

VU Research Portal

The Power of Interpersonal Generosity

Klapwijk, A.

2009

document version

Publisher's PDF, also known as Version of record

[Link to publication in VU Research Portal](#)

citation for published version (APA)

Klapwijk, A. (2009). *The Power of Interpersonal Generosity*. [PhD-Thesis - Research and graduation internal, Vrije Universiteit Amsterdam].

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

E-mail address:

vuresearchportal.ub@vu.nl

Chapter 1: General Introduction

Many times in our lives we experience situations in which our personal interest is at odds with the interests of others or a group that we take part in. Such conflicts, which are often referred to as *social dilemmas* (e.g., see Weber, Kopelman, Messick, 2004) are at the core of large-scale societal problems involving many individuals (N-person dilemmas), such as overfishing, free-riding, and traffic congestion, they may exist between groups (e.g. Israeli government and Hamas) but they may also arise between just two individuals who encounter each other at work, on the Internet, on the street or in the living room (2-person dilemmas; e.g., see Van Lange & Klapwijk, 2007). A central aspect of every social dilemma is that the action that produces the personal best outcome (e.g., playing computer games instead of cleaning up the living room) is not the one that will produce the best collective outcome (e.g., a tidy home and a happy relationship). But if all actors act in their own best interest, everyone will be worse off (e.g., an untidy home and an unhappy relationship). It is easy to understand that people's choices within social dilemma situations are important 'diagnostic tests' for which true goals and motives people pursue within a relationship (cf. Kelley, 1983; Kelley et al., 2003) and are closely linked to the development of cooperation and trust.

The overarching question that I address in the present dissertation is: how can one understand and promote cooperation and trust in social dilemma situations? This question is not only relevant for scientists but also for policy makers, managers, school teachers, spouses, parents and many others. I advance the hypothesis that a very effective way is to deal with other people in a *generous* (rather than reciprocal) manner. Interpersonal generosity involves investing slightly more than one has received from the other (cf. Kollock, 1993). I hypothesize that generosity is very effective in promoting cooperation and trust, particularly in social situations that are subject to "noise" and misunderstanding (i.e., people are bound to make errors and misinterpret each others' intentions) – a notion of everyday life interaction that hardly has been addressed in prior research. In the current chapter, I first briefly review some theories and prior research that underlie the present work. Then I provide a short overview of the studies that are presented in the following chapters of this dissertation.

Prior Research: The Power of Reciprocity

My research in the present dissertation was inspired by two lines of prior research within the field of social dilemmas. The first centers around the fundamental question *how* people can be motivated to set aside personal interest for the collective interest when facing a social dilemma. Several 'solutions' for enhancing cooperation (in both two-person and N-persons dilemmas) have been proposed. These solutions can be broadly categorized into motivational, strategic, and structural solutions (for reviews, see Kollock, 1998; Komorita & Parks, 1994; Van Lange & De Dreu, 2001; Van Lange, Liebrand, Messick, & Wilke, 1992; Weber et al., 2004). Of particular importance for the present dissertation are *behavioral strategies* that people may adopt to shape outcomes and hence the

behavior of their interaction partner. How can people shape outcomes and hence the behavior of their interaction partner? Should one return exactly as much love, goods, money or effort to others as one has received from them? Or is it more efficient to invest slightly more or perhaps somewhat less?

The second line of research focuses on the question *why* people tend to cooperate with others in the first place. Many scholars, including evolutionary biologists, behavioral economists, psychoanalysts, but also social psychologists (e.g., see Miller & Ratner, 1998), assume that humans are fundamentally self-interested. Yet, there are numerous examples in which people act in the interest of others often at the expense of their own interest. Why do people engage in such *other-regarding behavior*? It is particularly puzzling that people not only tend to be willing to help others they know well and meet regularly (e.g. lending a tool to the neighbor, baby-sitting one's grandchild, helping a friend move houses), but also cooperate with complete strangers – with whom they share no genes, with whom there is no history or even future of interaction (e.g. trading through eBay, providing help at internet forums). How can this be explained?

It appears that both lines of research (i.e., 'how' and 'why') converge on one straightforward answer: *reciprocity*. With respect to the 'how' question, hundreds of studies in the past decades have confirmed what religious figures and principal philosophers had advocated centuries before: do unto others what they have done unto you. The "golden rule" for eliciting cooperation from others is adopting a strictly reciprocal "tit for tat"-strategy, that is, approaching others cooperatively and subsequently responding to a positive action with a positive action, and to a negative action with negative action (see e.g., Axelrod, 1984; Komorita & Parks, 1995; McClintock & Liebrand, 1988; Oskamp, 1971)¹. Research investigating 'naïve theories' of people about the fairness and efficacy of different strategies (e.g., Kramer, Wei and Bendor, 2001) revealed that a tit-for-tat strategy was perceived to be fair, smart, rational and effective. Moreover, it was rated as the best strategy to adopt, whereas a more other-regarding² strategy, called 'nice and forgiving', was perceived as nice, good, kind, and altruistic, but was rated as the least effective strategy. Therefore, it is perhaps not surprising that reciprocity is assumed to be a natural tendency of people (e.g., Gouldner, 1960; Kelley & Stahelski, 1970; Van Lange, 1999; see also Komorita & Parks, 1995), that is argued to exist in every culture of the world (Schroeder, Penner, Dovidio, & Piliavin, 1995), and that is reflected in many common sayings, for example 'what goes around, comes around', 'tit for tat', 'I scratch your back, if you scratch mine' and 'an eye for an eye, a tooth for a tooth'. Because of the success of the tit-for-tat strategy, some commentators even suggested that this strategy should be used as the basis of everything from childhood education to international relations (cf., Kollock, 1998).

¹ I should note that in this dissertation, I use the concept of reciprocity in a specific sense, referring to the tendency of people to reciprocate cooperation with cooperation, and noncooperation with noncooperation. Also, strict reciprocity is defined in terms interaction qualities of tit-for-tat (except for the first choice); that is, when people very precisely reciprocate the degree of cooperation that they received from the other in the past interaction (see Kollock, 1993; Nowak & Sigmund, 1992; Van Lange, Ouwerkerk, & Tazelaar., 2002). I acknowledge, however, that the concept of reciprocity has a broader meaning in the tradition of social exchange theory (e.g., Homans, 1961) or in alternative models of social interaction (e.g., reciprocity in self-disclosure) that are rooted in various conceptual frameworks.

² The terms 'other-regarding' and 'self-regarding' are derived from the recent literature on the evolutionary approaches to cooperation (e.g., Gintis, 2007; Henrich et al., 2006; Silk et al., 2005).

With respect to the ‘why’ question, reciprocity is also considered to be a major explanation for *why* selfish individuals engage in cooperative behavior with others. For many years, the most widely accepted theory among researchers was the theory of reciprocal altruism or *direct reciprocity theory*³ stating that people help others because they believe that their help will be reciprocated in the future by the recipient, so that in the end they will gain a net benefit (Axelrod, 1984; Trivers, 1971). Moreover to also be able to account for short-lived other-regarding behavior when future action is unlikely (e.g., with strangers) an indirect variant of direct reciprocity was developed: *indirect reciprocity* (Alexander, 1987; Nowak & Sigmund, 1998; for a review see Nowak & Sigmund, 2005). One key aspect of this theory holds that individuals engage in other-regarding behavior because other-regarding behavior yields positive effects on one’s reputation, which over time is likely to be reciprocated by other members of a community. That is, it is indirectly rewarded through cooperative responses (while a “noncooperative reputation is punished by noncooperative responses) by other members of the general community. This mechanism is referred to as *reputation-based cooperation* (e.g., Nowak & Sigmund, 2005; Wedekind & Milinski, 2000) as opposed to *exchange-based cooperation* for direct reciprocity (see Figure 1.1.).

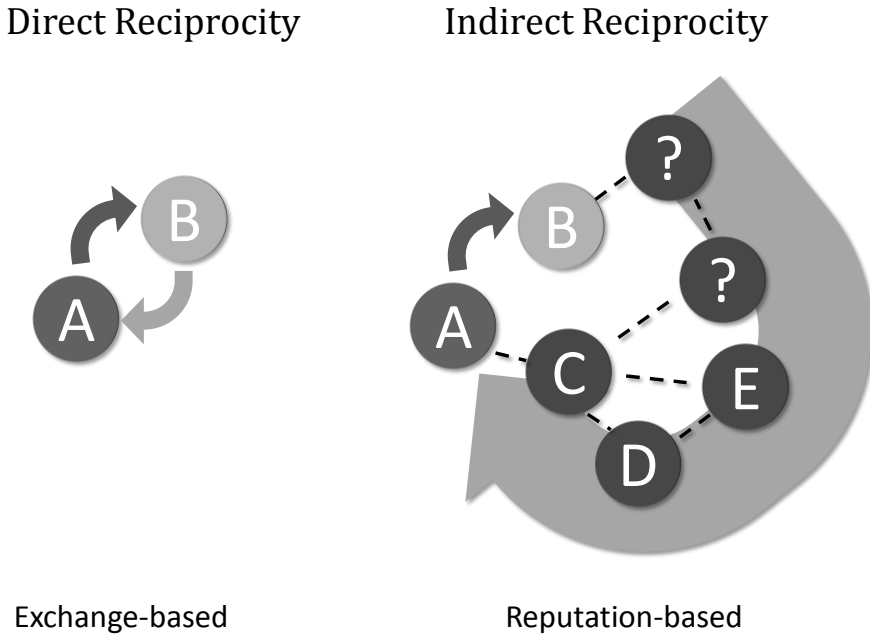
Reciprocity Revisited: An Interdependence Analysis

Thus, a major conclusion that can be drawn from an extensive body of prior research is that reciprocity plays a pivotal role in both explaining and enhancing cooperation among humans. However, despite the overwhelming support for the effectiveness of reciprocity, I believe that, when considering certain psychological and situational variables, the apparent superiority of reciprocity may be less likely, at least, not until some generosity is added to it.

As a framework for my theorizing, I use a simple model, that was introduced in the 1930s by one of the founding fathers of contemporary social psychology, Kurt Lewin. Lewin sought to analyze human interaction through a simple formula, $B = f(P, E)$, arguing that behavior (B) is a function of the person (P) and the environment (E) (Lewin, 1936). In the present dissertation, I use a slightly modified version of this equation, which is derived from interdependence theory: $I = f(S, A, B)$. This “SABI-model” (Holmes, 2002; Kelley et al., 2003; see also Van Lange, De Cremer, Van Dijk, & Van Vugt, 2007) implies that an interaction (I) between two individuals (A and B) can be conceptualized in terms of both their needs, thoughts, and motives in the context of a specific social situation (S).

³ I use the term “direct reciprocity” rather than the term “reciprocal altruism” (Trivers, 1971) because the concept of “indirect reciprocity” and its theoretical logic is rooted in the concept of direct reciprocity (e.g. Nowak & Sigmund, 2005).

Figure 1.1: Schematic overview of direct and indirect reciprocity



One fundamental assumption underlying the present work is that people attempt to predict and understand behavior of others in order to reduce uncertainty and to effectively respond to their behavior. This process has been termed *meaning analysis*, that is, one tries to reveal the direct meaning and broader implications of others' actions, forming expectations with respect to possible future behavior and seeking to explain prior behavior in terms of underlying personality traits (Fincham, 2001; Gilbert 1998; Weiner, 1985). Meaning analysis is strongly linked to how people make a transformation from a *given social* situation (i.e., consequences of own and other's actions in terms of gut-level, self-interested preferences) into an *effective social* situation (i.e., broader interpersonal consequences of own and other's actions) (Kelley & Thibaut, 1978; for a recent review, see Van Lange et al., 2007). Such transformations can be made in several ways (Kelley & Thibaut, 1978; Kelley et al., 2003; Van Lange et al., 2007) including *altruism, cooperation, equality, competition, and individualism* (Kelley & Thibaut 1978, Messick & McClintock, 1968). As we will see later, generosity involves a combination of seeking the benefit of the other (altruism) and minimizing the differences (equality)⁴. In the next paragraphs, I will briefly outline how the separate components of the SABI-model and their interactions can be useful for my argument that generosity is more beneficial than reciprocity.

⁴ For an interesting social interaction analysis of empathy and fairness, see Van Lange, Gallucci, Karremans, Klapwijk, & Reinders Folmer (2006).

Social Situations may be “noisy”

Two features of social situations (S) are relevant for my argument. To begin with, a very important dimension is the degree to which information about one another’s behavior, preferences and intentions is available (Kelley et al., 2003; Rusbult & Van Lange, 2003). The availability of such information— or the lack thereof — is of vital importance for understanding social interaction, as there are numerous examples in our everyday lives in which our behavior is not perceived or experienced by others as intended, or that we are unable to act according to our intentions. For example, we may be ill-prepared for an important business meeting because our child was sick and cried all night, or we may accidentally insult a colleague through ‘a slip of the tongue’. Such unintended errors are referred to as *noise*, which is defined as ‘discrepancies between intended and actual outcomes for an interaction partner due to unintended errors’ (Kollock, 1993; Van Lange et al., 2002; Wu & Axelrod, 1995). Noise may be defined in terms of both (a) misimplementation of behavior, or errors on the part of the actor (e.g. accidentally forgetting to invite someone for a party), and (b) misperception of behavior, or errors on the part of the observer (e.g. perceiving not being invited as intentional). Of particular relevance to the present dissertation is *negative noise*, that is, errors that cause actual outcomes for others to be *worse* than intended. Negative noise is argued to be more prevalent and to have greater impact on social interaction than positive noise (see Box 1.1).

Surprisingly, however, there has been very little attention of scientists for the effects of noise and misunderstanding. As I will outline later, the effects of noise may be relevant, if not fundamental, for both the effectiveness of behavioral strategies and questions about the evolution of cooperation.

Box 1.1: The prevalence of positive and negative noise according to students

To find some evidence relevant to my assumption that negative noise is more prevalent than positive noise, I asked 56 participants to estimate the ratio of negative and positive noise occurring in the life of an average individual. Mean estimates were 62.2 percent and 37.8 percent for negative and positive noise, respectively (both SD’s = 14.64). These estimates differed significantly from chance (i.e., 50 percent), $t(55) = 6.22, p < .001$, indicating that participants considered negative noise to be more prevalent than positive noise. We also asked the participants to give an example of both types of noise in their lives and to rate the discrepancy between their intention and the actual action on a seven-point scale. The perceived intensity of negative noise ($M = 5.72, SD = 1.37$) was significantly greater than the perceived intensity of positive noise ($M = 4.75, SD = 1.59$), $F(1, 42) = 10.18, p < .01$.

Social situations may differ in temporal perspective

Social situations may also differ with respect to the temporal perspective, or the degree to which behavior can be understood in terms of past interactions or the expectation of future interaction (e.g., see Van Lange & Joireman, 2008). Situations may range from really ‘short-lived’, e.g., interactions between strangers that have no history or future of interaction (a single-trial interaction) to very ‘long-term’, e.g., interactions with friends, family or business partners (a repeated interaction). It is important to note that this so-called ‘stranger vs. friend’ dimensions does not necessarily represent a black-and-white distinction but rather involves a continuum. Especially in the globalized (virtual) environment that we live in nowadays, it can be difficult to say whether one is going to

meet an individual again or not (which may add extra “noise” to contemporary interactions as opposed to past interactions).

Theoretically, the temporal perspective of social situations is important because it may change the preferred outcomes, and hence their behavior, of individuals facing social dilemmas. For example, Axelrod (1984, p. 126) coined the phrase the *shadow of the future* to suggest that people often cooperate because they foresee the rewards for cooperation and the punishments for noncooperation, and so adopt a longer-term perspective on the situation at hand. Also, game theorists have outlined that while noncooperation is rational in a single-trial social dilemma, cooperation is rational in a repeated social dilemma (e.g., Rapoport, 1990). Indeed, prior research provides strong evidence that people exhibit less cooperation in a single-trial than they do across repeated interactions (see Bo, 2005; Murnighan & Roth, 1983; Roth & Murnighan, 1978), which is sometimes termed the *repeated interaction effect* (e.g. see Van Lange, Klapwijk, & Van Munster, 2009). Other studies point out that a concern with long-term self-interest might promote cooperation at the onset of the interaction (e.g., sequential transformations, see Kelley & Thibaut, 1978; see also Batson, 1994; Joireman, 2005; Van Lange & Joireman, 2008). The temporal perspective also raises fundamental questions about the evolution of cooperation among strangers (the ‘why’ question as mentioned earlier), because direct reciprocity (which can account for cooperation among friends) cannot account for cooperation in strangers facing single-trial interactions.

Box 1.2: Anecdotal evidence for the occurrence of noise among strangers

Noise and misunderstanding may not only occur between “friends”, but perhaps even more so among “strangers”. To illustrate, consider the following anecdote: “A 42 year old landscaper said he was parked outside Checkers at State Road 52 and Little Road late Wednesday, eating in his truck, when his arm slipped and he accidentally honked the horn. Bad timing. According to a sheriff’s report, another man and a woman were walking by at the time, and the woman turned to look at him, thinking he’d honked at her. Minutes later, three young men approached his truck and asked why he was looking at the woman. The landscaper said he didn’t want any trouble. But one of them pulled a silver pistol, cocked it and pointed it at him. “I think you were trying to proposition the girl,” the young man said. Fortunately for the landscaper, his motor was running. He put it in drive and sped away. No arrests were made.”⁵

People exhibit some general psychological tendencies

In addition to the situation (S), specific characteristics of individuals A and B are important for understanding how cooperation and trust develops. Particularly relevant for the present work are several psychological tendencies that people are generally known to fall to when they judge others and form impressions of them. First, prior research shows that people exhibit a tendency to explain other’s behaviors and their effects in terms of other’s traits and intentions rather than in terms of situational variables (such as noise) that may in fact have produced the behaviors and their effects (this phenomenon is often referred

⁵ This anecdote was literally adapted from the following web page:

<http://blogs.tampabay.com/breakingnews/2007/07/honking-horn-le.html>. When searching for the words “honking” and “horn” in Google (July 2008), the first page with results already reports of four news stories in which people were molested (and in one case killed) for honking their horns, thereby underlining, albeit with anecdotal evidence, the importance of noise and misunderstanding in everyday life.

to as the fundamental attribution error; Ross, 1977; correspondence bias; Jones, 1990; see also Allison & Kerr, 1994). Second, people are especially motivated to form personality impressions and make attributions when their own outcomes are affected in a negative rather than a positive manner (e.g., Kanouse & Hanson, 1971; Skowronski & Carlston, 1989; Weiner, 1985). Third, a very robust finding in the literature is that “bad is stronger than good”, that is, negative behavior and information stands out more and is therefore more salient for people (for a review, see Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; also, see De Bruin & Van Lange, 1999; Reeder & Brewer, 1979). Fourth, people have a tendency to think that others are more self-interested than they themselves are (Ratner & Miller, 2001).

Last but not least, as noted earlier, people have a strong tendency to reciprocate the degree of cooperation observed in others (e.g., Ben-Ner, Putterman, Kong, & Magan, 2004; Fehr, Gächter, & Kirchsteiger, 1997; McCabe, Rassenti, & Smith, 1996). This tendency to reciprocate may not only take direct forms (i.e., exchange-based; when oneself was the recipient of the act that is reciprocated) but also indirect forms (i.e., reputation-based; when someone else was the recipient of the act that is reciprocated), that is, people are also inclined to respond to a noncooperative reputation with noncooperation and to a cooperative reputation with cooperation. (e.g., Nowak & Sigmund, 2005; Wedekind & Milinski, 2000). Moreover, the (already strong) tendency to reciprocate has been shown to be stronger for noncooperative behavior than for cooperative behavior (Epstein et al. 1993; Gottman, 1998; Van Lange, 1999) and there is little reason to believe that this is different for the reciprocation of reputations. Thus, together these psychological tendencies suggest that people are likely to form relatively negative impressions about another person’s intentions and to show a particularly strong tendency to reciprocate noncooperative behavior and most likely also noncooperative reputations.

Analyzing the Social Interaction: $I = f(S, A, B)$

Naturally, the most important aspect of the analysis is to understand how persons A and B *interact* in the context of the situation (S) and how this relates to cooperation and trust. To begin with, I suggest that because of people’s tendency to focus on the negative, rather than the positive, as well as to focus on the person rather than the situation as a cause for behavior, people are likely to interpret incidents of noise in terms of the person’s noncooperative intentions. That is, noise may obscure the link between intention and action. Such obscurity may give rise to several psychological processes. For example, if a friend accidentally forgets to invite you to her birthday party, this may give rise to feelings of uncertainty and misunderstanding (e.g., “Why wasn’t I invited?”), erroneous attributions (“She doesn’t take our friendship seriously”) and wrongful impressions (e.g., “She doesn’t like me anymore”). Moreover, it may elicit retributive feelings (e.g. “I don’t like her either”) and intentions (e.g., “Next time she calls me, I’m going to say that I’ve no time”).

It is clear that such processes may affect cooperation and trust within a certain relationship. First, the ‘logical’ argument is that, given the tendency of individuals to reciprocate, one single incident of negative noise (i.e. an unintended noncooperative choice) could trap them into a chain of noncooperative interaction that harms them both,

which may be characterized as negative reciprocity. In the literature, this is sometimes referred to as the *echo effect* (Axelrod, 1984). Indeed, several computer simulations and theoretical models (e.g. Axelrod & Dion, 1988; Bendor, Kramer, & Stout, 1991; Kramer, Wei, & Bendor; 2001; Kollock, 1993; Nowak & Sigmund, 1993) and some empirical studies (e.g., Van Lange et al., 2002) have demonstrated that noise undermines cooperation elicited by a tit-for-tat strategy. Second, the ‘psychological’ argument is that noise tends to challenge the *atmosphere of trust and benign intent* within social situations. Many authors agree that trust is fundamental for making and breaking cooperative relations (e.g., see Kramer, 1999; Simpson, 2007). Trust may reduce general feelings of uncertainty about others’ true motives, intentions or actions, and provide a basis for specific expectations about how others might behave (Kramer & Carnevale, 2001).

What effects of noise should one expect when taking into account the temporal perspective (stranger vs. friend degree) of social interaction? First, I suggest that uncertainty about others’ intentions may be more pronounced for strangers than for friends as one has less knowledge of earlier interactions. Also, it is not unlikely that people sooner fall prey to psychological tendencies, such as negativity effects and the tendency to ‘blame’ the person rather than the situation, when dealing with strangers than with friends. Therefore, incidents of “noise” occurring within the social situation may also have stronger effects for interaction with strangers: the less we know about each other’s prior behavior, habits, and intentions, the less reason we have to put trust in one another. And in the absence of an atmosphere of trust, there will be no “buffer” against noise, and people will be less likely to give the benefit of the doubt and make other-regarding transformations. With respect to trust I suggest that, when moving along the continuum from friend to stranger, interactions are more and more related to trust that is directed at others in general or generalized trust (Kelley & Stahelski, 1970; Rotter, 1980; Yamagishi, 1986, 1988) rather than trust that is related to one particular other (partner-specific trust; e.g., Kelley & Thibaut, 1978; Rempel, Holmes, & Zanna, 1985).

Adding Some Generosity to Reciprocity

The preceding interdependence analysis of social interaction has important implications for both lines of research that I have discussed earlier. First, given the possible detrimental effects due to noise, it becomes very questionable whether tit-for-tat is the most effective behavioral strategy for promoting lasting cooperation and trust in social dilemmas. In fact, it is even likely that it is a very ineffective strategy in “noisy” situations. Second, effects of noise may also put questions about the evolution of cooperation in another perspective. While the reciprocating tendency of people is the key mechanism for the success of both direct and indirect reciprocity, it may, at the same time, form their Achilles’ heel or greatest weakness (cf., Axelrod, 1984; Kollock, 1993; Panachanathan & Boyd, 2003). Within communities that largely consist of reciprocating individuals, unintended errors on the actor’s side (e.g., one was not really able to make a cooperative choice) or on the observer’s side (e.g., one misperceives a behavior as a noncooperative act) may undermine cooperation through exchange (*echo effect*; Axelrod, 1984), but even more so through reputation. That is, due to the fact that erroneous reputation information may be transferred to multiple others (e.g., through communication) and hence will be reciprocated (*generalized echo-effect*), the detrimental effects of noise for reputation-based

cooperation may be especially pronounced – and perhaps even more pronounced than for exchange-based cooperation.

How can such detrimental effects of noise for reciprocating strategies be overcome? And how can the effects of noise be understood when seeking to explain human cooperation? In the present dissertation, I advance the hypothesis that adding some generosity to reciprocity is the answer. Generosity involves investing slightly more (e.g. time, effort, money) than one has received from the other (cf. Kollock, 1993), but may also involve, for example, withholding judgment or refraining from punishing someone for his behavior. I hypothesize that a generous strategy may be very effective in promoting cooperation and trust, thereby forming a buffer to “noise” and misunderstanding, because it has three important functions (a claim for which I will seek to find support in the next chapters). First, generous individuals promote an atmosphere of interpersonal trust, including perceptions of benign intent, that help people to give each other the benefit of the doubt, which help people to reduce the detrimental effects of noise (i.e., the trust building function of generosity). Second, theoretically, only one of the two interaction partners needs to adopt a generous strategy, so long as the interaction partner adopts a reciprocal strategy (i.e., tit-for-tat) and does not seek exploitation (i.e., the symbiosis of generosity and reciprocity). A third function of generosity may be that it is able to activate a mindset in others that motivates them to forego their self-interest and engage in a *genuine* form of other-regarding behavior – that is, behavior that cannot be accounted for by benefits one might expect to receive from the other. Such a mindset is expected to have a function of very positive interaction experiences, in which people receive very good psychological outcomes (an atmosphere of interpersonal trust), as well as very good material outcomes (through reciprocating generosity). As such, the third function of generosity can be conceptualized as the product of the first two functions (trust-building; generosity-reciprocity symbiosis). Moreover, I believe that these functions of generosity may even hold for indirect forms of generosity, that is, for reputation-based cooperation within communities of relative strangers.

Overview of the present dissertation

In the next chapters, I present five studies through which I seek to test my ideas regarding “the power of generosity” for eliciting cooperation and trust among “friends” and within community of “strangers”. In the following paragraphs, I will provide a brief overview of the different chapters in this dissertation. It should be noted in advance that all the empirical chapters of the present dissertation were written as separate articles – meant to be submitted to scientific journals. Hence, there may be some overlap among the chapters regarding theorizing and methodologies described. Also, in the empirical chapters the plural “we” is used to acknowledge the fact that the studies presented were part of a joint project.

The first empirical chapter (Chapter 2) reports on two studies that examine how direct forms of generosity may promote cooperation and trust among dyads in “noisy” situations. In both studies, the tit-for-tat strategy – as a baseline behavioral strategy of human behavior—is compared with two other strategies that individuals may use to deal with others. Study 2.1 compares the tit-for-tat strategy with two classic strategies, namely unconditional noncooperation (i.e., never cooperate) and unconditional cooperation (i.e.,

always cooperate). The effects of these strategies have been studied very often in noise-free settings (e.g., see Kuhlman & Marshello, 1975; Van Lange & Visser, 1999; Wrightsman, O'Connor & Baker, 1972), but it is unknown how they perform in more realistic, noisy situations. Study 2.2 compares three strategies that are entirely reciprocal (*tit-for-tat*) or largely reciprocal, namely *generous* (i.e., giving somewhat more than received) or *stingy* (i.e., giving somewhat less than received). The latter strategies are assumed to be more subtle and more widely used than the two unconditional strategies of Study 2.1 and hence more realistic. In both studies is examined what thoughts and feelings are elicited by a partner's generosity, responding in kind, and stinginess. The key hypothesis is that cooperation as well as the atmosphere of interpersonal trust and benign intent is undermined by negative noise, but more so for *tit-for-tat* than for strategies that are driven by other-regarding transformations and communicate generosity (i.e., giving more than one has received).

In the second empirical chapter (Chapter 3), I extend the findings of Chapter 2 that are demonstrating the benefits of generosity for promoting cooperation and trust. In Study 3.1, I explore another functional aspect of generosity. I argue that generous individuals (rather than reciprocal individuals) are able to activate a specific "other-regarding mindset" in their partners that motivates the partner to forego self-interest and engage in 'genuine' other-regarding behavior. To measure such other-regardingness, I use a *dictator game* (e.g., see Henrich et al., 2005; Forsythe, Horowitz, Savin, Sefton, 1994) in which a 'dictator' decides how to allocate money between him- or herself and another player. I examine how much money participants allocate to either a generous or a reciprocal partner in a noise-free or a "noisy" social environment, thereby hypothesizing that generous partners will receive more money, particularly under noise.

The third empirical chapter (Chapter 4) describes two studies meant to examine how indirect forms of generosity can promote cooperation and trust in "noisy" communities of relative strangers. In Study 4.1, I examine whether the beneficial effects of indirect reciprocity (i.e., reputation-based cooperation) as revealed in recent theoretical models and empirical studies, can be generalized to "noisy" social dilemma situations. The goal is to examine whether the beneficial effect of reputation-based cooperation may be undermined by noise, at least for communities characterized by reciprocity. In Study 4.2, I build upon the results of Chapter 2 regarding direct reciprocity and noise by comparing three types of communities that vary from purely reciprocal (calling for indirect reciprocity) to very generous (calling for indirect generosity), thereby examining only realistic situations in which unintended errors (or noise) challenge cooperation. The goal of this study is to examine whether generous communities are better able at reducing or overcoming the detrimental effects of noise on cooperation and trust – that is, that *reputation-based* cooperation is more effective among generous communities than among reciprocal communities.

In the final chapter, I provide an overview of the main findings, discuss some implications, give comments on strengths and limitations of the present work, and finally, provide some avenues for future research.