CHAPTER 2.3

Self-Interest and Beyond

*Basic Principles of Social Interaction*

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What interpersonal orientations drive social interactions? Does selfishness underlie most of our behavior? Are we also inclined to benefit others? Are we naturally committed to sharing and pursuing equality? Do we tend to compete with others, even if we suffer from it by doing so? When and why do we aggress? Such questions are among the most fundamental to understanding interpersonal relations and group processes, which may explain why these topics have attracted the attention of so many scientists from so many fields and disciplines for so long.

A complementary reason may be that the questions raised above touch on the long-standing scientific debate about "human nature": Are people by nature good or bad? Thomas Hobbes is often acknowledged as being one of the first to explicitly address this basic question. In *Leviathan* (1651/1996) he raised the interesting problem of why societies and collectivities are able to function at all, if—so he believed—humanity is basically self-interested. The puzzle, which later was termed "the Hobbesian paradox," is central to much theory developed in the social and behavioral sciences. It deals with relationships between the individual and the society at large, but also to smaller scale issues, such as the relationships between individuals in dyads or small groups, and to relationships between groups. How have the social and behavioral sciences sought to solve the Hobbesian paradox?

THE ASSUMPTION OF THE BENEFICENT INVISIBLE HAND

Over a century after Hobbes’ writings, Adam Smith (1776) sought to solve the Hobbesian problem by his famous notion of the beneficial invisible hand, assuming that private and collective interests tend to correspond rather than conflict. Indeed, in *Wealth of Nations*, Adam Smith assumed that, for the most part, groups and societies are self-functioning because individuals pursue their self-interest. The underlying assumption is that the pursuit of self-interest often has the unintended consequence of enhancing collective interest.

It is now widely acknowledged that Adam Smith’s notion of the beneficial “invisible hand” is too limited—and perhaps too simply to be true. In fact, not long after his writings, many scientists came to subscribe to the Hobbesian paradox, assuming that self-interest is often, and in important ways, incompatible with collective interests. As such, the paradox gave rise to two interrelated questions. First, is human behavior primarily or exclusively guided by self-interest? And second, if the costs of selfishness outweigh its benefits, how then can we control selfishness? In the latter question, the costs often refer to collective costs (shared by all involved), whereas the benefits often refer to the gains for the individual.
Illoa a long time before these questions were studied empirically. In fact, it is only five to six decades ago that some influential books were written that systematically addressed such issues from a formal, mathematical perspective (Daley & Raffa, 1957; Von Neumann & Morgenstern, 1944) and from a psychological perspective (Thibaut & Kelley, 1959). These books, and especially the empirical research that they inspired, have exerted an enormous influence on the science of interpersonal orientations. First, by systematically analyzing situations, scientists informed each other about the various situations that may (or may not) exist in everyday life. For example, some scientists were able to logically de- dure around 96 situations from 2 × 2 matrices (which represented two persons each having two behavior options). This work has led to an understanding that there are many kinds of conflicts in everyday life—conflicts between self-interest and collective interest, conflicts between self-interest and equality, conflicts between equal- ity and collective interest, and so on.

Second, by artificially wide variety of situations, in the laboratory or the field, it became increasingly clear that many situations represent a conflict between self-interest and collective interest. Such situations are omnipresent in our close relationships (e.g., whether to preemptively do the dishes), in relationships with colleagues (e.g., whether or not to prepare very well for a meeting when it takes costly time to do so), and in our links with organizations or the society at large (e.g., whether not to en- gage in citizenship or volunteering activities to help oth- ers). Clearly, a relationship is unlikely to be healthy or even to persist if people would not engage in costly acts that benefit the partner. A collaboration between col- leagues is unlikely to be fruitful if either of us is unwilling to help the other in any way that is beneficial. Situations are often set prepared for a meeting. And a society is un- likely to function well if most people, for example, pol- lute the environment, never intervene in emergency situ- ations, or volunteer for the greater good of all.

In fact, conflicts between self-interest and collective in- terests are so pervasive in everyday life that one can see it as the most challenging task that govern- ments, groups, and organizations, as well as friends and close partners, face in an unsuccessful manner to manage conflicts be- tween self-interest and collective interests. This may ex- plain why many scientists in various disciplines have such a long-standing interest in themes that are directly relevant to understanding conflicts between self-interest and collec- tive interest, or social dilemmas (e.g., Daves, 1980; Komorita & Parks, 1995). Beyond the scope of empirical research on social dilemmas, there has been a strong in- terest in social psychology for cooperation and competi- tion, prosocial behavior, altruism, aggression, trust, reciprocity, and many more. These topics are primarily studied from an interpersonal, or small-group perspec- tive, but it should be clear that they have also been studied from an intergroup perspective or from a large soci- al perspective. Thus, the broad scientific and societal relevance of social dilemmas is beyond dispute.

We are discussing conflicts between self-interest and collective interest in so much detail because it is precisely this domain of situation that is relevant to all the topics discussed previously. If the social world was not social (e.g., the world of Robinson Crusoe before Friday came), or if the world was much like Adam Smith initially imag- ined (i.e., almost no conflict of interest), any of the spe- cific themes not described would be of little concern. Cooperation and competition would not be called for, and one cannot communicate or develop trust if there are no con- flicts between self-interest and collective interest. This would be a world in which "good and bad" do not seem to matter. But, of course, Robinson Crusoe started to face many opportunities and constraints after Friday's ar- rival. He and Friday could share food in an equal man- ner, overbenefit themselves a little every now and then, reciprocate favors over time, cooperate on building shared goods, or compete for scarce resources. Because they became interdependent in terms of fulfilling their basic needs, each of them developed orientations toward each other, which are essential to adapting to the various situations that they face. For example, they could de- velop orientations toward cooperation, equality, altru- ism, individualism, composition, or aggression.

In this chapter, interpersonal interaction is broadly de- fined as the set of cognitions, affect, and motivation that underlie interpersonal behavior and social interaction. We deliberately use a broad definition to reveal its rele- vance to many interpersonal topics, from affiliation to at- tachment, and from altruism to aggression. The concep- tual basis for interpersonal orientation is derived from Kelley and Thibaut's (1978) interdependence theory as- suming that people may transform interpersonal situa- tions into new situations that guide their behavior and in- teractions. Also, we should note that in illustrating principles and mechanisms, we focus on research on so- cial value orientations, which are important predetermi- nes for distributions of outcomes for self and other. The concept of social value orientation deals with prosocial, individualistic, and competitive orientations, and often has been examined and conceptualized as an individual difference variable. In this chapter, we use the concept of interpersonal orientations to explicitly ac- knowledge the assumption that such orientations can be influenced by the person, the situation, or the interaction partner, as we discuss later.

SOCIAL INTERACTION IS A FUNCTION OF PERSONS A AND B AND THE SITUATION

The illustration about Robinson Cruso already illus- trates the power of the situation—at Friday's arrival, Robinson's life changed dramatically. Indeed, the es- sence of a social psychological "way of thinking" is often described in terms of the power of the situation. A classic case in point is, of course, the Lewinian equation B = F (P, E) which assumes that that behavior (B) is shaped not only by properties of the person (P) but also by features of the situation, or social environment (E) (Lewin, 1935). The essence of a social psychological analysis can be even more fully expressed by constraining our goals in terms of the relationships between two (or more) persons. To de- velop a tru social psychology, we may wish to expand
our formulation, noting that an interaction (I) between persons A and B can be conceptualized in terms of the persons' needs, thoughts, and motives in relation to one another (A and B) in the context of the specific social situation (S), in which their interaction tranquilles (Holmes, 2002; Kelley et al., 2003; Van Lange, Otten, De Bruijn, & Joireman, 1995). Expressed in an equation, I = (S, A, B).

To illustrate the utility of an interaction-based analysis, imagine two scenarios for John and Mary, who are deciding where to spend their summer vacation. In one scenario, their interests conflict in that John wants to go to a beach resort whereas Mary wants to go to Paris. In this type of situation, each person will seek to communicate the basis for his or her preference ('I need the excitement of Paris'), and each will engage in cognitive activity oriented toward understanding the other's needs ("Does John want to relax because he had a stressful year?"). The situation makes it possible for each person to display his or her goals and motives (e.g., selfish vs. prosocial). Communication and information seeking will center on each person's needs, goals, and motives in relation to those of the partner ("Whose needs are more pressing?"; "Will Mary be responsive to my needs?"). The two may rely on fairness norms to resolve their problem ("It's my turn, you deserve a break"). Thus, situations involving conflicting interests are interpersonally rich, affording psychological processes such as self-presentation and attributional activity, and activating morality and benevolence-relevant motives and norms.

In a second scenario, John's and Mary's interests correspond. In that both want to vacation in Paris. Neither person is likely to be particularly concerned with information seeking, self-presentation, or attribution in that there is "nothing to explain" and "nothing to think about." It is possible and not possible for either person to display benevolent motives in that the course of action that would benefit John simultaneously benefits Mary. Interaction is a coordination problem; the two must agree on a date for their vacation, and one person must arrange for travel and lodging. Thus, is comparison to situations with conflicting interests, situations with corresponding interests are relatively simple in that they are less likely to inspire activities such as information seeking or self-presentation and are unlikely to give rise to moral dilemmas or questions of benevolence.

These scenarios very simply illustrate an important point: To understand social interaction we must consider the person (the Self), the interaction partner (the Other), the interaction (I), and the situation. Likewise, social interaction experiences can be shaped by any of these three components, independently or in combination. For example, a person may be likely to yield noncooperative, selfish interactions because of person influences (e.g., the person does not trust others' cooperativeness), partner influences (e.g., the partner holds in fact a competitive orientation), or situational influences (e.g., the two people often are faced with zero-sum-like situations, with very little opportunity for fruitful exchange through cooperation).

Several theories tend to assume such influences, although often focusing on one of these influences. Models or theories that focus on self-fueling prophecies tend to focus more strongly on influences of the Self. For example, individuals with competitive orientations are likely to elicit noncooperative behavior from others, because they expect noncooperative from others, they behave noncooperatively toward others, through which they elicit noncooperative behavior from others—thereby supporting their initial belief that "everybody is selfish" (cf. Weijters & Stahelka, 1979). There are many models which suggest strong partner influences. For example, traditional formulations of attachment theory suggest that early social interaction experiences tend to underlie the development (or not) of secure attachment, and that "partner influences" are strong (Bowlby, 1969). In particular, when the primary caregiver (usually the mother) acts in a cold, uncaring, and untrusting manner, the child is unlikely to develop secure attachment—which is likely to be developed when the primary caregiver is highly responsive to the primary needs of the child, communicating trust and love. Finally, there are some classic theories or models that emphasize the important role of situation. Perhaps the most illustrative example is the Robber's Case experiment, revealing that the presence of conflicting goals among groups of children undermined friendly behavior and turned it into hostility, distrust, and overt aggression between the two groups (Sherif, Harvey, White, Hood, & Sherif, 1961; 1968).

Social interactions are important in their own right (i.e., as a topic of study), but we suggest that an interaction-based analysis has strong theoretical benefits. First, it is true, almost by definition, that interaction is a function of the situation and the persons involved. This analysis forces us to analyze situations in terms of what the individuals (behavior, thoughts, feelings) do for, or on, and/or may activate). Interdependence theory has advanced a taxonomy of situations. The degree to which individuals' interests correspond versus conflict (i.e., covariation in interests), discussed and illustrated earlier, is only one of the six dimensions that contemporary formulations of interdependence theory incorporate (Kelley et al., 2003). The other dimensions capture degree of dependence (how strongly are outcomes determined by the partner's actions or the partner's actions in combination with one's own actions); (2) mutuality of dependence; (3) basis of dependence (whether dependence derives solely from the partner's behavior [partner control], or from partner's behavior in combination with one's own behavior [behavior control]); (4) information availability (e.g., the degree to which we have information about the partner's preferences); and (5) extended situations (e.g., the degree to which interaction situation extend over time and/or the degree to which diverse behavioral options are available). It is beyond the scope of this chapter to fully discuss and illustrate these dimensions (for a detailed overview, see Kelley et al., 2003; Rusult & Van Lange, 2003). We do wish to note, however, that the dimension of corresponding versus conflicting interest is among the most essential to understanding interpersonal orientations.

Second, the concept of interaction is essential to observation. We never directly see people's motivations or in...
tions displayed, but we do see two (or more) people reacting to each other, thereby usually producing good or not so good outcomes for each other. Thus we can speak of cooperative interactions (when two people behave cooperatively toward each other), noncooperative interactions (when two people ignore one another's interests), or aggressive interactions (when people seek to produce bad outcomes for each other). Because observation is essential to social learning and modeling, it is likely that the observation of social interaction, along with the (social) analysis of it, is an important determinant of our beliefs regarding the orientations that other people may have as well as our beliefs regarding the norms for appropriate conduct. For example, when watching a fighting couple, people may strengthen their belief that most people are not to be trusted and perhaps come to believe that even small forms of verbal abuse are violating norms of decency and respect.

Third, perhaps even more essential than observation, the most direct experiences we have with our social environment are derived from our own social interactions. Given that social interactions can be chronically influenced by some situational factors (e.g., the degree to which we need to share important resources with our siblings), or by an essential interaction partner (e.g., the primary caregiver), people may acquire different social interaction experiences. These social interaction experiences are likely to shape the relatively stable (interpersonal) orientations that people may rely on and use with particular partners (e.g., a prosocial orientation toward one's caring father) or across multiple interaction partners (e.g., a prosocial orientation across most [nonclose] interaction partners). Of course, any interpersonal orientation is subject to change and modification.

Fourth, and finally, psychological processes such as cognition and affect are often both determinants of social interaction and consequences of social interaction. Cognition, motivation, and affect in many ways guide our behavior, emotions, and ultimately interactions. Indeed, much of our thinking and affect is oriented toward making sense of interaction situations and the partner(s) that is/are essential to interaction. Automatic or more controlled forms of impression formation are obvious examples—and it is certainly true that much of our thinking and feeling are "for doing" (Tulke, 1992; cf. Jones & Thibaut, 1958). At the same time, during and after social interactions, people are likely to evaluate and summarize their interaction outcomes—for example, cognitions may help us understand the partner's actions, motivation may provide the frame for interpretation while emotions may signal satisfaction or dissatisfaction with the outcomes (along with potential emotions such as anger, disappointment, happiness, etc.). The important point is that, in many ways the concept of social interaction is key to understanding the functions of cognition, motivation, and affect.

To conclude, an analysis that focuses on social interaction has the theoretical benefit of understanding "the situation," understanding social learning through observation, understanding social development (continuity and change) of interpersonal orientations, as well as cog- nitive, motivation, and affect as determinants and consequences of social interaction.

**BASIC PRINCIPLES OF INTERPERSONAL ORIENTATIONS**

Which interpersonal orientations help us understand interpersonal behavior and social interaction phenomena? What types of interpersonal orientations, other than selfishness or individualism, should be meaningfully distinguished? Briefly, we suggest the importance of three prosocial orientations (cooperation, equality, and altruism), two prosocial orientations (individualism and competition), and one antisocial orientation (aggression). The theoretical basis for these orientations is largely derived from interdependence theory (Kelley & Thibaut, 1978) and early research and theory of social value orientation (MacCoun & Messick, 1976; Mc Clintock, 1972; Messick & Mc Clintock, 1968). It is interesting to note that this early research and theory by Messick, Mc Clintock, and their colleagues has inspired the development of a model of social exchange, which largely departed from the assumption of rational self-interest (Thibaut & Kelley, 1959), to the theory of interdependence, which assumes that individuals may "transform" a given situation according to broader orientations, such as cooperation, equality, or competition (Kelley & Thibaut, 1978).

Interdependence theory describes these four nonindividualistic orientations in terms of outcome transformations, delineating enhancement of joint outcomes (MaxJoint), minimizing differences between own and other's outcomes (MinDiff), enhancing outcomes for other (MaxOther), enhancing relative advantage over others (MaxRel), and reducing other's outcomes (MinOther). Specifically, the theory argues that given settings of interdependence (i.e., the given matrix) may be transformed according to these orientations to yield a reconciliatory scheme (i.e., the effective matrix) which is more strongly predictive of behavior and social interaction. The given matrix is typically a function of base, nonsocial preferences, such as whether a person prefers to watch movie A or movie B. When two partners differ in their preferences but want to go to the theater together, they may take into account broader preferences. Such broader preferences are inherently social, because the individual takes into account the partner's preferences, which then yields a reconciliatory transformation of the given matrix. That is, through transforming the given matrix by orientations such as cooperation, equality, altruism, or competition, the individual constructs an effective matrix which may account for how the individual seeks to solve this interdependence problem (e.g., whether to give in, whether to persist in his or her initial preferences) as well as how the two partners eventually reach a solution (which movie they attend).

The broader considerations, or transformations, may be the product of systematic information processing, shallow or heuristic processing, or even virtually no processing at all (automaticity: Bargh, 1996). In fact, because
TABLE 23.1. An Overview of Basic Propositions of Interpersonal Orientations

Proposition 1
Most people pursue good outcomes for self, either in the short term, the long term, or both (individualism); but this is often not the sole orientation that people adopt to interaction situations.

Proposition 2
Interpersonal orientations reflect not only individualization (enhancement of own outcomes) but also cooperation (enhancement of joint outcomes), equality (enhancement of equality in outcomes), altruism (enhancement of other's outcomes), competition (enhancement of relative advantage over others), and aggression (minimization of other's outcomes).

Proposition 3
The proximal orientations of cooperation and equality frequently operate in a concerted or interactive manner. That is, these orientations tend to go hand in hand, and it is the interplay of both "proximal" orientations that best accounts for behavior and interaction in settings of interdependence.

Proposition 4
Interpersonal orientations are partially shaped by societal interactions—therefore, shaped by the self, the interaction partner, and/or the situation.

Proposition 5
Interpersonal orientations represent different probabilities with which one or more decision rules (e.g., outcome transformations such as MaxJoint, MinSelf) are activated and used.

Proposition 6
We encounter several types of interdependence situations quite regularly, often with the same or similar partners, it is plausible that such transformations frequently take place in a habituated, automatic manner. For example, parents may fairly automatically respond to the basic needs and preferences of their children, friends may fairly automatically help each other without a lot of thought, and the desire to "compete" with others may sometimes come into being without any deliberation.

We advance five basic propositions relevant to interpersonal orientations. The term "proposition" is a deliberate choice, as we believe that alternative concepts are either too broad and too remote from the empirical world (e.g., assumptions) or too specific and too closely linked to direct empirical tests (e.g., hypotheses). The empirical literature relevant to these propositions focuses on basic work in social psychology and related fields. Table 23.1 presents an overview of the propositions advanced in this chapter.

INTERPERSONAL ORIENTATIONS AS DECISION RULES

Proposition 1 states that "most people pursue good outcomes for self, either in the short term, the long term, or both, but this is often not the sole orientation that people adopt to interaction situations."

As noted earlier, Thomas Hobbes, and many of his contemporaries, assumed that humankind is basically self-interested, suggesting that human nature involves little (if any) motivation to enhance the well-being of others, to enhance the well-being of the collective, or to enhance equality in outcomes. While many philosophers since Hobbes (and before) held similar views (though less explicitly), it is perhaps more surprising that this view continued to be influential for a long time. More recently, the notion of self-interest, later extended and modified into "the power of wealth," has dominated much of the traditional theories relevant to interpersonal and intergroup behavior, including early formulations of game theory (Luce & Raiffa, 1967; Von Neumann & Morgenstern, 1944) and of social exchange theory (Blau, 1964; Homans, 1961; Thibaut & Kelley, 1959). This seems especially true for economic theory. As Gordon Tullock (1976), an influential economist and theorist on public goods, once said: "the average human being is about 98 percent selfish in the narrow sense of the term." (cited in Masnidge, 1990, p. 12).

Within psychology too, the assumption of rational self-interest is embedded in several key constructs, such as reinforcement, the pursuit of pleasure, and utility maximization, as developed in the context of behavioral theory (including social learning theory), psychoanalytic theory, and theories of social decision making. Moreover, many of the "self-enhancement" phenomena documented in social psychology tend to assume that people seek out material or esteem-related outcomes for the self, often neglecting the power of considerations aimed at benefiting others. Although there is little doubt that people seek to construct realities in ways that serve to maintain or enhance a positive self-image (i.e., self-enhancement), it is also likely that similar tendencies are at work in describing close partners, friends, and members considered to belong to the own group (e.g., Murray & Holmes, 1983).

In the current article we do not wish to discard self-interest as a powerful motivation. We are not so confident that self-interest tells only part of the story, not all of it. Also, we suggest that Tullock's 95% should be regarded as an overstatement. But why are we so confident that self-interest tells only part of the story? First, several researchers have addressed the fundamental issue of whether people may be willing to make a cooperative choice, in the absence of several (although not all) self-serving goals such as reputational, self-presentation, or reciprocal concerns. Specifically, researchers have designed prisoner's dilemma situations in which participants are strangers who made a single and anonymous choice for relatively large amounts of money and interaction among participants was prevented before and after the experiment. The studies have revealed that under such conditions, a substantial number of people make a cooperative choice (for a review, see Caporael, Dawes, Orbell, & Van de Kragt, 1989).

Second, in a different program of research, it has been demonstrated that feelings of empathy provide a power-
ful motivation to make a cooperative choice in single-trial prisoner’s dilemmas, even if the other had just made a noncooperative choice (Batan & Ahmed, 2001). That is, people who are informed about the misfortune of another person (e.g., partner has ended a relationship and inturned to put themselves in their position (empathy instruction) tend to act in ways that cannot be under-
stood in terms of self-interest (for an overview of earlier evidence, see Batson, 1998). Third, the long-standing research on justice and fair-
ness reveals that (at least some) people are often inclined to favor fair outcomes over self-enriching outcomes that repre-
sent injustice. A more recent phenomenon is the notion of altruistic punishment, the well-supported ten-
dency for people to punish others (at a cost to them-

selves) who fail to cooperate and thereby undermine the "cooperative atmosphere" in a small group (Fehr & Gächter, 2002). This phenomenon too clearly shows that people are strongly motivated to pursue equality and to "do justice" to those who tend to exploit others.

Fourth, what is impressive about the lines of research just described is that considerations other than selfish-
ness can be observed with relative strangers, with whom they interest in a fairly abstract social dilemma task, often under completely anonymous conditions. Clearly, in the context of ongoing relationships, people should be quite prepared to engage in self-sacrificial acts, to "nurture," or to accommodate in an attempt to promote the well-being of family members, close partners and friends (see Russett & Van Lange, 2005). Although such tendencies are not easy to isolate from long-term selfish interest in ongoing relationships (because there is a history and fu-
ture to the relationship), research on communal relation-
ships suggests that prosocial behavior often may occur in the absence of "recordkeeping" or reciprocity in favors. This is, people tend to respond to variation in the other's needs, and less so (or not at all) to whether the partner has engaged in similar acts in the past (Clark & Mills, 1995). And the fact that people harbor exceedingly favor-
able views of close others is certainly consistent with the notion that the partner's ego is quite important to them-

selves as well (Murray & Holmes, 1995).

Last but not least, the long-standing program of re-
search on social value orientation, to be discussed later, is strongly at odds with the view of self-interest. In fact, the program of research was initiated in part because early research on the prisoner's dilemma and the like revealed pronounced intraindividual consistency in tendencies to-
ward cooperation or selfishness.

Thus, various lines of research provide support for the notion that selfishness is not the only orientation that people adopt in interaction situations with others—close others, or even complete strangers. In this respect, we agree with recent insights that suggest that the impor-
tance of self-interest may be overstated. Miller and Ratner (1998; see also Ratner & Miller, 2001), for exam-
ple, demonstrated that participants overestimate the im-
pact of financial rewards on their peers willingness to donate blood, as well as the power of social rewards (as assessed by group membership) on their peers attitudes. Also, research has revealed that people tend to assume

that most others adopt an individualistic orientation to a prisoner's dilemma, believing that most others are sim-
ply seeking to enhance their own outcomes with no or very little regard for other's outcomes (Fedema & Puppe, 1994; Maki & McGinnick, 1985).

There may be several mechanisms that support the "myth of self-interest." For example, people are more likely to reciprocate noncooperation than to reciprocate cooperation. The implication is that a belief in the selfish-
ness of others is more easily confirmed than a belief in the cooperative nature of others (Kelley & Stahelski, 1970). There are several specific mechanisms as well that support selfishness rather than cooperation. One ex-
ample is the strong tendency for people to assign greater weight and attention to negative behaviors than to posi-
tive behavior (e.g., Blake, 1980; Skowronska & Carlston, 1989). Another mechanism derives from the availability of information. Often in the context of groups, what we can observe (noncooperative interaction) may actually be due to a few or even only one person, in that the coopera-
tive intentions are (often) not visible. In other words, ob-
servable noncooperative behavior in groups may be due to noncooperative intentions of only a few group mem-
bers. Finally, at the societal level, the myth of self-interest tends to be supported in the media, which tends to focus more on the bad parts of human nature than the good parts.

To conclude, we suggest that self-interest is a powerful motivation, but one that is often overestimated in strength. Such overestimation often is accompanied by a neglect of other important interpersonal orientations, to which we will direct our attention next.

Proposition 2 states that "interpersonal orientations re-
flex not only individualism (enhancement of own out-
comes) but also cooperation (enhancement of joint out-
comes), equity (enhancement of joint outcomes), altruism (enhancement of other's outcomes), compe-
tition (enhancement of relative advantage over others), and aggression (mimization of other's outcomes)."

Cooperation
There is a fair amount of research showing that the en-

hancement of joint outcomes, or cooperation, is an im-
portant consideration. People have a pronounced ten-
dency to consider not only outcomes for themselves but also outcomes for others. The enhancement of joint out-
comes may sometimes take the form of self-interest and as-
signing positive weight to other's outcomes (or doing so harm to others). But perhaps just as often, or more of-
ten, the enhancement of joint outcomes takes the form of enhancing outcomes for the group as a whole (a ten-
dency sometimes referred to as collectivism, see Batson, 1994). In terms of decision rules, in both cases, individu-
als tend to enhance joint outcomes (even though they may assign greater weight to outcomes for self than to outcomes for other).

Psychologically, the two types of cooperation are sub-
stantially different. The tendency to assign some positive weight to other's outcomes may be accompanied by a va-
riety of mechanisms, such as want to act in line with the "no-harm" principle (Batson, 1994), adopting a norm of social responsibility, which dictates helping. The tendency to enhance group outcomes may readily be acti-
ated, e.g., at the very beginning of group formation, and it is powerfully activated by identification with the group (e.g., Brewer & Kramer, 1986; Kramer & Brewer, 1984). To the extent that a person feels more strongly part of the group and valued by the group, or the extent to which a person deems self-definition and esteem from the group, individuals are more likely to behave cooper-
atively. A classic case in point is research by Brewer and Kramer (1986), in which participants were categorized as psychology students (i.e., the actual participants, hence strong group identity) or economics students (i.e., weak group identity). Using a specific resource dilemma, Brewer and Kramer showed that under conditions of strong identity, individuals were more likely to behave cooperatively when it was essential to the group (i.e., when the resources were near depletion). Such coopera-
tive efforts were not observed when group identity was low. It has been suggested that under conditions of strong identity, there may be a blurring of the distinction between personal outcomes and collective outcomes—that is, me and mine becomes we and ours, just as we and ours becomes me and mine (e.g., De Cremer & Van Vuurt, 1999).

Egalitarianism

The existence of egalitarianism or equality may be de-
rived from various lines of research. To begin with, sev-
eral experiments have been conducted within the realm of reasoning that lead to prescriptions (rules) that are supposed to determine different "rules of fairness." In these tasks, a group of people shares a resource and the problem is how to allocate the resource fairly. How do they develop certain standards as to how to operate fairly using the resource without overusing it. Research by Allison and Messick (1990) provided a powerful dem-
stration of what happens in such situations. That is, their results showed that when participants (in a group of six people) are asked to harvest first from the common resource, people almost without exception use the so-called division rule. Individuals tend to favor equality in outcomes (rather than more complicated rules of fairness); for related evidence, see Van Dijk & Wille, 2000). Allison and Messick (1990) suggested that equality represents a decision heuristic that has the advantage of being sim-
ple, efficient, and fair. Equality has great potential to pro-
 mote the quality and effectiveness of interpersonal rela-
tionships, and therefore it can be considered a "decision rule" that is deeply rooted in people's orientations to-
ward others (see also Deutsch, 1975, Girzal, 1982; Knight & Dubro, 1984). Another powerful illustration of equality in interde-
pendence situations is when people have to negotiate al-
locations (e.g., how to allocate monetary outcomes). This problem is often addressed in research on ultimatum games, an exceedingly popular paradigm in experimen-
tal economics (see Guth, Schmalberger, & Schwartze, 1988). In this negotiation setting, two players have to de-
cide on how to distribute a given amount of money. One of the players, the allocator, offers a proportion of the money to the other player, the recipient. If the recipi-
ent accepts, the money will be distributed in agreement with the allocator's offer. If the recipient rejects the offer, both players get nothing. Some of the first studies using this research paradigm demonstrated that allocators gen-
erally proposed an equal distribution (i.e., a 50-50 split) of the money (for an overview, see Camerer & Thaler, 1995). Subsequent studies, however, wondered whether this was true fairness and that allocators may have acted out of fear that recipients would reject their offer. Recent evidence suggests that at least some people do persist in employing the equality rule in ultimatum games, even when recipients can be cheated on or when recipients hardly have any power over the decision to reject the offer or not (see Van Dijk, De Cremer, & Handgraaf, 2004). Again, equality seems to be an orientation that people carry with them when engaging in social interactions.

Although equality is the eye of many of the prime ex-
ample of fairness, we already noted that fairness might also take different forms, independent of outcomes. More precisely, allocating outcomes is always accompa-
nied by procedures guiding allocation decisions (Thibaut & Walker, 1975). People also wonder about how fair these procedures are and these perceptions in turn also have strong effects on people's behaviors and experi-
ences in social relationships (De Cremer & Tyler, 2005). The focus on procedural fairness was further inspired by research showing that when people are asked to talk about their personal experiences of injustice they usually talk primarily about procedural issues, in particular the fairness of the procedures used. Voice also means that people are given an opportunity to express their values (i.e., "value-
expressive") worth. For example, some research shows that people who already rated a procedure to be fairer if they had voice than if they lacked voice, even if they estimated that what they said had little or no influence on the decisions made and on the outcomes that would have received (Ty-
ler, Rasinski, & Spodick, 1985). An important field study by Tyler and Depoy (1990) examined people's perceptions of fairness of the legal authorities in California and their sense of identification with their state. At the time of their study, California was plagued by a severe drought and people had to try to maintain water resources—so a situation that resembles a so-
cial dilemma. Results revealed that perceptions of proce-
dural fairness (i.e., how accurate, ethical, neutral, consis-
tent, and participative) they perceived the procedures enacted by the authorities significantly influenced people's willingness to save and maintain water resources. Especially when they exhibited a strong sense of identifi-
cation with the community. High identifiers particularly
cared about the fairness of the procedures because this indicated to them that they were valued society members and thus should be treated with respect (Tyler & Lind, 1992). More recently, De Cremer and Van Vugt (2002) experiments demonstrated the powerful effects of procedural fairness on cooperation behavior in a public good dilemma by showing that a procedurally fair leader (i.e., a leader allowing voice to group members in the decision to allocate the public good) promoted prosocial behavior, but particularly among those who identified strongly with the group toward the group (i.e., high group identifiers). These results thus indicate that procedural fairness, independent of outcomes, guides people’s actions in social relationships, and especially when the locus is on the common group. More recent research supports the notion that procedural fairness (examining the availability of voice or not) often is used as a cue or heuristic as to whether “the authority” is to be trusted. In fact, Lind (2001) notes that “people use overall impressions of fair treatment as a surrogate for interpersonal trust” (p. 65) (for empirical evidence, see Van den Bos, Wilke, & Lind, 1998).

To conclude, egalitarianism has received attention in distinct literatures, often supporting the notion that equality in outcomes and treatment is deeply rooted in our system and often serves as the norm as well as a heuristic for own actions and expectations regarding other’s actions.

Altruism

The claim that altruism should be considered an interpersonal orientation is rather controversial. Indeed, as more readers know, there has been a fair amount of debate about the existence of altruists both within and beyond psychology. Much of the controversy, however, deals with the debate about what constitutes altruistic behavior (i.e., acts of costly helping are considered altruistic) to definitions that seek to exclude any possible mechanism that may be activated in some way by self-interest. If we limit our discussion, for prudence’s sake, to research on cooperation and competition, and to allocation measures, then we see that altruism is not very prominent. For example, in assessments of interpersonal orientations in a specific resource allocation “task,” the percentage of people who should be classified as altruistic (i.e., assigning no weight to their own outcomes while assigning substantial weight to other’s outcomes) is close to zero (Liebrand & Van Run, 1985). Similarly, when people playing a single-choice prisoner observe that the other makes a noncooperative choice, the percentage of cooperation drops to 5% or less (Van Lange, 1999).

But this evidence should not be interpreted as if altruism does not exist. In fact, what is more likely is that it does not exist under the (interpersonal) circumstances that we common in this tradition of research. People usually face a decision-making task, be it a social dilemma task, a resource allocation task, or a negotiation task, in which they are interdependent with a “relatives stranger” in that there is no history of social interaction or other form of relationship. Accordingly, there is no basis for feelings of interdependence, sympathy, or relational commitment. We suggest that when such feelings are activated, altruism may very well exist.

As alluded to earlier, recent research by Batson and Ahmad (2001) provides convincing evidence. Specifically, they had participants play a single-trial prisoner’s dilemma in which the other made the first choice. Before the social dilemma task, the other shared some personal information that her partner had ended the relationship with her, and that she finds it hard to think about anything else. Batson and Ahmad compared three conditions, one of which was a high-empathy condition in which participants were asked to imagine and adopt the other person’s perspective. The other conditions were either a low-empathy condition, in which participants were instructed to take an objective perspective on the information shared by the other, or a condition in which no personal information was shared.

After these instructions, participants were informed that the other made a noncooperative choice. Batson and Ahmad found that nearly half of the participants (45%) in the high-empathy condition made a cooperative choice, while the percentages in the low-empathy and control conditions were very low, as shown in earlier research (less than 5%, as in Van Lange, 1999). Hence, this study provides a powerful demonstration of the power of empathy in activating choices that can be understood in terms of altruism, in that high-empathy participants presumably assigned substantial weight to the outcomes for the other at the expense of their own outcomes.

Also, the existence of altruism was also supported by earlier research that was designed to test the hypothesis that feelings of empathy toward others could be used as a cue to benevolence in that other’s welfare. Using experimental manipulations of empathy (study 1) and naturally occurring variation in empathy (study 2), Batson et al. found that feelings of empathy created or enhanced the desire to benefit one person in the group (i.e., the 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 altruism, form a threat to collective well-being. That is, feelings of empathy may lead one to provide tremendous support to one particular person, thereby neglecting the well-being of the collective. For example, as noted by Batson and colleagues (1995), an executive may remain an ineffective employee for whom he or she feels compassion to the detriment of the organization. We suggest that such tendencies toward altruism are likely to be observed when individuals deal with others with whom they have developed attachment, closeness, or sympathy.
Competition

There is also strong evidence in support of competition as an orientation quite distinct from self-interest. As noted earlier, the work by Messick and McClintock (1968) has inspired considerable research that reveals that not only cooperative orientations but also competitive orientations may underlie social interactions. For example, Kuhlman and Marshello (1975) have demonstrated that individuals with cooperative orientations do not tend to exploit others who exhibit cooperation at every interaction situation, irrespective of the individual's own behavior. They also showed that individuals with competitive orientations do not exhibit cooperation, even if cooperative behavior, rather than noncooperative behavior, best serves their own personal outcomes. For example, when interacting with a partner who pursues Tit-for-Tat (Axelrod, 1984), which begins with a cooperative choice and subsequently makes the same the choice as the other did in the previous interaction situation, it make sense to cooperate if one is selfishly oriented. The reason is that cooperative choices yield mutual cooperation (good outcomes), whereas noncooperative choices yield mutual noncooperation (less good outcomes). Interestingly, unlike individualists who do respond cooperatively, competitors do not tend to behave cooperatively in response to a Tit-for-Tat strategy. The plausible reason is that competitors do not seek to enhance their own outcomes is an absolute sense—they seek to maximize the gain (or minimize the losses) relative to the other person.

The importance of competition is even more directly shown in research on a decision-making task that represents a conflict between the one hand cooperation and individualism (option A) and on the other hand competition (option B). Hence, the only consideration is to choose option B is to receive better outcomes (or less worse outcomes) than the other, even though one could do better for oneself by choosing option A. Research using this so-called maximizing difference game has revealed that quite a few people choose the competitive alternative; it is also of some interest to note that among some (young) age groups cooperation and competitiveness tend to be even more pronounced (McClintock & Moskowitz, 1976). Specifically, among very young children (5 years old) individualistic orientation dominates, after which competition becomes more pronounced (4–5 years), which is then followed by cooperative orientation (6–7 years).

Finally, one might wonder whether it is the aversion of "getting behind" or the temptation of "getting ahead" that underlies such competition. In a very nice study by Messick and Thornaght (1967), it was shown that the former tendency (aversive competition) is much more pronounced than the latter tendency (appetitive competition)—in other words, not losing seems a strong motivation than winning. This early research was later extended, and generalized, by Kahneman and Tversky's (1979) gain and loss frames in their prospect theory, and by Higgins's (1998) distinction between prevention and promotion focus as two distinct self-regulatory systems. Recent research has also revealed that under conditions of uncertainty, competition may be especially pronounced, presumably because people really want to make sure that they do not get less than the other (Pappe & Val kesnberg, 2008). Thus, there is little doubt that competition is an important orientation that needs to be carefully distinguished from self-interest.

Aggression

The orientation of aggression has received very little attention in research on social dilemmas. It is interesting to note that, especially in comparison to the orientation of altruism, much research on aggression focuses on genetic factors and other individual differences. Experiments are not only twin studies but also studies focusing on associations of aggression with hormonal activity, such as variations in levels of testosterone. Generally, this body of research supports the view that aggressiveness, examined by self-report methodology, is substantially "influenced" by genetic factors and biological makeup. For example, research shows that manipulations of levels of testosterone, varied as part of a treatment for sexual transformations, influence the proclivity to anger. There is an increase in the tendencies toward anger among individuals who transform from woman to man, and a decrease in such tendencies among individuals who transform from man to woman (van Gooren, Frijda, & Van de Poll, 1995). Importantly, the correlation between aggressiveness and testosterone is especially pronounced for scale items assessing aggressiveness in response to provocation (Olweus, 1979), suggesting that aggression needs to be considered in terms of the other, interpersonally activated. Indeed, the methods typically used to study aggression consist of examining aggressiveness in response to provocation by another person. Hence, anger and aggressiveness should be easily aroused by others who fail to exhibit cooperative behavior. Indeed, the fact that there is not much systematic research on aggression in social dilemmas is not to imply that aggression is not an important orientation or motivation in the context of social dilemmas. We suspect that many or most of the readers who have conducted social dilemma experiments will immediately recognize not only the involvement but also the hostility described by Dawes, Mc Tavish, and Shackle (1977).

One of the most significant aspects of this study, however, did not show up in the data analysis. It is the extreme seriousness with which subjects take the problems. Comments such as, "If you defect on the rest of us, you're going to live with it the rest of your life," were not at all uncommon. Nor was it unusual for people to wish to leave the experimental building by the back door, to chant that they did not wish to see the "sons of bitches" who double-crossed them, to become extremely angry at other subjects, or to become tearful." (p. 7)

Because it is unlikely that aggression is a selfactivated phenomenon in social dilemmas, people are unlikely to approach one another aggressively, with the primary goal in mind to reduce the outcomes for others. As noted earlier, aggression may be activated when others
fail to cooperate. This interpersonal basis of aggression is important, and suggests several interesting phenomena. For example, it may well be that tendencies toward aggres-
sion are most pronounced among those who do not expect others to behave selfishly. As a point in case, Kelley and Stahelski (1970) provide some evidence for what they referred to as oversanitization, the tendency for cooperative individuals (at least, some cooperative individ-
uals) to behave eventually even more noncoopera-
tively than the typically noncooperative partner with whom one interacts (see also Liebrand, Jansen, Rijken, & Suhrer, 1985)

But why might people respond so aggressively to noncooperative behavior by others? Is it only because the other's noncooperative behavior provides one with much less good outcomes than the other's cooperative behavior? We think not. In fact, it may well be strongly linked to a violation in equality of outcomes that often is created (and often perceived as intentional) by the other's noncooperative behavior. But then the ques-
tion becomes, "Why would people respond so aggres-
sively to a violation of equality in outcomes?" Specula-
tively, three reasons seem especially noteworthy.

First, a violation of equality is generally easily ob-
served. When comparing two outcome situations, it
seems easier to compare both situations in terms of
equality in outcomes than it is to compare them in terms
Second, people often use social standards for evaluating
the quality of their own outcomes (cf. comparison level;
Kelley & Thibaut, 1978). In the context of a social di-
lemma, the social standard (or social comparison) is also salient (1) because typically people can "explain" any
given outcome directly in terms of the other's behavior,
and to some degree, the other's intentions, and (2) be-
cause individuals' own behavior, at least in part, may be
guided by expectations regarding other's behavior (e.g.,
Kelley & Stahelski, 1970). Third, people are generally
avertive to receiving fewer good outcomes than others.
One is reminded here of classic research by Mestick and
Thorngate (1967), revealing that aversive tendencies to-
ward ensuring that the other does not attain greater out-
comes than one'self are stronger than "appetitive" ten-
dencies toward attaining greater outcomes for oneself.
In most situations, a violation of equality, caused by oth-
ers' noncooperative behavior, may not only hinder or frustrate one's interaction goals, but also negatively influ-
ence a person's pride, honor, or self-esteem (i.e., two conse-
quences that are likely to instigate anger, see Averill, 1982).

It is interesting that responses to aggressive acts (spe-
cifically, offenses) have recently received greater atten-
tion in studies on interpersonal forgiveness. In support
of the notion that (aggressive) offenses often are viola-
tions of justice, it has been shown that forgiving is effec-
tively promoted by a compensatory act or an apology by the offender (McCullough, Worthington, & Rachal, 1997). If such restorations are not made, forgiving is less likely to happen, especially when justice concerns remain prominent. Such may lead to an inability to which in turn may challenge quality of relationships and undermine psychological well-being (e.g., Karremans, Van Lange, Dawerker, & Kuwer, 2005). Aggression is, of course, by no means confined to dyads or small groups. Also, in large-scale social dilemmas, aggression, or at least subtle forms of aggression, may account for patterns of re-
action, resistance, protest, and so on. Such aggression is
to a high extent by the behavior of specific group members,
managers, or local and global authorities. Much research on
large-scale social dilemmas has focused on individu-
als' willingness to contribute to cooperate, which may be
regarded as a line of research that would benefit from
greater attention for the opposite side of the coin (i.e.,
examining the psychological aspects of individuals' readi-
tness to aggress in subtle or more explicit ways). Also, the
topic of forgiveness is, of course, of great relevance to re-
solving conflict between large groups. To conclude, it is
surprising that aggression has received so little attention
in social dilemmas, because—unless research suggest otherwise—aggression seems an important orientation
in social dilemmas, albeit one that seems activated primar-
ily by the behavior of others.

Proposition J states that "the prosocial orientations of cooperation and equality frequently operate in a con-
certed or interactive manner. That is, these orientations
tend to go hand in hand, and it is the interplay of both
"prosocial" orientations that best accounts for behavior
and interaction in settings of interdependence." Thus far, we distinguished among six orientations, which,
in decreasing order of benevolence, are (1) altruism,
(2) cooperation, (3) egalitarianism, (4) individualis-
ism, (5) competition, and (6) aggression. As noted ear-
ier, it is unlikely that each of these orientations operates in
a completely independent manner. We argue that two or
more orientations may well activate each other in
some way, and thus may over time become "psychologi-
cally interrelated" orientations. As illustrated in Table
23.5, we suggest a model of interdependent orientations
that focuses on five relatively distinct interpersonal ori-
teations, whereby "prosocial orientation" is the broader
term representing both cooperation and egalitarianism
as two interrelated orientations.

There is good theoretical and empirical reason to be
lieve that at least two "prosocial orientations" (i.e., coop-
eration, and egalitarianism) tend to go hand in hand, at

<table>
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<th>TABLE 23.5 An Overview of Five Orientations</th>
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<tr>
<td>1. Altruism</td>
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<td>2. Prosocial orientation</td>
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<td>3. Individualism</td>
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<td>4. Competition</td>
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<td>5. Aggression</td>
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least in social dilemmas. How so? To begin with, one very robust phenomenon observed in the two-person prisoner's dilemma is the phenomenon of behavioral assimilation (Kelley & Stahelski, 1970). This phenomenon, which may also be referred to as reciprocity, holds that individu- als with a prosocial orientation cooperate with others who also cooperate but turn to noncooperation when others do not cooperate (i.e., they become behaviorally similar to noncooperative others). The phenomenon of behavioral assimilation has been observed and sup- ported in the most intensely studied prisoner's dilemma. Importantly, one could theoretically infer that if an indi- vidual is merely concerned with enhancing joint out- comes, one should behave cooperatively irrespective of the other's behavior. Thus, individuals with prosocial ori- entations should do more than simply enhancing joint outcomes. In fact, a model in which prosocial orientation is understood in terms of (1) egalitarianism alone or (2) cooperation and egalitarianism together (an "integrative model") is able to account for behavioral assimilation. In past research, the phenomenon of behavioral assimilation has been supported only in research on iterated social dilemmas. In such repeated choice situations, reciprocity could be guided by a multitude of specific consider- ations, following from an interplay of other's past choices (or past interactions) and individuals' long-term interaction goals (e.g., the perceived feasibility of attain- ing particular interaction goals). For example, a partner's past actions may to some degree influence consider- ations relevant to long-term interaction goals, because the partner's past actions (e.g., noncooperative choices) might bring about beliefs regarding the feasibility of attaining particular long-term interaction goals (e.g., di- minished confidence in the feasibility of establishing patterns of mutual cooperation). Thus, because consider- ations regarding the past, present, and future are inex- tricably linked to patterns of choice in iterated prisoner's dilemmas, it is difficult to understand the specific consider- ations and motivations that underlie patterns of reci- procity (but Galucci & Perugini, 2003; Parks & Rumble, 2001; Sheldon, 1999).

Such accounts are irrelevant to a single-trial social di- lemma, in which participants make only one choice. In such contexts, the only basis for choice follows from the present (the immediate past, present, and future). In one such study, participants made a choice after the other had made a choice (Van Lange, 1999). As noted earlier, this study manipulated informa- tion about the other's choice, having participants believe that the other gave away one chip, two chips, or three chips from a total of four chips, which were more valu- able to the self than to the other. The participant him- or herself also possessed four chips, which were more valu- able to the other than to the self. This situation repre- sents a prisoner's dilemma because giving away chips is costly, but both would be better off to the degree that they exchanged a greater number of chips. Prior to the social dilemma, we assessed participants' social value ori- entations using a nine-item decomposed game technique (i.e., the triple-dominance measure of social value orientation), to examine whether tendencies toward reciproc- ity would be more pronounced among prosocials than among individualists and competitors. The analysis focused on reciprocity choices, giving away exactly the same number of chips as the other had given away. Across the three conditions, prosocials ex- hibited greater reciprocity (64%) than did individualists (38%) or competitors (17%). In another study, we exam- ined reciprocity in the context of a single-trial social di- lemma in which the participant and the other made their choices simultaneously (Van Lange, 1999). Reciprocity choices were operationalized as giving away exactly the same number of chips as they expected the other to give away. In this study, too, prosocials (79.6%) exhibited greater reciprocity than did individualists (58.4%) and competitors (45.4%).

The cooperation between cooperation and egalitarian- ism is also supported in some other research. For exam- ple, relative to individualists and competitors, prosocials use and recall decision-making heuristics that focus on enhancement of joint outcomes (e.g., "take a problem-solving approach") and enhancement of equality of out- comes (e.g., "play fair" or "share and share alike"); de Dreu & Boles, 1998). Such findings are also interesting because they indicate that individuals may fairly automat- ically (i.e., without a lot of thought) attach different meanings to the same situation (cf. Lefebvre et al., 1986; Satter & Kerr, 1991; Van Lange & Kuhlman, 1994).

That prosocials are concerned with enhancing both collective outcomes and equality in outcomes is also demonstrated by recent research on ultimatum bargain- ing. As noted earlier, it has been argued that in ultima- tum bargaining offers tend to be "strategic" in that allocators may offer an equal split of the money to the recipient simply to avoid the recipient's rejection of the offer. Van Dijk and Vermint (2000), for example, designed an ultimatum game in which bargainers had to divide 100 chips that were worth twice as much to the allocator than to the recipient. In the symmetric information con- dition the allocators were led to believe the recipient too was informed about this differential value, whereas in the asymmetric information condition allocators were led to believe that the recipient was not informed about differ- ential value. Allocators in the symmetric information condition tended to give the recipient more than half of the chips in order to compensate for the differential value. But allocators in the asymmetric information con- dition made substantially lower offers, suggesting that al- locators exhibit a tendency of self-servingly using infor- mational advantage. That is, because the recipient does not know about the differential value, the allocator can offer to split the number of chips equally—a seemingly fair offer to the recipient—without much fear that the recipi- ent is going to reject the offer. Such tendencies have been interpreted in terms of the strategic use of fairness (e.g., Kagel, Kim, & Moser, 1996; Pillutla & Murnighan, 1995).

Interestingly, a recent study by Van Dijk and col- leagues (2004) revealed that only individuals with prosocial orientations (individualists and competitors) used fairness in a strategic, self-serving manner. In contrast, indi- viduals with prosocial orientation revealed a "true" pref-
herence for an equal distribution of the outcomes. That is, in agreement with the notion that prosocials assign great weight to minimizing differences in outcomes, their findings indicated that even when prosocial allocators thought that some recipient was not aware that chips were worth twice as much to the allocator, they did compensate for the differential value of the chips by offering twice as many chips to the recipient as to themselves. Such findings are not only in line with the integrative model of interpersonal orientations but also suggest that prosocials are genuinely concerned with equality in outcomes.

The integrative model of interpersonal orientation is also supported in research on coalition formation, an area of research that has not been conceptualized in terms of egalitarianism. Specifically, Van Beest, Wilke, and Van Dijk (2003) compared bargaining behavior of prosocials and proselites in a three-person negotiation setting. In this setting, group members could form two-person coalitions by excluding a third party from the coalition—the excluded party would then yield substantially lower outcomes because it does not benefit from the coalition. Alternatively, group members could form a grand coalition of all three parties, yielding a somewhat lower outcome for each party than in a two-party coalition but yielding equality in outcomes. The results indicated that prosocials were more than proselites reluctant to exclude another party from a coalition. This tendency to not exclude, and to include all members in distributing the bargaining payoff, once again suggest that prosocials are strongly motivated to obtain equality in outcomes.

Similar conclusions can be reached on the basis of research on social dilemmas. For example, Samuelson (1965) investigated in a resource dilemma how prosocials and proselites reacted to collective inefficiency and inequality. He investigated people's preferences for structural change when they observed that the common resource became depleted (as compared to efficient use of the resource), and when they observed that some members harvested more than others (as compared to a more equal distribution of resources). Both dimensions—collective inefficiency and inequality—appeared to be more important to prosocials than to proselites.

A recent study by Stou et al., de Graaf, and Van Dijk (2005) provided further evidence for Samuelson's findings by examining emotional reactions to violations of equality. In this study, participants learned that they were a member of a four-person group, and that their group could obtain a monetary bonus if the combined contributions of the group members would surpass a certain threshold. After participants had decided on their contribution they received (bonus) feedback. They were informed that their group had not been successful, and that the total contribution fell below the threshold needed for provision because one member had violated the equality rule by contributing less than an equal share. After this feedback, however, Stouen and colleagues introduced a manipulation of outcome feedback by informing half of the participants that even though the contributions fell short, the public good would be provided after all. Thus, for these participants what seemed like failure turned out to be a success after all. For the other half of the participants the negative outcome was not altered.

Interestingly, Stouen and colleagues (2005) found that the emotional reactions of prosocials were less negative and more positive if they learned that the public good was provided after all than if they learned that the outcome remained unchanged. In contrast, information that the public good would be provided after all was not enough for enhancing morale in prosocials. That is, even if the public good was provided after all, prosocials remained angry and unhappy. These findings suggest that prosocials' emotional reactions are deeply affected by violations in equality—the anger and frustration caused by one of the members who did not contribute (and received much greater outcomes than the others) was not resolved by yielding a good result for all four.

Taken together, there is good support for the link between cooperation and egalitarianism. Enhancement of joint outcomes and enhancement of equality tend to go together and are characteristics of how prosocials tend to approach social dilemmas and related situations of interdependence. One might further speculate about the relative importance of cooperation and equality. There is some initial evidence suggesting that enhancement of equality is "stronger" than enhancement of joint outcomes (e.g., Foa & Gärting, 2000; Gärting, 1999). For example, Gärting (1999) found that relative to individualists and competitive, prosocials exhibited greater levels of universalism, an attitude closely related to equality and fairness, but no greater levels of benevolence, an attitude closely related to altruism in the model discussed earlier. As noted earlier, it is plausible that in the context of prisoners' dilemmas and related structures, the violation of equality is so strong that mutual cooperation is preferred to even weak forms of unilateral cooperation (or weak forms of altruism) whereby one behaves—or expects to behave—somewhat more cooperatively than the other. That is, prosocials may behave cooperatively up to the point that it violates equality in outcomes too strongly. Future research could examine how, more precisely, these two orientations work in concert, and whether some of the other orientations may in some ways activate each other.

**DETERMINANTS OF INTERPERSONAL ORIENTATIONS**

Proposition 4 states that "interpersonal orientations are partially shaped by social interactions—therefore, shaped by the self, the interaction partner, and/or situation." To most social psychologists this proposition should not come as a surprise in that it adds very little (if anything at all) to what most of us already assume. So, why is the proposition stated at all? The reason is that we want to illustrate the "power of the situation" (the situational view) as well as seek to clarify some issues relevant to "fluences" of personal dispositions (the dispositional view) and the partner's observable tendencies ("the part-
ner view). These goals are all the more important be-
cause, empirically, interpersonal orientations are primar-
ily addressed from the dispositional standpoint (i.e.,
known as social value orientations). We begin our dis-
cussion with the situational view.

In their review of interdependence processes, Rusbult
and Van Lange (1996) advance three sources of interper-
sonal orientation, arguing that interperso nal orien-
tations are manifested in at least three general forms: (1)
interpersonal norms, (2) relational specificity, and (3) pro-
social tendencies. The first two of these orientations re-
semble patterns of interdependence in a specific man-
ner, while the third involves a given relationship and
social norms, or rule-based inclinations to respond to
patterns of interdependence in a specific man-
ner, either across numerous interaction partners (e.g.,
ever der the first to "defect") or within the context of a
given relationship (e.g., never betray your best friend).
Clearly, relationship-specific meanings and social norms
form an important situational basis of interpersonal ori-
entations. For example, a relationship-specific motive
may be derived from commitment to a partner, embody-
ing feelings of attachment, intent to persist, and long-
term orientation (Rusbult, Verette, Whitney, Slobik, &
Lipkus, 1991; see also Agnew, Van Lange, Rusbult,
& Langton, 1998). Commitment is ultimately a product of
previous social interaction experiences, and broadly
shaped by satisfaction with a relationship, alternatives to
a relationship, and investments in a relationship. Impor-
tantly, relative to partners to whom we feel very com-
mitt ed, partners to whom we feel strongly committed are
more likely to elicit or activate prosocial orientations
(Rusbult et al., 1991; Van Lange, Rusbult, et al., 1997).
Similarly, the degree to which social norms activate
prosocial versus prosely orientations is powerfully linked
to differences in situations. In some situations, such
norms are very strong and often habituated, whereas in
other situations such norms may be less salient or
more ambiguous (i.e., when two or more social norms
need to compete). For example, the "equality norm
is a powerful norm in informal, communal situations, whereas
other norms, such as equity (Adams, 1965), might be more im-
potent in formal, business-like situations. In yet other
situations, it may be a norm to compete, often meaning
doing the best one can, as in many games or sports where
only one can win.

There is even good reason to believe that prosocial ori-
entations (or prosely orientations) are fairly easily ac-
tivated by relatively subtle situational differences. Slight
variations in the degree to which another person is per-
cieved as likable or unlikable, close or not so close, simi-
lar or dissimilar might elicit considerable influence on
the activation of prosocial versus prosely orientations
(e.g., De Bruijn & Van Lange, 2000). Similarly, slight vari-
ations in the degree to which some norms are made sa-
lent in a given situation might exert considerable influ-
ences on the activation of prosocial versus prosely ori-
tations. For example, Heret and Fiedler (1994) found
higher levels of cooperation alter a morality prime
than after a power prime. Several studies have replications
these findings, while at the time showing that the ef-
fects of priming morality may be especially pronounced
for individuals who do not tend to save a stable so-
 cial value orientation (e.g., Heret & Fiedler, 1998;
Smetsers, Warlop, Van Avermaet, Cornetté, & Vervli,
2005). And finally, there is evidence indicating that prim-
ing people with "intelligence" may strengthen prosocial
tendencies to cooperate, and—more significantly—
sacrifices cooperators' interests (Van Lange 1996,
a partner's cooperation (Utz, Ouwerkerk, & Van Lange,
2004). Thus, there is little doubt that the situation (even
multiple situation interactions), we Van Lange) may exert pow-
 erful influences on the activation of prosocial versus
prosocial orientations.

At the same time, decades of early research on the pris-
eners dilemma and related situations revealed a remark-
ble consistency in individuals' orientations. That is,
across various situational manipulations, some individu-
als tended to behave in a prosocial manner, whereas
other individuals tended to behave in a prosely manner.
These observations inspired several researchers to exam-
ine individual differences in interpersonal orientations.
Indeed, the important line of research on social value ori-
nentation (e.g., Messick & McClintock, 1988) provided
the methodological tools for assessing prosocial versus
prosocial orientations. Subsequent research has dem-
onstrated that even brief measures involving allocation
choices (such as the nine-item decomposed game instru-
ment, see Appendix 25.11) are predictive of cooperative
and noncooperative behavior in various settings, includ-
ing two-person prisoners' dilemmas, social dilemmas, re-
source dilemmas, and social forms of helping behavior.
An example of the latter is that individuals with prosocial
orientations are more likely to donate time to the univer-
sity than do individualists and competitors (McClintock
& Allison, 1989). There is also evidence that these dif-
f erences are linked to motivations for willingness to
sacrifice to ongoing relationships (Van Lange, Agnew,
Harinck, & Steemers, 1997), and to various forms of
prosocial behavior in the context of large communities
(e.g., donation to noble causes; Van Lange, Van Yper-
bekkers, Schuyt, & Schipper, 2005).

Some researchers and theorists might believe that the
situational view is inconsistent with the dispositional
view, thinking that it is an "either-or" matter. We regard
both views as perfectly consistent as well as perfectly
complementary, and we believe that theoretical analyses
would benefit from taking into account both views rather
than focusing on either point of view. How so? First, it is
the situation that affords interpersonal orientations. That
is, it is the situation that dictates the relevance of a parti-
cular interpersonal orientation and determines which ori-
ientations are in conflict with one another. For example,
the prisoner's dilemma, especially the single-trial pris-
ioner's dilemma, affords cooperative orientations versus
selfishness orientations. A cooperative situation, on
the other hand, affords none of the orientations outlined
in this chapter. Thus, first and foremost, it is important
to analyze and define situations in terms of "afford-
ances". What is it that the situation calls for?
Second, within a domain of situations that afford coop-
erative-interpersonal, noncooperative (e.g., the so-called mixed-motive situations), the distinction between
"strong" and "weak" situations, advanced by Snyder and
Ickes (1985; see also Mitchell, 1977), becomes important.
Strong situations are ones that "provide salient cues to
guide behavior and have a fairly high degree of structure
and definition, whereas weak situations do not tend to
have salient cues to guide behavior and are relatively un-
structured and ambiguous" (Snyder & Ickes, 1985, p. 90).
Strong situations are the ones in which situational
influences should be large, whereas weak situa-
tions are the ones in which dispositional influences
should be large. Applying these concepts to the domain
of mixed-motive situations, it is important to note that
by its very structure, mixed-motive situations are almost
by definition ambiguous. Indeed, they often represent "di-
lemma." Thus, the structure itself, by its affordances, is
weak and therefore suggests the importance of dis-
positional influences. This may explain why the "remark-
able consistency in individuals' orientations" in mixed-
motive situations should in fact not be all that remark-
able. However, even mixed-motive situations have the ca-
pacity to become strong. In particular, they may become
strong because of relationships-specific motives (e.g.,
commitment) or because of social norms (which, as sug-
gested earlier, may even be activated through some sub-
tle priming procedures). Under such circumstances, the
dispositional influences should be substantially weaker.

The implication for research is that when one com-
pare strong with weak situations, one should obtain
statistical interactions of dispositional and situation
(Magnusson & Endler, 1977), because the influences of
dignity, self-evaluations, or weak rules should show stron-
gest differences. For example, preexisting differences in
social value orientation do predict willingness to sacrifice in
difficult decision situations. If one's commitment to the re-
lationshio is relatively weak but fail to predict willingness
to sacrifice in close relationships when one's commit-
ment to the relationship is strong. Similarly, a person
with strong attachment for his sibling may have the
same distribution of slots when facing dilemmas with his
sibling or best friend. The reverse pattern, when a
competitive person, while an individualistic person may
see an intermediate position (with 60% individualistic
slots, 20% cooperative slots). The slot-machine metaphor of interpersonal orienta-
tion is reasonable because people behave in a variety of
different interaction situations, even with the same part-
er. Experience accumulates across interaction situa-
tions, which is likely to shape a "probability distribution
of interpersonal orientations." Indeed, it would appear
to be dysfunctional or maladaptive if people relied on
only one single orientation in their interactions with others,
even if the situational features are the same. The slot-
machine model of interpersonal orientation is also plau-
sible (1) because there is variation in the external (and
imperical) circumstances to which individuals may re-
spond in some way (e.g., the weather, noise), and (2) be-
cause there is a fair amount of variation within an individ-
ual even on a day-to-day basis which may also exert
influences on the activation of a particular orientation
e.g., differences in mood states, or differences in energy
levels on a particular day). The slot-machine metaphor has important implica-
tions. One implication is that the metaphor assumed flex-
ibility and adaptation. If a person was to repeatedly

Proposition 5 states that interpersonal orientations
rise best different probabilities when it is more to more
decision rules (e.g., outcome transformations such as
Maslow and MiniMax) are activated and used.
It is not uncommon for scientists and people alike to
assume (often implicitly, we believe) that a disposition
or orientation must translate directly into behavior. Per-
haps due to the human need for predictability and con-
trast, we parsimoniously tend to believe that "prosocial
people behave (almost) always prosocially" just as "com-
positive people behave (almost) always competitively."
Rather than taking a deterministic perspective, a more
accurate characterization of the dispositional view is
probabilistic, based on the assumption that people differ
in the probability with which one or more of the interper-
sonal orientations will be activated. A metaphor we
prefer to frame this in terms of the slot-machine model of
interpersonal orientations. But what does it mean—more
precisely? We suggest that for relatively stable orienta-
tions (as dispositions or as partner-specific orientations)
persons differ in terms of the percentages of slots
that represent prosocial, individualist, and competitive
preferences—just as slot machines represents different fre-
quencies of bananas, lemons, and oranges (so we as-
sume). For example, a person with a positive relative
high percentage of prosocial slots (let's say, 70%), and relativel low percentages of individualistic (and competitive=
slots, 10% each). Similarly, a person with strong attraction for his sibling may have the
same distribution of slots when facing dilemmas with his
sibling or best friend. The reverse pattern, when a
competitive person, while an individualistic person may
see an intermediate position (with 60% individualistic
slots, 20% cooperative slots). The slot-machine metaphor of interpersonal orienta-
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different interaction situations, even with the same part-
er. Experience accumulates across interaction situa-
tions, which is likely to shape a "probability distribution
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cause there is a fair amount of variation within an individ-
ual even on a day-to-day basis which may also exert
influences on the activation of a particular orientation
e.g., differences in mood states, or differences in energy
levels on a particular day).
(and rigidly) adopt the same orientation (irrespective of whether it is prosocial, individualistic, or cooperative orientation) across multiple partners, or even to one and the same important partner, the person would be unlikely to adapt to small but important changes in the situation or to small but important changes in the partner's behavior. Indeed, rigidity would probably imply that one does not even notice certain changes in the situations (e.g., new possibilities for effective communication) or changes in the partner's behavior (e.g., increased tendency toward cooperation, increased tendency toward "cheating"). Hence, interpersonal orientations require flexibility to be adaptive—and indeed, if we were to be slave of a particular orientation, our adaptive quality, and hence survival opportunities, would be very slim.

A second implication of the slot-machine metaphor is that people will have experience with prosocial, individualistic, and competitive "states." This is important because it suggests that people should be able to change perspectives when called for. For example, it has been shown that prosocials are more likely than individualists and competitors to evaluate other's cooperative and noncooperative actions in terms of "good versus bad" associating cooperation with goodness and noncooperation with badness—they adopt readily a "moral" perspective (Lebrand et al., 1986; van Lange & Kuhlman, 1994). According to the slot-machine metaphor, people should not find it hard to change perspectives. Prosocials should not need to find it difficult to see that cooperation is often the right (or good) thing to do. People should also adapt by changing perspectives when dealing with their close partner from the perspective they have when dealing with a second-hand car salesman (or at least the stereotype thereof). While it may be seen as immoral to misinform your close partner, people should find it fairly "smart" to do so when buying (or selling) a second-hand car.

But is there empirical evidence for the slot-machine model of interpersonal orientation? Although the evidence is very indirect, we think of three complementary sources of empirical support. First, as discussed earlier, relatively subtle cues or associations seem to be able to activate one orientation rather than another. Priming morality, fairness, competence, power, and competition have all been shown to affect behavior in prisoners' dilemmas. Moreover, merely describing a situation as a business transaction may be enough to evoke more self-interested behavior (Hersen & Moran, 1999; see also Elliott, Hayward, & Canova, 1998). Interestingly, recent research on social dilemmas has suggested that whether a situation is perceived as a business transaction depends not only on the actual words used to describe the situation but perhaps even on other situational characteristics. For example, Tenbrunsel and Messick (1996) demonstrated that perceptions of social dilemma situations are strongly affected by the introduction of sanctions on selfish behavior. After introduction of sanctions on selfish behavior, the perception of a social dilemma may shift so that people are more likely to regard their decision as a businesslike decision rather than an ethical decision. Hence, sanctions of selfishness may activate individualistic or competitive orientations (see also Gneezy & Rustichini, 2000; Mulder, van Dijk, de Cremer, & Wilke, 2006). Perhaps, the use of explicit interventions may undermine a more natural tendency ("intrinsically motivated"); Deci & Ryan, 2000) to exhibit cooperation among prosocials—those likely to do so under other circumstances.

A second source of indirect support is that the temporal stability of social value orientation is good but far from excellent. As noted earlier, there are often high levels of intrapersonal stability (and interpersonal variability) within various types of social dilemmas that are partially accounted for by measures of social value orientation. At the same time, while the test-retest reliability of social value orientation (i.e., the item, triple-dominance measure) is generally good, it is not excellent. In a study involving a small sample size, it appeared that 18 of 24 classifiable participants (78%) at time 1 expressed the same interpersonal orientation at time 2 (Kappa = .65; Van Lange & Semin-Groeneveld, 1998). In another study (van Lange, 1999, study 1), the sample was large, fairly representative of the Dutch adult population, and the time lag between measurement sessions was 19 months. Despite some differences in instructions and procedures between the two measurements, it appeared that 242 of 581 participants (58.8%) expressed the same interpersonal orientation at time 1 and time 2 (Kappa = .19). Clearly, the stability of interpersonal orientation is somewhat lower than one would expect from a "stable dispositional" point of view, yet comparable to those found for other individual-difference variables (e.g., adult attachment styles; Shaver & Brennan, 1992). We suggest that temporal stability that may have been accounted for by variability in day-to-day mood, prior experiences with situations resembling social dilemmas, or other "subtle influences" (e.g., media influences) may determine whether prosocial, individualistic, or competitive orientations are more easily activated.

Third, within the context of specific partners, we tend to see considerable variation in the interpersonal orientations we adopt. Clearly, some key relational constructs, relatively subtle cues or associations seem to be able to activate one orientation rather than another. Priming morality, fairness, competence, power, and competition have all been shown to affect behavior in prisoners' dilemmas. Moreover, merely describing a situation as a business transaction may be enough to evoke more self-interested behavior (Hersen & Moran, 1999; see also Elliott, Hayward, & Canova, 1998). Interestingly, recent research on social dilemmas has suggested that whether a situation is perceived as a business transaction depends not only on the actual words used to describe the situation but perhaps even on other situational characteristics. For example, Tenbrunsel and Messick (1996) demonstrated that perceptions of social dilemma situations are strongly affected by the introduction of sanctions on selfish behavior. After introduction of sanctions on selfish behavior, the perception of a social dilemma may shift so that people are more likely to regard their decision as a businesslike decision rather than an ethical decision. Hence, sanctions of selfishness may activate individualistic or competitive orientations (see also Gneezy & Rustichini, 2000; Mulder, van Dijk, de Cremer, & Wilke, 2006). Perhaps, the use of explicit interventions may undermine a more natural tendency ("intrinsically motivated"); Deci & Ryan, 2000) to exhibit cooperation among prosocials—those likely to do so under other circumstances.

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From a more conceptual perspective, it may be instructive to relate the slot-machine metaphor to two complementary theoretical constructs. First, the metaphor's congruence with the notion of "accessibility." For example, in forming impressions of others, for some people some trait concepts tend to be chonically accessible (e.g., appearance), whereas for other people different traits concepts tend to be chronically accessible (e.g., politeness, Higgins, King, & Raven, 1982). Such accessibility differences may influence impressions of others without people being aware of it. Such effects have also been demonstrated for attitudes, for attributes relevant to people's self-definitions, and the like. Similarly, a person with a prosocial orientation is more likely to use and rely on decision rules that dictate "equality in outcomes" or "collective outcomes," and so the person may often without being aware of it attribute to information regarding equality in outcomes and collective outcomes. The other concept that is related to the slot-machine metaphor is the notion of goal activation and habits. As an interesting case in point, Aarts and Dijksterhuis (2000) have shown that habitual bicycle riders rapidly responded to the word "bicycle" when they had been primed with the goal of traveling to nearby locations (e.g., university); in contrast, nonhabitual bicycle riders did not. Similarly, competitors' tendencies to compete may be activated by relatively small "cues" in social dilemmas and the like whereas such tendencies may not be present among prosocials. As this literature of automatic goal activation suggests, such tendencies may be automatic and beyond any awareness. Hence, some interaction goals ("slots") may be activated in an automatic manner (as well as in a more controlled manner).

The evidence for the idea that the slot-machine model is correct, the idea that the two or three people do seem to converge on the point that consistent differences in interpersonal orientations represent consistent differences in the probability with which a particular interpersonal orientation may be activated. The same seems to be true for situational effects, which tend to take strong probabilistic (rather than deterministic) forms. The best oxytocin to capture such effects is perhaps the interaction's "contingency," whereby probability is influenced by numerous other variables that determine contingency, including randomness.

SUMMARY AND CONCLUDING REMARKS

This chapter discusses five propositions that are relevant to understanding the interaction goals with which people adapt to various situations in which self-interest and collective interest are conflicting. Interpersonal orientations are broadly defined as the set of cognitions, affects, and motivations that underlie interpersonal behavior and social interaction. They reflect interaction goals by which people seek to enhance the outcomes for themselves (individualism) as well as enhance the outcomes for others (pluralism), enhance joint outcomes (cooperation), enhance equality in outcomes (egalitarianism), enhance relative advantage over others (competition), or maximize outcomes of another person (aggression). We suggest that interpersonal orientations are of broad relevance to diverse social psychological phenomena in that the construct is relevant to the internal processes (cognition and affect) that prepare one for interaction as well as to the internal processes that may grow, summarize the interaction—and that prepares one for the next interaction, either with the same partner or with a third, unrelated person. In the following paragraphs we discuss some further theoretical and evaluative issues relevant to these propositions that we have advanced in this chapter.

We begin by noting that the psychology of interpersonal orientations, while inherently social psychological, cuts across several shifts in the dominant theoretical paradigms in the past as well as integrates several fields of psychology—which is arguably important for any scientific topic to grow, develop, and perhaps to yield cumulative knowledge (e.g., Kružlanski, 2004; Michels, 2004). It is closely connected with almost any interpersonal process that is relevant to social interaction. The list is exceedingly long and is illustrated by (but by no means limited to) concepts such as altruism, generosity, fairness, equality, cooperation, forgiveness, sacrifice, trust, conflict, aggression, hostility, reactance, competition, suspicion, retaliation, and so on. Most of these topics are essential to understanding relationship processes underlying interactions among kin, friends, close partners, or colleagues, as well as group processes underlying interactions among members of teams, work units, interest groups, and even nations. Also, most of these topics have been studied not only by social psychologists but also by personality psychologists, developmental psychologists, health psychologists, cognitive psychologists, and so on. For example, the topic of forgiveness was originally studied by clinicians and religious leaders but has become an exceptionally productive area of research within social psychology—and for good reasons, in that forgiveness is a response to an interpersonal offense, with strong implications for future interactions between two persons or two groups. Within social psychology, interpersonal orientations are at the heart of interpersonal and group processes, even though each of the phenomena described above applies (perhaps often with even greater societal relevance) to processes that operate with in and between large groups (e.g., within and between nations; e.g., Bornstein, 1992). Many processes that receive considerable attention in contemporary social psychology, such as affect regulation, promotion and prevention foot, and stereotyping, are intimately and importantly linked to interpersonal orientations and the situations in which they are relevant. For example, some social dilemmas can easily evoke a prevention-focused tendency to reduce loss or protect the resources of mutual cooperation; and even subtle cues regarding another person's stereotypical characteristics can affect cooperation (e.g., de Bruijn & Van Lange, 2000; de Dreu, Vazbed, & Leyna, 1995).

More generally, by being so closely related to social interaction, the literature of interpersonal orientations may serve as a bridge between (1) micro (or molecular)
approaches, with a strong focus on principles and mechanisms that may account for why individuals function as they do, and (2) macro (or malt) approaches, with a strong focus on principles and mechanisms that may account for why large groups and societies function as they do (for a related argument, see Kelley, 2000; see also Penner, Dovidio, Pilatik, & Schechter, 2003; Van Lange, 2006). We discuss each in turn.

In support of the micro side of interpersonal orientations, we suggest that most if not all of the propositions can be supported by neuroscientific and related psychophysiological research. For example, there is research on the neural orientations of, or path, revealing for humans and monkeys that observing someone else's actions automatically activates social systems underlying the production of our own actions (for a review, see Blakemore & Decety, 2001). Recently, this line of research has been extended to consider our ability to understand the feelings and sensations of others (i.e., our ability to empathize). Such research may well illuminate a neural basis for altruism (Singer & Prifti, 2006).

Moreover, recent functional magnetic resonance imaging research reveals that retaining patterns of reciprocal cooperation in social dilemmas activate areas of the brain that are associated with the processing of rewards (Rilling et al., 2002). One may argue that the activation of this neural network helps individuals to resist the temptation to take advantage of the partner's cooperation—but instead to develop patterns of cooperation. Such research is consistent with Propositions 1 and 2, but also with Proposition 3, arguing that enhancing collective outcomes and equality in outcomes tends to go together. It would be interesting to examine whether the activation of cooperative goals tends to enhance the perception of equality and vice versa. On the basis of Proposition 5, and the empirical evidence in support of it, it seems likely that these goals are closely associated, and this association may well be demonstrated in a variety of automatic and controlled cognitive mechanisms (e.g., in implication associations), neurophysiological methods, and the like.

In support of the macro side of the interpersonal process orientations are of great relevance to large groups, even nations. In fact, there is good reason to believe that the distribution of social value orientations is the way in which "functionality" at the societal level. Specifically, across a variety of different countries (although mostly "Western" countries), the distribution of prosocials, individualists, and competitors is around 4:4:2:1 ratio (see Van Lange, Otten, et al., 1997). According to frequency dependent selection explanations, often used in evolutionary theory, such a ratio is unlikely to be random. Rather, the success of one strategy depends on the relative frequency of other strategies in the population (Maynard Smith, 1982). For example, it is plausible that a stable, high-frequency group of prosocials invites individualists and competitors to develop and grow. In particular, a small percentage of competitors may always be there (and never become extinct) because of the presence of prosocials, who allow a little bit of "exploitation" (e.g., in single interactions), when there is no opportunity for behavioral assimilation (cf. Kelley & Stahelski, 1979). It is of interest to note that the distribution of 4:4:2:1 has also been observed in computer simulations (e.g., Lamborg, 1996), which provides further evidence in support of the claim that distributions of social value orientation are as they are because of the functioning at the societal level (see also Rietelaar, 2004).

We also suggest that interpersonal orientations, more broadly, reflect how people interact not only with other individuals in the context of dyads but also with individuals as part of medium-size and large groups. There is a fair amount of evidence that social value orientation is also predictive of cooperative behavior in groups and to large-scale social dilemmas, such as environmental dilemmas (e.g., Parks, 1994; Van Vuuren, Van Lange, & Meerissen, 1996). Also, relative to individualists and competitors, prosocials are more likely to exhibit anonymous forms of protocultural behavior, for the good of their own society or even other societies (e.g., donations to the third world; Van Lange et al., 2005). Furthermore, although dispositions, such as social value orientation, have received little attention in the context of intergroup relations, there is strong evidence that intergroup interactions tend to be more strongly guided by individualistic and competitive goals than interindividual interactions (Insko & Schopler, 1998).

As alluded to earlier, the psychology of interpersonal orientations is closely connected to evolutionary theorizing. Why are people willing to cooperate at all? Why are they willing to engage in costly acts to benefit others or the group? Why do we do so even with complete strangers with whom there is no future of interdependence? Such issues are relevant to the evolution of cooperation. Interestingly, reciprocity is considered to be the key mechanism through which social interactions evolve, both as a direct mechanism (Axelrod, 1984) and as an indirect mechanism, accounting for cooperative behavior among strangers (Nowak & Sigmund, 1998). Reciprocity in social dilemmas seems to be accounted for by even the most basic form of altruism and generosity ultimately account for the evolution of cooperation. For example, when there is some uncertainty regarding another's actions (e.g., when there is "noise" so that social signals cannot always be detected), it may be advantageous to give the other the benefit of the doubt (and not immediately reciprocate) and behave more cooperatively than the other was believed to do (Van Lange, Ouwerverk, & Taeckens, 2002).

We also suggest that Propositions 4 and 5 can make important contributions to the evolutionary theory. First, Proposition 4 is relevant to a taxonomy of interaction situations, and it is clear that the scientific discussion about the evolution of cooperation would benefit from an analysis of situations—after all, social life is not limited to social dilemmas, or even to exchange situations. And even within such situations, there are differences in the size of groups, in the availability of information regarding the intentions underlying another's actions, and
the degree to which the situation extends in time. At a
provincial approach, such as the one advanced by Kelley and
colleagues (2003), is essential to understanding the inter-
personal orientations under which various prosocial
orientations of various selfish orientations are adaptive. Proposition
5 emphasizes probability in the ways in which interpersonal
orientations are activated—by the self, the partner, or the situation. We suggest that the de-
bate about the evolution of cooperation benefits from the point of view of the awareness or the use of emotions are ac-
tivated in a probabilistic manner. After all, such a proba-
bility approach provides people with the flexibility that is needed to adapt to changes in the partner’s actions and
needed to adapt to changes in situations.

We wish to close by noting that interpersonal orienta-
tions are strongly guided by cognitions and affect—a
aspect of this that has not yet received much empirical attention. The theorizing regarding interpersonal orientations is
most directly rooted in Kelley and Thibaut’s (1978) trans-
formational analysis—which assumes that individuals may,
depending on their orientations, transform a given situation
into “an effective situation,” which guides behavior and
interactions. Part of such transformational processes are the cognitions and emotions that may help individu-
als “to make sense” of situations—often in a goal-oriented
(yet not necessarily conscious) manner. Social dilemmas,
in particular, afford multiple and conflicting cognitions (for
many, it is dilemma), and emotions that may guide behavior,
and that summarize interaction outcomes (the reader is reminded of the spontaneous comments by par-
ticipants, reported by Daws, 1980). For example, people
may interpret social dilemmas in terms of classic dimen-
sions of judgment and impression formation, perceiving it in terms of moral evaluation, strength and weakness,
intelligence, and the like (Osgood, Suci, & Tannenbaum,
1957; Rosenberg & Selnick, 1972). Also, the anticipation
of experiencing guilt may prompt prosocials to behave
cooperatively, to avoid taking advantage of the other’s cooperation, or to avoid being accused of such tenden-
cies (Frank, 1988). It goes without saying that feelings of
anger, disappointment, and regret may be experienced when the individual discovers that he or she is the only one
who cooperated. Conversely, feelings of interper-
sonal linking, enjoyment, and gratification, may be experi-
enced when individuals have developed stable patterns of
mutual cooperation. And some pleasure (e.g., schaden-
freude) may be derived from punishing free riders, as well
as from observing others engaging in such punitive activi-
ties (e.g., Price, Tooby, & Cosmides, 2001; cf. Fehr &
Güth, 2002). Frequently, cognitions, and certainly emotions, are guided by strong norms, which often serve to
counteract tempting tendencies toward cheating, de-
ception, and otherwise hurtful forms of “rational” self-
interest (Keltner, 2001; Mealey, 1995). After having crit-
itzed Adam Smith (1757/2000) for his (narrow) view re-
garding situations, we should give him considerable credit for bringing to our attention the important role of
hot cognitions and emotions, in particular “moral senti-
ments” that help us overcome or resolve social dilemmas
that threaten interpersonal, intergroup, and interna-
tional relations.

APPENDIX 23.1. AN INSTRUMENT TO
MEASURE INTERPERSONAL ORIENTATION

In this task we ask you to imagine that you have been randomly
paired with another person, whom we will refer to simply as the
“other.” This other person is someone you do not know and
that you will not knowingly meet in the future. Both you and
the “other” person will be making choices by circling the letter
A, B, or C. Your own choices will produce points for both your
self and the “other” person. Likewise, the other’s choice will
produce points for him or her and for you. Every point has
value. The more points you receive, the better for you, and the
more points the “other” receives, the better for him or her.
Here’s an example of how this task works:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>You get: 500 500 550</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other gets: 100 500 500</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In this example, if you choose A you would receive 500 points and
the other would receive 100 points; if you chose B, you
would receive 550 points and the other 500; and if those are,
you would receive 500 points and the other 550. So, you see
that your choice influences both the number of points you re-
receive and the number of points the other receives. Before you
begin making choices, please keep in mind that there are no
correct or wrong choices—choose the option that, for what-
ever reason, prefer you. Also, remember that 50 points have
value. The more of them you accumulate the better for you.
Likewise, from the “other’s” point of view, the more points he
or she accumulates, the better for him or her.
For each of the nine choice situations, circle A, B, or C, de-
pending on which column you prefer most:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) You get: 460 540 640</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other gets: 80 210 460</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) You get: 560 500 500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other gets: 50 500 500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) You get: 520 500 540</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other gets: 320 220 500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) You get: 500 560 490</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other gets: 110 460 590</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5) You get: 560 450 500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other gets: 50 450 500</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Note: Participants are classified when they make six or more consistent choices. Inconsistent choices are: 1a 2b 3c 2b 3a 1a 9c; individualistic choices are: 1a 2a 3a 4a 5c 6b 7b 8a 9c; and competitive choices are: 1a 2c 3a 4a 5c 6c 7c 8b 9a.

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NOTE
1. There are several theoretically important issues that are im-
pertinent to the five propositions. For example, one key issue
concerns whether we should include orientations other than
outcome-distribution orientations in the analysis of inter-
personal orientations (e.g., dominance vs. submission). An-
other key issue concerns the "explanations" for prosocial
orientation and prosocial behavior: (1) whether prosocial
orientation and behavior may to some degree be mediated
by conscious self-regulatón (e.g., enhancement of mood and
the desire to uphold a moral principle), and (2) whether
prosocial orientation and behavior to some degree may re-
fract the goal of enhancing long-term personal outcomes
(i.e., the issue of time). Generally, we believe that interper-
sonal orientations and social interactions are guided by other
broad orientations (such as dominance vs. submission), the
automatic or controlled pursuit of specific self-interests,
and the broader considerations of long-term self-interests.
These are very important theoretical issues but considered beyond
the scope of this chapter.

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