van Lange, Liebrand, Messick, and Wilke, 1992a). In this chapter we selectively review the literature in light of March's (1994) logic of appropriateness. March suggested that, faced with a need to make a decision, people ask themselves (implicitly or explicitly), "What does a person like me do in a situation like this?" At the most basic level, this question focuses us on three important factors—two main effects and an interaction: (1) characteristics of the situation, (2) characteristics of the decision maker, and (3) the importance of the interaction between decision makers and the situations they encounter. This is, of course, consistent with classic statements of the social psychological enterprise (e.g., Ross and Nisbett, 1991). However, the additional contribution of March's logic of appropriateness framework is to hone in on the definition of the situation as the heart of the decision-making process; what is determined to be "appropriate" behavior hinges on how the situation is understood.

Though March's framework is a simple one, it offers a better fit for the accumulated social dilemma data than the traditional expected utility models of decision making that focus primarily on decision makers' predicted outcomes (cf. Messick, 1999). Consequently, we have chosen this framework to organize the literature in this chapter. We first highlight some documented main effects of important situational characteristics in dilemmas. We then turn to main effects of decision-maker characteristics, and to the more complicated area of interactions—what a person "like me" does "in a situation like this." Finally, we identify a number of opportunities for future research in light of March's interactive logic of appropriateness framework.

Characteristics of the Situation: Task Structure and Task Description

The experimental manipulation of many different situational characteristics has been found to have predictable effects on people's choices in social dilemmas. These situational characteristics fall into two broad categories: task structure and task description. Task structure variables are objective elements of a situation. In this category, we focus on communication, group size, leadership, and sanctions. Task description, on the other hand, refers to different characterizations of equivalent tasks. This category includes the effects of framing on people's behavior. In terms of March's logic of appropriateness (1994), both task structure and task description variables can influence how decision makers answer the question: What kind of situation is this?

TASK STRUCTURE

Communication

One of the most consistent main effect findings in the social dilemma literature is that allowing task-relevant communication between parties yields more cooperative behavior (e.g., Dawes et al., 1977). A number of possible explanations for this effect have been offered. By 1990, systematic programs of research had reduced the possible explanations to two: (1) letting people talk to one another enhances feelings of group identity and solidarity, and (2) when people talk to one another they elicit commitments to cooperate from their counterparts (Dawes, Van de Kragt, and Orbell, 1990). Recent studies suggest that communication derives most of its effectiveness from the latter explanation—the elicitation of commitments and individuals' internalized beliefs about the importance of following through on their commitments (Bouas and Komorita, 1996; Kerr, Garst, Lewandowski, and Harris, 1997; Kerr and Kaufman-Gilliland, 1994). Although group identification does appear to improve somewhat when communication occurs, its effect is small and not sufficient to account for the overall pattern of results (Kerr and Kaufman-Gilliland, 1994). Making a commitment seems, for most people, to define the situation as one in which follow-through is most appropriate.

Group Size

In recent years, significant advances have also been made in understanding group size effects. It was long assumed, based on much-replicated early findings, that people cooperated more in smaller groups than in larger groups (for reviews of these early findings, see Dawes, 1980; Messick and Brewer, 1983a). Recent studies suggest that this effect flows from peoples' oversimplified heuristic belief that their actions are more efficacious in small groups than in large groups (cf. Kerr, 1989; Seijts and Latham, 2000; Seijts, Latham, and Whyte, 2000). That is, compared to people in larger groups, people in smaller groups believe that their individual choices make more of a difference in their groups' outcomes. Further, people tend to adhere to this heuristic even when it is objectively not true (Kerr, 1989). Kerr calls such effects "illusions of efficacy." Smaller group size, then, seems to prime people to define their situation as one in which cooperation is reasonable because it can be effective.

Leadership

Since the very early days of social dilemma research, the appointment of leaders has been offered as a solution to the difficulties inherent in managing conflicts of interest along temporal and individual versus group dimensions (e.g., Hardin, 1968). Experimental research demonstrated that parties to a

common resource dilemma were more likely to appoint leaders to manage their access to a resource when the commons was being overused (e.g., Rutte and Wilke, 1984) and when managing the common resource was seen to be particularly difficult (Samuelson, 1991).

Recent research has begun to further qualify our understanding of people's reactions to those exercising leadership by considering interactions between characteristics of both the leaders and the led. For example, Wit and Wilke (1990) demonstrated that when leaders attempt to encourage cooperation through rewards and punishments, who leaders are, and whose interests they are seen to represent, can make a difference in peoples' choices. In their study, rewards offered by government officials were counterproductive in eliciting cooperation from a group of businesspeople, while the same rewards offered by a parent company were successful in encouraging cooperation. The source of incentives made no difference to a group of undergraduates. Further, during the 1991 water shortage in California, Tyler and Degoey (1995) found a positive relationship between community members' judgments of leaders' legitimacy and the leaders' use of fair allocation and decision-making procedures. However, that relationship was moderated by community members' level of social identification with their communities; those who took pride in their community and saw procedures as fair expressed particularly great support for their municipal leaders.

Sanctions

The payoff structure of social dilemmas has been the subject of considerable study. Not surprisingly, incentives tend to encourage a target behavior and punishments tend to discourage it (see Van Lange, Liebrand, Messick, and Wilke, 1992b, for a concise review). More interesting, from a logic of appropriateness perspective, is how rewards and punishments might affect situational construal.

Tenbrunsel and Messick (1999) demonstrated that a sanctioning system intended to encourage cooperation might actually discourage it by changing how the situation is understood. Participants were assigned the role of businesspeople who had to make a decision about investing in pollution control technologies. When there were no sanctions, a substantial proportion of participants chose to invest in the public good—clean air for all—despite its implications for the bottom line. In the absence of sanctions, people viewed the dilemma as an ethical problem; investing in the technology was the "right" thing to do. However, in the presence of small sanctions, fewer decision makers made the prosocial, cooperative investment. The presence of sanctions seemed to change how decision makers understood the task from an ethical decision problem to a more calculative, cost–benefit business decision. When the sanctions were small and the probability of being

caught without the technology was low, participants were more likely to act in a self-interested fashion. These results are consistent with Messick's (2000) notion that whether the situation is construed as a group problem or an individual problem is an important predictor of cooperation in social dilemmas. Arguably, in the Tenbrunsel and Messick (1999) study, sanctions focused participants on costs and benefits for their own company (i.e., an individual problem), whereas in the absence of sanctions, participants seemed to focus more on the public good of clean air (i.e., a group problem).

Each of the task characteristics reviewed—whether communication, group size, or sanctions—can be seen to affect how people define the social dilemma situation, and therefore what is construed to be appropriate or reasonable behavior. The effects of task structure on situational definition can be relatively direct (e.g., sanctions focus people on the calculus of payoffs), somewhat indirect, (e.g., communication leads to elicitation of commitments that increase cooperation by tapping into internalized personal norms), and the consequence of evoking heuristic beliefs (e.g., I can make a difference in a small group).

TASK DESCRIPTION

Peoples' answers to the question "What kind of situation is this?" can also be influenced by how the situation is described or labeled. The effects of such manipulations are called framing effects.

Framing

Since Kahneman and Tversky's (1979) introduction of "prospect theory," behavioral scientists, and decision-making researchers in particular, have examined how the framing of situations influences how people respond to them. Although prospect theory, per se, has failed to predict clear and reliable effects in social dilemmas,[1] researchers have reported a series of other intriguing framing effects and findings.

People seem to bring different assumptions to identical social dilemmas that are merely framed differently. For example, in a study of empathy and cooperation, Batson and Moran (Batson and Moran, 1999) found that participants who thought they were participating in a business transaction study cooperated less than those who thought they were participating in a "social exchange" study. It seems that being asked to make "business decisions" invoked a more competitive definition of the situation than "social exchange"—even though the underlying tasks were structurally equivalent for both groups.[2]

Batson and Moran's (1999) study is an example of how labeling a situation differently can affect behavior. How the action in a situation is labeled—its "procedural frame"—is also important. Larrick and Blount (1997) noted that

the structure of a sequential social dilemma and the structure of an ultimatum bargaining game are identical; yet people cooperate more in social dilemmas than in ultimatum bargaining games. To explain this effect, Larrick and Blount (1997) pointed to how the action is labeled in each situation. In their sequential commons dilemma, the second participant was permitted to "claim" some portion of the remaining resource after the first participant had made a decision. In the ultimatum bargaining game, the second participant was entitled to "accept or reject" the first participant's offer. The researchers demonstrated experimentally that the different procedural frames led to the observed difference in cooperation between their sequential social dilemmas and ultimatum bargaining games.

van Dijk and Wilke (2000) argued that framing manipulations are effective because they focus people on particular aspects of a social dilemma's context. Like Larrick and Blount (1997), van Dijk and Wilke (2000) started with the finding that behavior in different dilemma types varies, despite other structural similarities. In this case, the researchers noted that public goods dilemmas and common resource dilemmas, two sides of the same situational coin, tend to elicit different behaviors. However, the researchers went a step further by striving to isolate the processes underlying different procedural frames, like "take" versus "leave" and "give" versus "keep." They found that the public goods frame focuses people on striving to make contributions equivalent to those of others. In other words, people seem interested in ensuring that they don't contribute more than their share to the public good. The common resource dilemma frame, on the other hand, focuses people on the achievement of equivalent final outcomes. When it comes to harvesting from a common resource, everybody wants to make sure they get their fair share. The differing foci appear to evoke different definitions of the situation and therefore elicit the application of different behavioral rules.

Framing—be it of the situation or of the required action—has proven to be an important situational characteristic. Simply changing the label given to an exercise, or the description of the decision required, is enough to elicit changes in people's responses and choices.

Characteristics of Decision Makers

Considerable research has been conducted to determine the extent to which individual differences (e.g., personality, values, etc.) can predict the outcomes of social dilemmas and the choices of individual decision makers. Many individual differences, including self-monitoring (e.g., De Cremer, Snyder, and Dewitte, 2001; Kurzban and Houser, 2001) and gender (e.g., Walters, Stuhlmacher, and Meyer, 1998), have been the subject of careful study. However, for the purposes of this review, we focus on social motives because

social motives are the individual differences that have received the greatest attention in the experimental social dilemmas literature (see Chapters 5 and 6 for a discussion of social motives and negotiation).

SOCIAL MOTIVES

Social motives are also referred to as social values or social value orientations. Although there can be any number of discrete social motives (McClintock, 1978), four receive the greatest attention: individualism, competition, cooperation, and altruism (cf. McClintock, 1972). Individualism is the motive to maximize personal outcomes. Competition is the motive to maximize one's own outcomes relative to others' outcomes. Cooperation is the motive to maximize joint outcomes. Altruism is the motive to maximize others' outcomes. Typically, individualists and competitors are labeled proself, or sometimes simply competitors. Cooperators and altruists, on the other hand, are often characterized as prosocial, or simply as cooperators.

As their respective labels imply, prosocial individuals tend to behave more cooperatively in social dilemmas, whereas proself individuals tend to behave more competitively. Nobody is certain why some people have proself motives and others have prosocial motives. However, some recent research has begun to address this question. Over a series of studies, Van Lange and his colleagues found evidence that patterns of social interaction in early life and young adulthood partly predicted social motives (Van Lange, De Bruin, Otten, and Joireman, 1997). Those reporting secure attachment experiences and more siblings (particularly sisters), for example, were more likely to be prosocial. The researchers also offered some cross-sectional evidence that social motives may change over the life span; the prevalence of proself motives was lower among those in middle and late adulthood.

One of the most provocative studies in the dilemmas literature demonstrated that proself and prosocial individuals understand cooperative and competitive behavior in fundamentally different ways (Liebrand, Jansen, Rijken, and Suhre, 1986). Researchers categorized participants as having proself motives, prosocial motives, or more ambiguous motive preferences ("borderline" individuals). Participants played a series of experimental games with others who were either cooperative, altruistic, individualistic, or competitive. They were then asked to describe the choices and individuals they encountered. Factor analyses yielded two clear, uncorrelated subscales: evaluation and potency. The evaluation scale included words that connoted moral judgment (e.g., *just, fair, incorruptible, dishonest*). The potency scale, on the other hand, included descriptors that dealt with effectiveness (e.g., *weak, vigorous, purposeful, naive*). Proself individuals tended to describe the cooperative–competitive continuum of behavior in terms of potency, or power. To them, cooperative choices were weak and competitive choices powerful. Prosocial

individuals, however, tended to define the cooperative–competitive dimension in evaluative—or "moral"—terms. To the prosocial individual, cooperative choices were good and competitive choices bad. This set of findings has come to be known as the might versus morality effect (Liebrand et al., 1986).

The might versus morality effect demonstrates how individual differences can have important effects on how people perceive their environments. A follow-up study found that prosocial individuals attribute cooperative behavior on the part of others to intelligence, whereas proself individuals are more likely to attribute cooperative behavior to a lack of intelligence (Van Lange, Liebrand, and Kuhlman, 1990). Liebrand et al.'s (1986) study yielded other results that demonstrate how researchers might miss important dynamics by focusing exclusively on situational factors without considering interactions with individual difference factors. Like Kelley and Stahelski (1970) before them, Liebrand and his colleagues (1986) found that prosocial individuals were behaviorally "assimilated" by their proself counterparts. That is, prosocial participants interacting with proself participants eventually acted like proself participants rather than continue to be exploited. Someone looking solely at the final outcomes, without being sensitive to relevant individual differences, could fail to identify how different people might initially understand and approach dilemmas in qualitatively different ways.

Interactions: What Does a Person Like Me Do in a Situation Like This?

As noted, the heart of March's (1994) logic of appropriateness is the definition of the situation, and under most circumstances the definition of the situation is jointly determined by the interaction between an individual's characteristics and the characteristics of the situation. Even the largest, best-known main effects in the social dilemmas literature have proven to be qualified by such interactions. For example, although Kerr and his colleagues documented that communication elicited commitments (Kerr and Kaufmann-Gilliland, 1994) and that people generally followed through on their commitments (Kerr et al., 1997), a sizable minority of their participants failed to follow through (32 percent).

Social-motive researchers have been particularly effective at demonstrating the importance of the interaction between situational characteristics and characteristics of decision makers. We demonstrate the pervasiveness of this interaction by reviewing social motive studies that reveal how motives interact with situational characteristics to affect (a) the selection of rules and procedures, (b) the effect of gain–loss frames, and (c) the impact of uncertainty on decision making.

Situation × Social Motive Interaction Elicits Different Rules

Individual differences like social motives can result not only in systematically different understandings of a situation, but also the application of different behavioral rules or heuristics—and therefore systematically different behavior. Samuelson (1993) ran a study in which proself and prosocial individuals faced situations of either moderate or extreme overuse of a common resource. The nature of the situation—moderate or extreme overuse—was defined for the individuals by the experimenter. Participants were offered an opportunity to make a structural change in how they were managing the resource—they could choose to elect a leader to oversee harvesting. More prosocial participants voted for a leader in the extreme overuse condition than in the moderate overuse condition. However, a majority of proself participants voted against the leader regardless of how poorly their group was handling the commons. Samuelson noted that prosocial participants assigned greater importance to fairness considerations when making their choices, whereas proself participants assigned greater importance to their self-interest. It appears, then, that proself and prosocial participants were using different rules to guide their behavior in identical situations.

Framing × Social Motive Interaction

As noted, prospect theory's gain–loss framing has yielded inconsistent results in social dilemmas. De Dreu and McCusker (1997) reported that they could account for inconsistent results from earlier studies of gain and loss framing in social dilemmas by taking into account the social motives of the people involved. De Dreu and McCusker found that loss frames elicited behavior consistent with their participants' social value orientations. Prosocial individuals were more likely to cooperate in loss frames than in gain frames, whereas individualists were more likely to act competitively in loss frames than in gain frames. So the frame is interpreted in individual difference–driven ways. Seeking to maximize joint outcomes, a prosocial individual sees a loss frame as identifying a situation in which cooperation is especially important. Alternatively, individualists who are watching out for their own interests see a loss frame as identifying a situation in which defensive, selfish behavior is most appropriate.

Uncertainty × Social Motive Interaction

Among the most interesting factors with respect to the decision structure of a dilemma is the degree of uncertainty about variables in the task environment. Uncertainty about the size of a common resource, or its replenishment rate, has been found to increase the amount people harvest, the amount they expect other parties to harvest, and their estimates of the size

of the resource (e.g., Budescu, Rapoport, and Suleiman, 1990; Budescu, Suleiman, and Rapoport, 1995; Gustafsson, Biel, and Gaerling, 1999; Hine and Gifford, 1996). However, some recent studies have demonstrated that the "uncertainty leads to inefficient outcomes" conclusion misses some very important nuances. Roch and Samuelson (1997), for example, found that when faced with high levels of uncertainty, those with prosocial values harvested less than those with proself values and held their harvests constant, whereas those with proself values increased their harvests.

We have used a number of social motive studies to illustrate the importance of understanding interactions between characteristics of decision makers and characteristics of situations. Earlier main effect generalizations have been shown to be qualified in significant ways by such interactions. Proself and prosocial individuals apply different rules in the same situations (e.g., Samuelson and Messick, 1995). They respond in opposite ways in loss frames (De Dreu and McCusker, 1997). Similarly, high uncertainty seems to focus the attention of proself and prosocial individuals in different ways (Roch and Samuelson, 1997). However, beyond social motives, people's roles (e.g., businessperson or undergraduate; Wit and Wilke, 1990) and their experiences with similar tasks (Bettenhausen and Murnighan, 1991) lead them to respond to the same situations in different ways. The interactive nature of factors in social dilemmas is a caution to researchers and practitioners about the kinds of generalizations they might make or assume (e.g., van Dijk et al., 1999). It also reinforces the descriptive power of March's (1994) logic of appropriateness framework, with its emphasis on the interaction between characteristics of the situation and characteristics of the decision maker in defining the nature of the situation.

Opportunities for Future Research

The accumulated empirical work on social dilemmas is substantial, yet the complexities of human social behavior in such settings are far from perfectly understood. In this section we highlight five areas in which we believe additional effort would help advance the field: (1) taking into account the often shallow nature of cognitive processing, (2) thinking in terms of complex identities rather than individual differences, (3) investigating how people experience and understand dilemmas, (4) conducting field research and natural experiments, and (5) bridging the social dilemma and negotiation literatures.

RULES, HEURISTICS, AND SHALLOW PROCESSING

In recent years, social scientists have become sensitized to the significant proportion of human behavior in general (e.g., Bargh and Chartrand, 1999), and decision making in particular (e.g., Gigerenzer and Todd, 1999), that

involves shallow, heuristic, or even "automatic" processing. We use the term *shallow processing* to refer to processing that does not involve significant effort or cognitive resources. When people engage in shallow processing they may adhere blindly to a heuristic (e.g., equality), make choices impulsively, or simply behave in the present situation as they have in similar situations in the past. Shallow processing can, of course, be contrasted with deep, or effortful processing—when people invest significant energy and attention in understanding the characteristics, contingencies, and dynamics of a situation.

There has been little direct investigation of such dynamics in social dilemma contexts. However, such effects seem likely given that many successful interventions (e.g., communication) appear to be disruptive of shallow processing. It would be worthwhile to explore the circumstances under which shallow processing is most likely, and whether interventions do, indeed, derive some of their efficacy from making processing more deliberate. One could imagine that this area, too, would be one in which social motives interact with characteristics of the situation to shape judgments of appropriate action. Depending on the situation, deliberate processing might affect prosocial and proself individuals differently. For example, more deliberate processing might magnify the effect of people's social motives. In other words, more deliberate processing might make prosocials more cooperative and proselves more competitive. This would be consistent with the uncertainty findings reviewed earlier; in fact, it may be that people act in particularly motive-consistent ways under conditions of uncertainty precisely because uncertainty elicits deeper, more considered processing.

A common tool for understanding such effects in other fields within psychology is the use of response time as a dependent variable. Response time is frequently used as a proxy for cognitive effort (cf. Bargh and Chartrand, 1999). Response time studies could be used, for example, to test the uncertainty–processing hypothesis. If those in "uncertain" conditions take longer to make their decisions than those in "certain" conditions, the level of processing might offer a partial explanation for the "uncertainty" effect.

INDIVIDUAL DIFFERENCES VERSUS IDENTITIES

The reality of multiple identities has long been understood in the social sciences. A single actor can simultaneously carry understandings of the self as a businessperson, a student, a parent, and a Muslim, for example. "The self is a collection of incompletely integrated identities" (March, 1994, p. 68). However, to date, experimentalists in the social dilemma literature have focused more on discrete characteristics of individuals (e.g., social motives or personality traits) than they have on these semi-integrated, more "gestalt" identities, much less multiple identities. We have learned a great deal from the individual differences (trait) approach, yet the more cohesive identities

that package a set of values, assumptions, and traits—however incompletely integrated—may offer just as much insight into how people make social dilemma decisions (see Brett and Kopelman, Chapter 19, this volume, for a discussion of cultural values and social dilemmas). It seems plausible, for example, that people struggling to decide how to behave may ask themselves, as March (1994) suggested, "What does a person like me do in a situation like this?" If such a question is posed, one can imagine answers that turn on "identities" and "roles" rather than traits and characteristics. For example, what might an introverted, low-self-monitoring proself doctor do when passing an accident while rushing to a pressing engagement? His personality traits suggest he will be tempted to keep driving, whereas his sense of self as a physician and healer would dictate stopping to help. Investigating identities in situations rather than individual differences may offer a window into people's experiences of dilemma situations. Indeed, this approach might address a weakness Taylor (1998, p. 82) has identified in the field of social psychology in general: "Without an understanding of social roles, we cannot appreciate the mundane activities of daily life in which social psychological phenomena are embedded. In seeking a multifaceted and complete view of the person in social psychology, our appreciation of social roles and their contextual importance for social psychological phenomena will be essential."

INVESTIGATING PEOPLE'S UNDERSTANDINGS AND EXPERIENCES OF SOCIAL DILEMMAS

After three decades of rigorous experimental inquiry, a great deal is known about factors that affect people's behavior in social dilemmas. Comparatively little is known about how people understand and experience the social dilemmas they encounter—about why people make the choices they make and how they feel about them. This is a consequence of how most research in the field has been conducted. Typically, situations and characteristics of participants are manipulated, and choice outcomes are the dependent variable of greatest interest. Other dependent measures are necessary to understand people's thoughts and experiences in social dilemmas.

For example, some very interesting insights have resulted from asking participants in experiments to explain their choices. In a study in which participants in a commons dilemma could buy out others' access to a resource, White (1994) found that parties who bought out others consumed more and exhausted the resource more quickly. This ran counter to her prediction that (a) a decrease in group size would yield more cooperative behavior and that (b) the cost of the buyout would make the need for conservation salient. When she asked her participants to explain their choices during debriefing, she learned that they viewed their buyout costs "not . . . as a cost of consumption but as the purchase of the right to consume more"

(p. 454). Little social dilemma research has asked such questions directly, or systematically measured people's understanding of the experimental tasks in which they participate. Though such an approach has its limitations—for example, people's limited access to why they do what they do or how they use implicit theories to construct their explanations and recollections (e.g., Ross, 1989)—it nonetheless has the potential to enrich the data upon which researchers draw their conclusions.

FIELD RESEARCH AND NATURAL EXPERIMENTS

The world is teeming with social dilemmas large and small. The ubiquity of dilemmas fuels the commitment of many social dilemma researchers; if this topic of study isn't important, what topic in the social sciences is? Yet social psychologists doing social dilemma research rarely venture outside their labs. It is more common to present participants with real-world scenarios or simulations than it is to study people in the real world (e.g., Van Vugt, Meertens, and Van Lange, 1995). Lab research is critical for a number of reasons; it is more efficient to conduct than field research, and it often allows for a measure of control that would be impossible to achieve outside a lab. However, there are merits to collecting data outside the lab—specifically with respect to external validity and the development of rich behavioral models (see also Barry, Fulmer, and Sinaceur, Chapter 3, this volume).

Although researchers in other disciplinary domains have studied social dilemmas in the field for decades, the dominant paradigm has been the case study (cf. Agrawal, 2002). A brave few social psychologists have studied dilemma behavior in the field (e.g., Tyler and Degoey, 1995), and some have even been able to take advantage of natural experiments (e.g., Van Vugt, Van Lange, Meertens, and Joireman, 1996). One alternative, creative approach involves conducting standard lab-style experiments in the field (e.g., Cardenas, 2000). Cardenas executed a lab-style dilemma experiment in several small Colombian villages. This approach has the benefits of permitting random assignment, experimental manipulation, and maintaining levels of experimental control while simultaneously strengthening claims of external validity and the generalizability of results. With the benefit of more data collected in the "real world," social psychologists studying social dilemmas might even find their contributions more welcome in public discourse and policy making.

SOCIAL DILEMMAS AND NEGOTIATION

Scholars have long treated the social dilemmas and negotiations literatures as sister domains (e.g., Bazerman and Neale, 1992; Kramer and Messick, 1995; Murnighan, 1992; Raiffa, 1982; Thompson, 1998). As fundamental conflicts of interest (short term vs. long term; individual vs. group), social dilemmas must be negotiated. Such negotiations can be explicit and involve

the making and keeping of promises (Kerr et al., 1997; Kerr and Kaufman-Gilliland, 1994). However, negotiations in social dilemmas are often tacit (e.g., Larrick and Blount, 1995), relying on behavioral signaling (e.g., Isaac, Walker, and Williams, 1994) or cause-and-effect strategies meant to influence other parties' choices (e.g., Axelrod, 1984; Kramer, Wei, and Bendor, 2001) rather than explicit dialogue and agreements. Despite the close relations between research domains and researchers, relatively little has been done that explicitly applies ideas from one domain to the other. We see at least two opportunities for cross-fertilization worth considering: (1) drawing research on integrative negotiations into the social dilemmas literature and (2) drawing research on iterated dilemmas into the negotiations literature.

Enriching Social Dilemma Research—Drawing on Integrative Negotiations Research

Although the stylized decision environments of much laboratory research on social dilemma behavior provides little latitude for the application of negotiation strategies, the lessons of the negotiations literature should be particularly valuable to those coping with, or studying, the complexities of real-world dilemmas. Lab-based social dilemma research tends to turn social dilemmas into iterated single-issue negotiations with limited integrative potential. This is an appropriate analogue for many important real-world dilemmas in which actual dialogue between parties is limited (e.g., recycling), but a weak one for others (e.g., international trade without bribery or corruption). The negotiations literature has acknowledged the complexity of real negotiation environments; they may have multiple differentiated parties,[3] involve coalitions, span cultural boundaries, or be steeped in emotion, for example. Although the social dilemmas literature has grappled in limited ways with richer multiple role situations (e.g., Wade-Benzoni, Tenbrunsel, and Bazerman, 1996) and the nesting of dilemmas (Polzer, Stewart, and Simmons, 1999),[4] these efforts are recent and may be further extended by considering the nature of asymmetries between parties, interests versus needs, logrolling opportunities, contingency arrangements, and the like.

Thompson and Hastie (1990), for instance, argued that people tend to have a "fixed pie" illusion when they enter negotiations. That is, they make the assumption that whatever is good for them is bad for their negotiating counterparts and vice versa (see Thompson, Neale, and Sinaceur, Chapter 1, this volume for a review). A similar phenomenon may occur in resource dilemmas when participants ignore the ability of a resource to replenish itself. If a resource were finite and fixed in size, this belief would not be an illusion, but most shared resources can grow if properly managed. To our knowledge, the impact of such a "fixed pie" assumption has not been examined in resource dilemmas.

CONSIDER THE DYNAMICS OF REPEATED NEGOTIATIONS

Two important findings with respect to the dynamics of iterated social dilemmas point to a research opportunity for negotiation scholars. First, when parties know they will interact with one another several times, they are more cooperative than when they think they are engaged in a one-shot dilemma (cf. Axelrod, 1984; Luce and Raiffa, 1957). Second, simulation data suggests that when parties can choose whom they interact with over time (i.e., known counterparts or different counterparts over repeated rounds), trusting and cooperative parties outperform those who are more self-interested (e.g., Hayashi and Yamagishi, 1998). Cooperators seem to excel under such conditions because they choose to interact with one another and enjoy the rewards of mutual cooperation, leaving competitors to languish in one another's less rewarding company. Negotiations researchers have not placed much emphasis on situations in which parties choose between negotiating with known counterparts and selecting new counterparts over repeated negotiations.[5] Such situations merit more attention since the social dilemma literature suggests that successful strategies over time may be qualitatively different (i.e., more cooperative) from successful strategies in one-off negotiations—particularly when parties have the option to exit a relationship and go in search of new counterparts. Clearly, reputation is an important factor when counterpart selection is an option.

Conclusion

The ubiquitous nature of social dilemmas, and their centrality to social life, has prompted a great deal of research in the experimental social sciences. After decades of steady incremental advances in our understanding of the "main effects" in social dilemmas (e.g., communication, uncertainty, group size), researchers have begun to study the interactions and complex contingencies that must be better specified to achieve a more complete understanding of social dilemma dynamics. Continued work in this vein is both needed and promising. Consistent with March's (1994) "logic of appropriateness," we believe a focus on the interactive dynamics of how people experience, understand, and define the dilemmas of which they are a part should be at the heart of such efforts.

Notes

1. Sonnemans, Schram, and Offerman, (1998) point out that prospect theory derives its predictive potency from a single clear reference point; social dilemmas are complex contexts with multiple reference points.

2. Those led to experience empathy for their counterparts (high-empathy condition) cooperated more than those in the low-empathy condition, regardless of the

framing condition. The task-framed differences cited were among participants in the low-empathy condition.

3. Social dilemmas have multiple parties—the distinction here is with respect to differentiation between parties' interests, roles, and so forth. In most dilemmas research, interests and payoffs are consistent across parties.

4. Social dilemmas can be nested in other social dilemmas. For example, politicians may struggle with choices to make contributions to local public goods of concern to their electors (e.g., avoiding the costs of environmental regulations), versus choices that would be supportive of broader public goods (e.g., implementing such regulations).

5. Bazerman, Magliozzi, and Neale's (1985) seminal prospect theory study in a market setting involved partner selection but did not allow negotiators to choose to continue negotiating more than a single round with the same counterpart(s). Therefore, the benefits of repeated cooperative interaction with the same party were not available.

Works Cited

Agrawal, A. (2002). Common resources and institutional sustainability. In E. Ostrom, T. Dietz, N. Dolsak, P. C. Stern, S. Stonich, and E. U. Weber (Eds.), *The drama of the commons* (pp. 41–86). Washington, DC: National Academy Press.

Axelrod, R. (1984). *The evolution of cooperation*. New York: Basic Books.

Bargh, J. A., and T. L. Chartrand. (1999). The unbearable automaticity of being. *American Psychologist, 54,* 462–479.

Batson, C. D., and T. Moran. (1999). Empathy-induced altruism in a prisoner's dilemma. *European Journal of Social Psychology, 29,* 909–924.

Bazerman, M. H., Magliozzi, T., and M. A. Neale. (1985). Integrative bargaining in a competitive market. *Organizational Behavior and Human Decision Processes, 35,* 294–313.

Bazerman, M. H., and M. A. Neale. (1992). *Negotiating rationally.* New York: Free Press.

Bettenhausen, K. L., and J. K. Murnighan. (1991). The development of an intragroup norm and the effects of interpersonal and structural challenges. *Administrative Science Quarterly, 36,* 20–35.

Bouas, K. S., and S. S. Komorita. (1996). Group discussion and cooperation in social dilemmas. *Personality & Social Psychology Bulletin, 22,* 1144–1150.

Budescu, D. V., Rapoport, A., and R. Suleiman. (1990). Resource dilemmas with environmental uncertainty and asymmetric players. *European Journal of Social Psychology, 20,* 475–487.

Budescu, D. V., Suleiman, R., and A. Rapoport. (1995). Positional and group size effects in resource dilemmas with uncertain resources. *Organizational Behavior & Human Decision Processes, 61*(3), 225–238.

Cardenas, J. C. (2000). *Real wealth and experimental cooperation: Evidence from field experiments*. Paper presented at the International Association for the Study of Common Property, June. Bloomington, IN.

Dawes, R. M. (1980). Social dilemmas. *Annual Review of Psychology, 31,* 169–193.

Dawes, R. M., McTavish, J., and H. Shaklee. (1977). Behavior, communication, and assumptions about other people's behavior in a commons dilemma situation. *Journal of Personality and Social Psychology, 35,* 1–11.

Dawes, R. M., Van de Kragt, A. J. C., and J. M. Orbell. (1990). Cooperation for the benefit of us—Not me, or my conscience. In J. J. Mansbridge (Ed.), *Beyond self-interest* (pp. 97–110). Chicago: University of Chicago Press.

De Cremer, D., Snyder, M., and S. Dewitte. (2001). 'The less I trust, the less I contribute (or not)?' The effects of trust, accountability and self-monitoring in social dilemmas. *European Journal of Social Psychology, 31*(1), 93–107.

De Dreu, C. K. W., and C. McCusker. (1997). Gain–loss frames and cooperation in two-person social dilemmas: A transformational analysis. *Journal of Personality & Social Psychology, 72,* 1093–1106.

Gigerenzer, G., and P. M. Todd. (Eds.). (1999). *Simple heuristics that make us smart:* New York: Oxford University Press.

Gustafsson, M., Biel, A., and T. Gaerling. (1999). Overharvesting of resources of unknown size. *Acta Psychologica, 103*(1–2), 47–64.

Hardin, G. (1968). The tragedy of the commons. *Science, 162,* 1243–1248.

Hayashi, N., and T. Yamagishi. (1998). Selective play: Choosing partners in an uncertain world. *Personality & Social Psychology Review, 2,* 276–289.

Hine, D. W., and R. Gifford. (1996). Individual restraint and group efficiency in commons dilemmas: The effects of two types of environmental uncertainty. *Journal of Applied Social Psychology, 26,* 993–1009.

Isaac, R. M., Walker, J. M., and A. W. Williams. (1994). Group size and the voluntary provision of public goods. *Journal of Public Economics, 54,* 1–36.

Kahneman, D., and A. Tversky. (1979). Prospect theory: An analysis of decision under risk. *Econometrica, 47,* 263–291.

Kelley, H. H., and J. Grzelak. (1972). Conflict between individual and common interest in an N-person relationship. *Journal of Personality & Social Psychology, 21*(2), 190–197.

Kelley, H. H., and A. J. Stahelski. (1970). Social interaction basis of cooperators' and competitors' beliefs about others. *Journal of Personality & Social Psychology, 16*(1), 66–91.

Kerr, N. L. (1989). Illusions of efficacy: The effects of group size on perceived efficacy in social dilemmas. *Journal of Experimental Social Psychology, 25,* 287–313.

Kerr, N. L., Garst, J., Lewandowski, D. A., and S. E. Harris. (1997). That still, small voice: Commitment to cooperate as an internalized versus a social norm. *Personality & Social Psychology Bulletin, 23,* 1300–1311.

Kerr, N. L., and C. M. Kaufman-Gilliland. (1994). Communication, commitment, and cooperation in social dilemma. *Journal of Personality & Social Psychology, 66,* 513–529.

Kollock, P. (1998). Social dilemmas: The anatomy of cooperation. *Annual Review of Sociology, 24,* 183–214.

Komorita, S. S., and C. D. Parks. (1996). *Social dilemmas.* Boulder, CO: Westview.

Kopelman, S., Weber, J. M., and D. M. Messick. (2002). Factors influencing cooperation in commons dilemmas: A review of experimental psychological research. In E. Ostrom, T. Dietz, N. Dolsak, P. C. Stern, S. Stonich, and E. U. Weber (Eds.),

The drama of the commons (pp. 113–156). Washington, DC: National Academy Press.

Kramer, R. M., and D. M. Messick. (Eds.). (1995). *Negotiation as a social process.* Thousand Oaks, CA: Sage.

Kramer, R. M., Wei, J., and J. Bendor. (2001). Golden rules and leaden worlds: Exploring the limitations of tit-for-tat as a social decision rule. In J. M. Darley, D. M. Messick, and T. R. Tyler (Eds.), *Social influences on ethical behavior in organizations* (pp. 177–200). Mahwah, NJ: Erlbaum.

Kurzban, R., and D. Houser. (2001). Individual differences in cooperation in a circular public goods game. *European Journal of Personality.* S37–S52.

Larrick, R. P., and S. Blount. (1995). Social context in tacit bargaining games: Consequences for perceptions of affinity and cooperative behavior. In R. M. Kramer and D. M. Messick (Eds.), *Negotiation as a social process* (pp. 268–284). Thousand Oaks, CA: Sage.

Larrick, R. P., and S. Blount. (1997). The claiming effect: Why players are more generous in social dilemmas than in ultimatum games. *Journal of Personality & Social Psychology, 72,* 810–825.

Ledyard, J. O. (1995). Public goods: A survey of experimental research. In J. H. Kagel and A. E. Roth (Eds.), *The handbook of experimental economics* (pp. 111–194). Princeton, NJ: Princeton University Press.

Liebrand, W. B., Jansen, R. W., Rijken, V. M., and C. J. Suhre. (1986). Might over morality: Social values and the perception of other players in experimental games. *Journal of Experimental Social Psychology, 22*(3), 203–215.

Luce, R. D., and H. Raiffa. (1957). *Games and decisions: Introduction and critical survey.* New York: Wiley.

March, J. (1994). *A primer on decision-making: How decisions happen*. New York: Free Press.

McClintock, C. G. (1972). Social motivation: A set of propositions. *Behavioral Science, 17,* 438–455.

McClintock, C. G. (1978). Social values: Their definition, measurement, and development. *Journal of Research and Development in Education*(12), 121–137.

Messick, D. M. (1999). Alternative logics for decision making in social settings. *Journal of Economic Behavior and Organization, 39*(1), 11–28.

Messick, D. M. (2000). Context, norms, and cooperation in modern society: A postscript. In M. Van Vugt, M. Snyder, T. R. Tyler, and A. Biel (Eds.), *Cooperation in modern society* (pp. 231–240). New York: Routledge.

Messick, D., and M. Brewer. (1983a). Solving social dilemmas. In Wheeler and Shaver (Eds.), *Review of Personality and Social Psychology* .

———. (1983b). Solving social dilemmas: A review. In L. Wheeler and P. Shaver (Eds.), *Review of personality and social psychology* (Vol. 4, pp. 11–44). Beverly Hills, CA: Sage.

Messick, D. M., and C. G. McClintock. (1968). Motivational bases of choice in experimental games. *Journal of Experimental Social Psychology, 4*(1), 1–25.

Murnighan, J. K. (1992). *Bargaining games.* New York: Morrow.

Osgood, C. E. (1962). *An alternative to war or surrender.* Urbana: University of Illinois Press.

Ostrom, E. (1998). A behavioral approach to the rational choice theory of collective action. *American Political Science Review, 92,* 1–22.

Polzer, J. T., Stewart, K. J., and J. L. Simmons. (1999). A social categorization explanation for framing effects in nested social dilemmas. *Organizational Behavior & Human Decision Processes, 79*(2), 154–178.

Raiffa, H. (1982). *The art and science of negotiation*. Cambridge, MA: Harvard University Press.

Roch, S. G., and C. D. Samuelson. (1997). Effects of environmental uncertainty and social value orientation in resource dilemmas. *Organizational Behavior & Human Decision Processes, 70*(3), 221–235.

Ross, L., and R. E. Nisbett. (1991). *The person and the situation: Perspectives of social psychology.* New York: McGraw-Hill.

Ross, M. (1989). Relation of implicit theories to the construction of personal histories. *Psychological Review, 96,* 341–357.

Roth, A. E. (1995). A brief history of experimental economics. In J. H. Kagel and A. E. Roth (Eds.), *The handbook of experimental economics* (pp. 3–109). Princeton, NJ: Princeton University Press.

Rutte, C. G., and H. A. Wilke. (1984). Social dilemmas and leadership. *European Journal of Social Psychology, 14*(1), 105–121.

Samuelson, C. D. (1991). Perceived task difficulty, causal attributions, and preferences for structural change in resource dilemmas. *Personality & Social Psychology Bulletin, 17*(2), 181–187.

———. (1993). A multiattribute evaluation approach to structural change in resource dilemmas. *Organizational Behavior & Human Decision Processes, 55,* 298–324.

Samuelson, C. D., and D. M. Messick. (1995). Let's make some new rules: Social factors that make freedom unattractive. In R. Kramer and D. M. Messick (Eds.), *Negotiation as a social process* (pp. 48–68). Thousand Oaks, CA: Sage.

Seijts, G. H., and G. P. Latham. (2000). The effects of goal setting and group size on performance in a social dilemma. *Canadian Journal of Behavioural Science, 32*(2), 104–116.

Seijts, G. H., Latham, G. P., and G. Whyte. (2000). Effect of self- and group efficacy on group performance in a mixed-motive situation. *Human Performance, 13,* 279–298.

Sonnemans, J., Schram, A., and T. Offerman. (1998). Public good provision and public bad prevention: The effect of framing. *Journal of Economic Behavior and Organization, 34*(1), 143–161.

Taylor, S. E. (1998). The social being in social psychology. In D. T. Gilbert, S. T. Fiske, and G. Lindzey (Eds.), *The handbook of social psychology* (Vol. 1, pp. 58–95). Boston: McGraw-Hill.

Tenbrunsel, A. E., and D. M. Messick. (1999). Sanctioning systems, decision frames, and cooperation. *Administrative Science Quarterly, 44,* 684–707.

Thibaut, J. W., and H. H. Kelley. (1959). *The social psychology of groups*. New York: Wiley.

Thompson, L. (1998). *The mind and heart of the negotiator.* Upper Saddle River, NJ: Prentice Hall.

Thompson, L., and R. Hastie. (1990). Social perception in negotiation. *Organizational Behavior and Human Decision Processes, 47,* 98–123.

Tyler, T. R., and P. Degoey. (1995). Collective restraint in social dilemmas: Procedural justice and social identification effects on support for authorities. *Journal of Personality & Social Psychology, 69,* 482–497.

van Dijk, E., Wilke, H., Wilke, M., and L. Metman. (1999). What information do we use in social dilemmas? Environmental uncertainty and the employment of coordination rules. *Journal of Experimental Social Psychology, 35*(2), 109–135.

van Dijk, E., and H. Wilke. (2000). Decision-induced focusing in social dilemmas: Give-some, keep-some, take-some, and leave-some dilemmas. *Journal of Personality & Social Psychology, 78*(1), 92–104.

Van Lange, P. A. M., de Bruin, E. M. N., Otten, W., and J. A. Joireman. (1997). Development of prosocial, individualistic, and competitive orientations: Theory and preliminary evidence. *Journal of Personality & Social Psychology, 73,* 733–746.

Van Lange, P. A., Liebrand, W. B., and D. M. Kuhlman. (1990). Causal attribution of choice behavior in three N-person prisoner's dilemmas. *Journal of Experimental Social Psychology, 26*(1), 34–48.

Van Lange, P., Liebrand, W., Messick, D., and H. Wilke. (1992a). Social dilemmas: The state of the art introduction and literature review. In W. B. G. Liebrand, D. M. Messick, and H. A. M. Wilke (Eds.), *Social dilemmas: Theoretical issues and research findings* (1st ed., pp. vii, 334). Oxford, England; New York: Pergamon.

———. (1992b). Social dilemmas: The state of the art. In W. B. G. Liebrand, D. M. Messick, and H. A. M. Wilke (Eds.), *Social dilemmas: Theoretical issues and research findings* (pp. 3–28). Oxford, England: Pergamon.

Van Vugt, M., Meertens, R. M., and P. A. M. Van Lange. (1995). Car versus public transportation? The role of social value orientations in a real-life social dilemma. *Journal of Applied Social Psychology, 25*(3), 258–278.

Van Vugt, M., Van Lange, P. A. M., Meertens, R. M., and J. A. Joireman. (1996). How a structural solution to a real-world social dilemma failed: A field experiment on the first carpool lane in Europe. *Social Psychology Quarterly, 59,* 364–374.

Von Neumann, J., and O. Morgenstern. (1944). *Theory of games and economic behavior.* New York: Wiley.

Wade-Benzoni, K. A., Tenbrunsel, A. E., and M. H. Bazerman. (1996). Egocentric interpretations of fairness in asymmetric, environmental social dilemmas: Explaining harvesting behavior and the role of communication. *Organizational Behavior & Human Decision Processes, 67*(2), 111–126.

Walters, A. E., Stuhlmacher, A. F., and L. L. Meyer. (1998). Gender and negotiator competitiveness: A meta-analysis. *Organizational Behavior & Human Decision Processes, 76*(1), 1–29.

White, S. B. (1994). Testing an economic approach to resource dilemmas. *Organizational Behavior & Human Decision Processes, 58,* 428–456.

Wit, A., and H. A. Wilke. (1990). The presentation of rewards and punishments in a simulated social dilemma. *Social Behaviour, 5,* 231–245.