PART ONE

INDIVIDUAL DIFFERENCES IN SOCIAL DILEMMAS

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From Generosity to Aggression

Five Interpersonal Orientations Relevant to Social Dilemmas

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What interpersonal orientations drive social interactions? What sort of motivations guide behavior and interactions in social dilemmas? While many philosophers have addressed issues relevant to cooperation and competition, Thomas Hobbes is often acknowledged as being one of the first who explicitly addressed this issue. In *Leviathan* (1651) he raised the interesting problem of why societies and collectivities are able to function at all, if – so he believed – humans are basically driven by self-interest. The Hobbesian paradox is central to many theories developed in the social and behavioral sciences. It deals with relationships between the individual and the society at large, but also with smaller scale issues, such as the relationships between individuals in dyads or small groups, and relationships between groups. How have the social and behavioral sciences sought to solve the Hobbesian paradox?

More than a century after Hobbes's writings, Adam Smith (1776) sought to solve the Hobbesian problem by his famous notion of the "*beneficent invisible hand*," assuming that private and collective interests tend to correspond rather than conflict. Indeed, Adam Smith assumed that collectivities and societies are well-functioning because individuals pursue their self-interest (which, as an unintended consequence, enhances collective interest). There is no need to explain to an audience consisting of social-dilemma experts that Adam Smith's notion of the beneficent "invisible hand" is too limited to provide an understanding of the features of the situations we are confronted with in everyday life. Indeed, the functioning of relationships, organizations, and societies is frequently challenged by social dilemmas, or conflicts between self-interest and collective interest. In fact, conflicts between self-interest and collective interest are so pervasive in everyday

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life that one can go so far as to claim that the most challenging task that governments, organizations, and even partners in a relationship face is to manage conflicts between self-interest and collective interest successfully. Contrary to Adam Smith's invisible hand, it is more plausible that, because conflicts between own interest and collective interest are so prevalent, these situations afford or evoke important social interaction experiences (e.g., cooperative interactions versus conflictual interactions), which in turn are likely to shape our interpersonal orientations, which I will address shortly.

As many of his contemporaries, Thomas Hobbes assumed that humankind is basically self-interested, suggesting that humankind has little (if any) motivation to pursue the well-being of others, to enhance the well-being of the collective, or to pursue equality in outcomes. This assumption of self-interest has dominated many of the traditional theories relevant to interpersonal and intergroup behavior, including early formulations of game theory (Luce & Raiffa, 1957; Von Neuman & Morgenstern, 1944) and social exchange theory (Blau, 1964; Homans, 1961). Within the domain of psychological theory, the assumption of self-interest is embedded in several key constructs, such as reinforcement, the pursuit of pleasure, utility maximization as developed in the context of behavioristic theory (including social-learning theory), psychoanalytic theory, and theories of social decision making. The assumption of self-interest has influenced not only the very foundation of psychological theory, but also our thinking on how to solve conflicts of interest in relationships and organizational practices.

Despite this accepted wisdom, I suggest that the assumption of self-interest is too limited to account fully for social interaction. Indeed, several research programs – some of which will be discussed later – have yielded findings that strongly conflict with this basic assumption. Hence, it seems likely that much theory overestimates the influence of self-interest on attitudes and behavior. This observation may actually hold for lay people as well, as recently demonstrated by Miller and Ratner (1998). For example, participants overestimate the impact of financial rewards on their peers' willingness to donate blood (Study 1), as well as the power of social rewards as assessed by group membership on their peers' attitudes (Studies 2 through 5). Thus, we need a broader model of interpersonal orientations, one that includes orientations which, at the very least, complement the orientation of self-interest. In fact, based on this and related evidence, Miller (1999) argues that, at least in Western cultures, there exists a norm that specifies that self-interest is and ought to be a powerful determinant of behavior. Moreover, he notes that this norm may influence not only our own actions and opinions but also how we explain behaviors and opinions. Although further research is needed, Miller's research and ideas suggest

that the assumption of self-interest is widespread not only among scientists but among laypersons as well.

Thus, while acknowledging that self-interest provides a powerful motivation, this chapter proposes that the power of self-interest is overestimated by many theories and that such overestimation is often accompanied by a neglect of other important interpersonal orientations (van Lange, 2000). In addressing these orientations, this chapter reviews past research on social dilemmas and interactive situations to illustrate the potential importance of five relatively independent orientations. These orientations – generosity, prosocial orientation (egalitarianism and cooperation), individualism, competition, and aggression – are assumed to guide behavior and interactions in a variety of interdependence situations.

BEYOND IMMEDIATE SELF-INTEREST: TRANSFORMATION OF SITUATIONS

The notion that people go beyond direct self-interest is explicated in Interdependence Theory (Kelley & Thibaut, 1978), which makes a distinction between the given matrix and the effective matrix. The given matrix is largely based on objective outcomes derived from hedonic, self-interested preferences. Examples are "nonsocial" preferences regarding a particular activity, such as the desire to listen to music at high volume, the preference to watch one particular movie, or the costs derived from investing time and energy in cleaning the kitchen. As such, the given matrix summarizes the consequences of the individual's and the partner's actions on the individual's outcomes. Interdependence theory assumes that the pursuit of direct immediate outcomes often provides an incomplete understanding of interpersonal behavior. There is indeed increasing evidence, some of which will be discussed later, that an individual's preferences are not solely based on consideration of his or her own outcomes only. That is why this theory introduces the concept of transformation of situations, defined as a movement away from preferences of direct self-interest by attaching importance to longer-term outcomes or outcomes for persons or groups. This concept is important to understanding why many people do turn down the volume while listening to their favorite music, why one occasionally does attend a movie that is not the movie that he or she most preferred to watch, or why many or most people do clean the kitchen. In the present chapter, I focus on outcome transformations, whereby individuals take account of both their own outcomes and the outcomes of interacting partners.

The concept of outcome transformation was based in part on the literature on social-value orientation (McClintock, 1972; see also Griesinger & Livingston, 1973), which distinguishes between eight distinct preferences or orientations, including altruism (or generosity), cooperation,

individualism, competition, aggression, as well as nihilism, masochism, and inferiority. (I will not discuss the latter three orientations because they are very infrequently adopted.) In this typology, cooperation is defined as the tendency to emphasize positive outcomes for self and other ("doing well together"). In contrast, competition is defined as the tendency to emphasize relative advantage over others ("doing better than others"), thereby assigning positive weight to outcomes for self and negative weight to outcomes for other. Individualism is defined as the tendency to maximize outcomes for self, with little or no regard for outcomes for other; altruism is defined as the tendency to maximize outcomes for other, with no or very little regard for outcomes for self. (I prefer the concept of generosity, a motivational concept that is not necessarily confined to the desire to benefit others in a manner completely independent of any form of self-reward; compare with Batson, 1994.) Aggression is defined as the tendency to minimize outcomes for other. These outcome transformations can be schematically represented by two dimensions, including (a) the importance (or weight) attached to outcomes for self, and (b) the importance (or weight) attached to outcomes for other (Griesinger & Livingston, 1973; McClintock, 1972).

It is interesting to note that similar models have been developed by other researchers. The most notable model is the dual-concern model (Pruitt & Rubin, 1986), developed in an attempt to understand the values or concerns that might underlie negotiation. As in the model described above, the dual-concern model assumes two basic concerns: (a) concern about own outcomes, and (b) concern about other's outcomes. The dual-concern model assumes that each of these concerns can vary from weak to strong, and identifies four negotiation strategies – problem solving, yielding, contending, and inaction – based on high versus low concern about own outcomes and high versus low concern about other's outcomes (Carnevale & Pruitt, 1992).

HOW DO PEOPLE GO BEYOND IMMEDIATE SELF-INTEREST: AN INTEGRATIVE MODEL

The interpersonal orientations discussed above can be inferred from a utility function which states that outcome transformations (OT) represent a process whereby individuals assign a weight to outcomes for self (W_1), and a weight to outcomes for other (W_2). Before discussing models of outcome transformation, two issues deserve brief attention. First, the concept of outcome transformation is very similar to the concept of utility or social utility. However, I prefer the concept of outcome transformation rather than utility, or social utility, because it conveys the notion that people translate an objective situation into a subjective one; that is, transform the given matrix into an effective matrix, along with differences in

meaning and feelings that are part of outcome transformations. In passing, I should also note that transformation does not imply careful consideration or even awareness. Indeed, often such transformations may occur quite automatically without much thought. Second, I will discuss three relatively straightforward models, thereby deliberately seeking to minimize the level of complexity, while emphasizing the broad orientations that could help us understand behavior and interactions in social dilemmas and related situations. In addition, I shall assume linearity of transformations, even though it is likely that outcome transformation can take a nonlinear form as well (e.g., decreasing marginal utility in valuing own outcomes). The reader should keep these two issues in mind, while reading the following three models of outcome transformation:

Model 1: $OT = W_1$ (Outcomes for Self) $+ W_2$ (Outcomes for Other)

According to this model, cooperation is revealed by assigning positive weights to both outcomes for self and outcomes for other. Individualism is revealed by assigning a positive weight to outcomes for self and very little weight to outcomes for other. Competition is revealed by assigning a positive weight to outcomes for self and a negative weight to outcomes for other. The three orientations do not differ in the weight assigned to outcomes for self (i.e., they all assign a positive weight to outcomes for self).

Although this model of social-value orientation (and similar models, such as the dual-concern model) has inspired considerable research, it does not conceptualize tendencies toward enhancing equality or fairness as an important orientation or concern. This is surprising if one considers the fact that equality and fairness have received strong attention and support in similar and complementary theory and research, including social decision making (e.g., Loewenstein, Thompson, & Bazerman, 1989; Messick & Sentis, 1985), social dilemmas (van Dijk & Wilke, 1993; Wilke, 1991), and social value orientation (Grzelak, 1982; Knight & Chao, 1991; Knight & Dubro, 1984). These lines of research suggest the importance of the following model, stating that outcome transformations are shaped by *egalitarianism*, that is, the weight assigned to equality in outcomes.

Model 2: $OT = W_1$ (Outcomes for Self) $+ W_2$ (Equality in Outcomes)

Given that egalitarianism refers to tendencies toward minimizing absolute differences between outcomes for self and outcomes for other, this orientation is rather unidirectional. That is, individuals may differ in how much positive weight they assign to equality in outcomes, but it is not very probable that there are many people who assign negative weight to equality in outcomes. As such, variability is to be found in the positive domain ($0 < W_2 < 1$), and less so in the negative domain ($-1 < W_2 < 0$). Given

that the same holds for the weight assigned to outcomes for self (since it is highly improbably that an individual will seek to maximize negative outcomes for self), this model is relatively parsimonious and simple. The model simply advances egalitarianism as an orientation that extends self-interest.

A third approach is to integrate Model 1 and Model 2. The so-called integrative model conceptualizes outcome transformations in terms of the weights assigned to outcomes for self, outcomes for other, and equality in outcomes (van Lange, 1999). This model can be formalized as follows:

Model 3: $OT = W_1$ (Outcomes for Self) $+ W_2$ (Outcomes for Other) $+ W_3$ (Equality in Outcomes)

In principle, one could infer numerous distinct social-value orientations from this model. For example, one could infer the eight social-value orientations that McClintock, Griesinger and Livingston, and others have distinguished, as well as egalitarianism, and other specific combinations of these eight social-value orientations and egalitarianism (McCrimmon and Messick, 1976; Schulz & May, 1989). Considering the large number of orientations that could be theoretically distinguished, Model 3 is quite a complex model. An important question is How one can derive a limited subset of "independently operating" orientations from the integrative model.

FIVE ORIENTATIONS DERIVED FROM THE INTEGRATIVE MODEL

To enhance greater parsimony, there are two rules that are helpful for deriving a limited subset of independently operating orientations from the integrative model. The first rule states that there is variability in the prevalence of the orientations, which can be theoretically distinguished, and that one should exclude orientations which, compared to other orientations, are infrequently adopted. Indeed, as past research inspired by Model 1 frameworks has shown us, some orientations (e.g., cooperation) are more prevalent than others (e.g., nihilism), a result which has led past research to exclude orientations that are not very prevalent, and focus primarily on the orientations of cooperation, individualism, and competition.

The second rule states that some orientations may go hand in hand, being activated and deactivated in a concerted manner, whereas other orientations may operate largely in an independent manner. Clearly, the orientations that one can derive from the three "dimensions" underlying the integrative model are conceptually independent. But it is implausible that each of these orientations is "psychologically independent." In fact, as the reader will see, some orientations are psychologically related, in that they tend to co-occur as orientations, suggesting that the activation of

TABLE 1.1. *An overview of five orientations*

1. Generosity:
   Enhancement of Outcomes for Other
2. Pro-social Orientation:
   Enhancement of Joint Outcomes (Cooperation), and
   Enhancement of Equality in Outcomes (Egalitarianism)
3. Individualism:
   Enhancement of Outcomes for Self
4. Competition:
   Enhancement of Relative Outcomes in Favor of Self
5. Aggression:
   Reduction of Outcomes for Other

a given orientation fairly automatically activates another orientation and vice versa. In this respect, I should note that several orientations cannot be meaningfully integrated. For example, cooperation ($W_1 = 1, W_2 = 1$) differs from individualism ($W_1 = 1, W_2 = 0$) in the weight assigned to outcomes for other. A combination of these two orientations has no additional meaning, because it simply involves variations in the weight assigned to outcomes for other. This holds for all of the orientations that may be inferred from the two dimensions (outcomes for self, outcomes for other) identified by McClintock (1972) and Griesinger and Livingston (1973). Hence, meaningful integrations can only involve combinations of egalitarianism with one (or some) of the other orientations, as will be discussed later.

Based on these two rules, I have used the integrative model (Model 3) to identify a limited subset of orientations. These five orientations are presented in Table 1.1.

As revealed by earlier research, the orientations of cooperation, individualism, competition, and egalitarianism appear to be rules that individuals use in various settings of interdependence, including social dilemmas. Indeed, each of these orientations has received attention in existing reviews of social dilemmas, cooperation and competition, and related topics (Komorita & Parks, 1995; van Lange, Liebrand, Messick, & Wilke, 1992). Thus, I assume that most readers would agree that these four orientations represent important rules of interdependent behavior. In addition, I would like to stress the importance of two additional orientations that have received little attention in past research on social dilemmas: generosity and aggression, which I discuss in turn.

Generosity

To my knowledge, one of the earliest studies that focused on generosity (albeit termed altruism) in social dilemmas is a study by Batson and others. This research was designed to test the hypothesis that feelings of *empathy* could promote choices that benefit one particular individual in a group rather than cooperation which benefits the entire group. Specifically, participants could choose to benefit themselves, the group, or other group members as individuals (Batson et al., 1995). Using experimental manipulations of empathy (Study 1) and naturally occurring variation in empathy (Study 2), Batson and others found that feelings of empathy created or enhanced the desire to benefit one particular other person in the group (i.e., the one for whom strong empathy was felt), thereby reducing tendencies toward benefiting the collective. This study indicates that, just as tendencies toward individualism may form a threat to collective well-being, so may tendencies toward benefiting specific others (or generosity) form a threat to collective well-being. That is, feelings of empathy may lead one to provide a high level of support to one particular person, thereby neglecting the well-being of the collective. For example, Batson and others (1995) note that an executive may retain an ineffective employee for whom he or she feels compassion to the detriment of the organization.

Generosity can also be activated by commitment, or the representation of long-term orientation to a relationship partner, including the feeling of being attached to a relationship, with the intention of maintaining it for better or worse (Rusbult, 1983). For example, research by Rusbult and others (1991) has revealed that commitment promotes several activities that may serve as relationship-maintenance mechanisms, such as derogation of alternatives, responses to dissatisfaction, and accommodation. The phenomenon of accommodation, defined as the tendency to respond constructively rather than destructively to a partner's potentially destructive behavior, is especially intriguing. It is not simply cooperative behavior, because it involves responding cooperatively when the other has engaged in a noncooperative behavior. Although one could accommodate (consciously or unconsciously) to enhance long-term personal well-being (or enhance relationship well-being), it is also plausible that such behavior, at least in part, is guided by a concern for the partner's well-being, that is by generosity. Complementary evidence (similarly indirect) can be derived from recent research which reveals a strong link between commitment and willingness to sacrifice in ongoing relationships (van Lange, Rusbult, Drigotas, Arriaga, Witcher, & Cox., 1997).

Another, related motivator of generosity is attachment, which is frequently defined in terms of feelings of closeness and self-other overlap (Aron & Aron, 1997; Reis & Shaver, 1988). Given that we often interact with others to whom we experience strong attachment (e.g., partner, children),

the role of attachment in the context of social dilemmas is quite important. There is some evidence that feelings of attachment activate generosity. Unfortunately, this evidence is indirect because many of the related studies did not seek to address generosity or related other-benefiting patterns of behavior in a manner independent of joint interest or long-term personal interest (for some evidence, see Aron, Aron, & Smollan, 1992). It is also important to note that, empirically, feelings of attachment tend to be linked to feelings of commitment (Agnew et al., 1998).

It is notable that past research on social dilemmas has yielded no evidence in support of generosity. One could observe patterns of reciprocal cooperation, and one could observe an individual's initiation of cooperation in an attempt to attain reciprocal cooperation. But there is virtually no evidence demonstrating the existence of generosity as a motive or orientation relevant to social dilemmas. Recently, I have conducted two studies in which I examined three forms of behavior: (a) cooperating more than the other (other-benefit), (b) cooperating as much as the other (reciprocity), and (c) cooperating less than the other (self-benefit). I examined these responses in a study in which participants were led to believe that the other already contributed three of four chips, two of four chips, or one of four chips in a give-some dilemma (van Lange, 1999; Study 2) as well as in a study in which the participants themselves generated such beliefs regarding other's behavior (van Lange, 1999; Study 3). Both studies used a single-trial social dilemma. Interestingly, the percentages of choices whereby the participants exhibited greater cooperation than they believed the other did was exceptionally low (3 percent in Study 2, where such beliefs were manipulated; and 10.4 percent in Study 3 where such beliefs were self-generated). Such findings seem to be at odds with the assumption that generosity exists; that is, that people's behavior may at times be merely or primarily guided by enhancement of other's outcomes. In fact, I have no knowledge of any study that demonstrates that participants in experimental games seek to give more benefit to the other than they expect to receive, or actually have received, from the other (an exception is a study by Batson that will be discussed shortly).

One might assume that generosity is unlikely to be activated in experimental games in which participants interact with relative strangers, who share no history and anticipate no shared future of interaction. As such, these situations may not provide sufficient bases for the development of empathy, commitment, or attachment. If sufficient basis for empathy, commitment, or attachment does exist, then generosity may exist, and guide an individual's behavior. For example, a study by Schoenrade, Batson, Brandt, and Loud (1986) provided some evidence suggesting that a history of emotional attachment activates a strong concern for the other's well-being. More recently, and in the realm of social dilemmas, a study by Batson and Ahmad (2001) revealed that a person may respond cooperatively to a previous noncooperative choice made by the other, if he or she feels