Cooperative, pure, and selfish trusting: Their distinctive effects on the reaction of trust recipients

OREN EILAM1* AND RAMZI SULEIMAN2
1Tel Aviv University, Israel
2University of Haifa, Israel

Abstract

Three types of trusting have been distinguished conceptually and empirically. In cooperative trusting the trust giver explicitly expects a reaction from the trust recipient that fits with the equality norm. In pure trusting, no explicit expectation is expressed by the giver. In selfish trusting the giver explicitly expects a reaction that benefits himself or herself at the expense of the recipient. We asked whether the three types of trust elicit distinctive reactions from trust recipients. Each participant was paired with a fictitious player who ostensibly enabled him or her to divide money between them. As hypothesized, both cooperative and pure trusting elicited more equal allocations than did selfish trusting. A second hypothesis, that cooperative trust would yield more equal allocations than pure trust, was not supported. Results are discussed in terms of equality norm, self-interest norm, reciprocity norm, reactance theory, social sanctioning, and the need to comply with others’ expectations. Copyright © 2004 John Wiley & Sons, Ltd.

INTRODUCTION

Trust is essential to the conduct of social life, and as long as people have the power to influence the costs and benefits accrued to other people, trust will remain an inherent part of social interactions. The importance of trust to interpersonal relations, and to social life in general, goes far beyond the context of close relationships and friendships. In the most extreme case a stranger we encounter in a street can harm us. Thus, even as simple and commonplace a behaviour as walking in a city street involves trust.

In the philosophical and social psychological literatures trust is usually defined according to two parameters: Reliance of the person who gives trust on the person who receives it and expectation of fair treatment, formed by the giver concerning the response of the recipient (e.g. Baier, 1986; Govier, 1993, 1994; Horsburgh, 1960; Schlenker, Helm, & Tedeschi, 1973; Thomas, 1978). According to this definition these two ingredients constitute the necessary conditions for the emergence of trust.

We argue that this definition is problematic, since it does not discriminate well between the behaviours and cognitions that are implied by the concept of trust (for a discussion about each one of
the two components, see Kramer, 1999). We prefer to use a broader definition, which disentangles the two components. Such a definition was suggested by Coleman (1990) who argued: ‘Situations involving trust constitute a subclass of those involving risk. They are situations in which the risk one takes depends on the performance of another actor’ (Coleman, 1990, p. 91). In situations in which people must decide between a risky and a non-risky option they are able to choose the risky option whether they believe that the probability that it will yield gains is high, moderate or low. Similarly, and in line with Coleman’s definition, there is no requirement that the trust giver expects fair treatment from the trust recipient. A person may decide to give trust whether he or she expects fair treatment, unfair treatment, or more than fair treatment. Furthermore, this definition of trust leaves the possibility open that the trust giver may have no expectation whatsoever when taking the social risk. Defining trust as a behavioural gesture enables us to retain the theoretical framework associated with the trust concept, while manipulating the expectation variable and measuring its influence on social interactions that involve reliance of one person on another.

We distinguish between three types of trusting situations, depending on the trust giver’s expectation. In selfish-trust (cf. Govier, 1992) the trust givers expect recipients to react in a manner that benefits the givers at their own expense. In cooperative-trust the givers expect the recipients to react in a way that equally benefits both parties. In pure-trust the trust giver does not express any expectations regarding the reaction of the trust recipient.

These subtypes of trust are not as trivial as they may seem at first glance. For example, Hardin stresses that trust is inherently non-purposive (Hardin, 2002, p. 10). In his view, trusting implies expecting that the ‘trusted’ side will behave fairly, whereas reliance does not necessarily follow from trusting. In contrast, we posit that trusting necessarily implies relying on the trusted, whereas an expectation of a fair response is a contingent ingredient, which is exogenous to the core definition of trust. The notion of trust that we advance here is that trust giving is a volitional behavioural gesture, and as such is purposive, although the underlying purpose may change across persons and situations. It is this supposition that enables us to define subtypes of trusting such as cooperative, pure, and selfish.

Hardin (2002) presents a fundamental question. He asks what causes one person to live up to the expectations of another. His answer to this question is quite simple. He puts forward the idea that the need to live up to another person’s expectations is driven by the desire to maintain a relationship with that person or similarly, by the fear of losing the relationship with that person (see also Coleman, 1990, for a similar suggestion). We do not dispute the idea that the interest in maintaining a relationship may play a role in shaping the reaction of the trust recipient. However, we do argue that, even when contextual constraints that are well recognized by the involved parties prevent the sustainability of a relationship between them, cooperative reactions on the part of trust recipients are still possible. Therefore, we ask what other factors may play a role in determining the reaction of the trust recipient. We put forward the idea that the type of expectation expressed by the trust giver may affect the recipient’s reaction. In other words, we ask whether one of the types of trust—selfish, cooperative, or pure—elicits more (or less) fairness from the recipient’s side than do the other two.

On the basis of a number of social psychological theories we hypothesized that selfish trust, in comparison with either cooperative or pure trust, would elicit the most selfish reactions from trust recipients. One theory that provides a rationale for this hypothesis is reactance theory (Brehm, 1966). In expecting to receive more than an equal share, the trust giver puts considerable pressure on the recipient, and the latter may therefore display reactance and refuse to comply with the expectation.

A second theory concerns the violation of prosocial norms. The trust giver who has selfish expectations expresses a desire to violate distributive justice norms in his or her exchange relationship

\(^{1}\)We do not rule out the possibility that trust giving as a purposive act can take place at an automatic level (see e.g. Bargh & Chartrand, 1999).
with the trust recipient (Clark & Pataki, 1995) and may therefore be punished by that person. Fehr and Gachter (2002) put forward a theory of 'altruistic punishment', according to which people are eager to sanction violations of prosocial norms, to the extent that they are ready to make sacrifices of private good for that purpose. Accordingly, an expectation expressed by trust givers for an above-equal share may be seen by trust recipients as unjust and consequently may elicit a punishing reaction that is independent of any greed-related consideration.

An additional rationale that yields a similar prediction is based on reciprocity (Axelrod, 1984; Gouldner, 1960). Usually reciprocal behaviour is considered one in which side ‘a’ engenders some type of behaviour toward side ‘b’, and in response side ‘b’ engenders a similar course of action towards side ‘a’. Notwithstanding this prominent and common type of reciprocity, a more subtle type may also exist, according to which the second person learns about the intentions of the first person, and adopts the same intentions in his or her behaviour towards the first person. In the context of the present research, by expressing a selfish expectation the trust giver manifests selfish intents regarding the trust recipient. In such a case, reciprocating would imply that the trust giver’s reaction would be selfish as well. A similar type of reciprocity is supported by a number of studies on both aggressive and prosocial behaviour (e.g. Braver & Barnett, 1974; Greenberg & Frisch, 1972; Nickel, 1974; Schopler & Thompson, 1968). In these studies the presence of aggressive (or prosocial) intention alongside with aggressive (or prosocial) behaviour on the part of one person fostered reactions that matched the first person’s intention.

Finally, the trust giver’s expectation may directly activate constructs such as norms, values and heuristics that are related to either selfishness or to equality. In this regard, high expectations on the part of the trust giver may activate constructs related to selfishness, such as the self-interest norm (Miller, 1999), whereas equal expectations may activate constructs related to equality such as the equality heuristic (Messick, 1993).

All the rationales mentioned above predict that the reaction of trust recipients would be more selfish in conditions of selfish trust than in conditions of either cooperative or pure trust. These rationales are less ‘straightforward’ regarding whether the reactions of trust recipients would differ between conditions of cooperative and pure trust, as neither condition is expected to evoke either reactance or sanctioning of equality norm violation. Still, cooperative trust may elicit prosocial reciprocity and may activate constructs related to equality and deactivate constructs related to selfishness. Pure trust, on the other hand, can be conceived as a ‘default situation’ and is presumed to elicit from trust recipients reactions that correspond to their natural reaction to trust. The question is, therefore, what is the default reaction to trust. Is it cooperative as implied by the research on the equality norm (e.g. Messick, 1993), or, alternatively, is it selfish as implied by the rational-economic theory and the research on the self-interest norm (e.g. Miller, 1999)? We hypothesized that the default lies somewhere in between the norm of equality and the norm of self-interest, and therefore we predicted that reactions to pure trust will be more cooperative than reactions to selfish trust, but less cooperative than reactions to cooperative trust.

**METHOD**

**Participants and Design**

Participants were 92 students at the University of Haifa in Israel. They responded to announcements posted on campus promising a payoff of up to 50 NIS (approximately $11) for participation in a
decision making experiment. Participants were informed that the exact amount paid to each one would depend on what happened in the experiment. One participant who did not fill the forms correctly and three participants who expressed suspicion about the purpose of the experiment were excluded from the analysis.

The experiment included three conditions in a one-factor, between-subjects design. The independent variable was the trust-giver’s expectation, which assumed three levels. In one condition the trust-givers ostensibly expected to be given more than half of the cake (40 out of 50 NIS). In the second condition he or she ostensibly expected to be given exactly half (25 out of 50 NIS). The third condition was a no-expectation condition. The dependent variable was the amount (out of 50 NIS) allocated to the trust giver.

Procedure

Four to six participants arrived at the laboratory at each session. On arrival, each participant was seated in a separate cubicle. The experimenter provided each individual with an instruction sheet, which stressed that the participants’ decisions would be strictly confidential, and that at the end of the experiment they would receive their payment and leave the laboratory one at a time, with no opportunity to meet the other participants who were present at the laboratory. Participants were further informed that they were about to participate in an experiment involving only one other person, and that the remaining individuals present at the laboratory would be paired among themselves. In fact the information about the pairing of participants was bogus, since each individual participated in the experiment independently from the other individuals present at the laboratory.

After about 1 min the experimenter returned with a second instructions sheet. This sheet form instructed the participant that he or she was paired with another participant and that a random procedure had assigned him or her the role of Player 2. The instructions stated that Player 1 would be the first to choose between two options: (1) that each of the two participants would receive 10 NIS and the experiment would then be terminated, and (2) that Player 2 would allocate 50 NIS as he or she wished between the two participants, after which the experiment would be terminated. The participants were instructed to read both options. The option ostensibly chosen by Player 1 was hand-marked on the printed instruction sheet. This was done in order to enhance the impression that a decision had actually been made by another participant. All participants were informed that Player 1 had chosen the second option.

A separate sheet that was stapled behind the previous one informed the participant about the expectation of Player 1. As in the previous sheet, the instructions were printed while the expectation of Player 1 was hand-checked. Under the high expectation condition participants were informed that Player 1 expected Player 2 to allocate 40 NIS to Player 1 and 10 NIS to Player 2. Under the equal expectation condition, subjects were informed that Player 1 expected Player 2 to allocate 25 NIS to Player 1 and 25 NIS to Player 2, and under the pure-trust condition no information was given to Player 2 about the expectation of Player 1.

On the same instruction sheet participants were requested to state their allocation of 50 NIS by checking the amount they chose to allocate to themselves, and on a second line, the amount they chose to allocate to Player 1. The instructions stressed that the total sum allocated to both participants should equal 50 NIS. After completing the allocation each participant was paid the amounts he or she allocated to himself or herself, probed for suspicion and left the laboratory without seeing any of the other participants.
RESULTS

Means and standard deviations of the amounts (out of 50 NIS) allocated to the other participant (the fictitious player) under the different expectation conditions are shown in Table 1. The distribution of allocations in the three expectation conditions is depicted in Figure 1.

A one-factor ANOVA yielded a main effect for the type of trust \( F(2,85) = 7.428, p < 0.002 \) which supports the research hypothesis. A post hoc Scheffe analysis revealed that in line with the hypothesis allocations in the high expectation condition were significantly more self-favouring than allocations in the equal expectation condition \( (p < 0.007) \). Also, in line with the hypothesis allocations in the high

<table>
<thead>
<tr>
<th>Trust condition</th>
<th>Selfish (high expectation)</th>
<th>Cooperative (equal expectation)</th>
<th>Pure (no expectation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allocation to the trust giver</td>
<td>17.55</td>
<td>23.03</td>
<td>23.15</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>(9.10)</td>
<td>(4.87)</td>
<td>(7.34)</td>
</tr>
<tr>
<td>( N = 88 )</td>
<td>n = 31</td>
<td>n = 30</td>
<td>n = 27</td>
</tr>
</tbody>
</table>

Figure 1. Distribution of allocations to the trust giver in each of the expectation conditions

Table 1. Means and standard deviations of allocations to trust giver in the different expectation conditions
expectation condition were significantly more self-favouring than allocations in the no-expectation condition \( (p < 0.007) \). The hypothesized difference in allocations between the equal- and no-expectation conditions was not found \( (p > 0.998) \).

**Comparison to Norms**

For each trust condition we compared the allocation to the trust giver to the 25/25 allocation (equality point), and to the 40/10 allocation, which secures what the trust giver would get, had he or she not given trust (preservation point). Two-tailed t-tests showed that in all the trust conditions allocations to the trust giver were significantly above the preservation point \( (t(30) = 4.621, p < 0.001, t(29) = 14.667, p < 0.001, \text{ and } t(26) = 18.427, p < 0.001 \text{ for the selfish, cooperative, and pure trust, respectively}) \), and significantly below the equality point \( (t(30) = -4.526, p < 0.001, t(29) = -2.213, p < 0.036, \text{ and } t(26) = -2.595, p < 0.016 \text{ for the selfish, cooperative, and pure trust, respectively}) \).

**DISCUSSION**

In the present study recipients of trust reacted more cooperatively in response to cooperative trusting and pure trusting, than in response to selfish trusting. This finding supported the main research hypothesis. On the other hand, results did not support the hypothesis that reactions to pure trust will differ from reactions to cooperative trust. Albeit the differences between reactions to selfish trust and reactions to the other two types of trust, in all three conditions allocations to the trust giver were above the preservation point (i.e. above 10 NIS that the trust giver would have obtained, had he or she not given trust), and below the equality point (25 NIS). These findings imply that, on average, in all conditions the trust giver benefited from giving trust and the trust recipient displayed self-bias in dividing the cake.

The finding showing that under selfish expectations allocations to the trust giver were above the preservation point is particularly interesting. Similarly, of special interest is the finding showing that under cooperative expectations, the participants’ allocations to trust givers were below the equality point.

To account for the results summarized above, we propose a model according to which the trust giver’s expectations activate and deactivate various social norms, values and heuristics, and these, in turn, affect the behaviour of the trust recipient. In the proposed model, the constructs that mediate the effect of expectations on behaviour include the norms of equality, self-interest and reciprocity, in addition to reactance, sanctioning violations of equality and compliance. Table 2 depicts the main features of the proposed model. As shown by the table, a number of different constructs can be influenced (activated, deactivated or unaffected) in each expectation condition. The net effect on the trust recipient’s behaviour may be seen as a weighted average of the effects of the various constructs. Obviously, the proposed model is a simplification of reality. The activation/deactivation of each construct in the model need not be independent of the activation/deactivation of other constructs, and thus the cumulative effect of the various constructs need not be a simple additive summation. Moreover, although the model includes several constructs that we think are most relevant to the psychological state associated with being trusted, the participation of each of the constructs needs to be verified in future research.

To give a brief account of the proposed model, consider first the selfish-trust condition. Recall that this condition yielded the most selfish allocations compared to the other trust conditions. Our model
explains the selfish allocations in this condition by suggesting that selfish trust may have deactivated the equality norm, while activating self-interest norm, reciprocity to the trust giver’s selfish motive, reactance, and sanctioning of the violation of equality intended by the trust giver. All these processes could affect the trust recipient’s behaviour in a self-favouring manner, resulting in an extremely low allocation to the trust giver. The finding that, in this condition, participants allocated to the trust giver 35% of the total amount of money (much above 0%) could be explained by the activation of the compliance construct. Also it is possible that due to its crucial role in our society, the equality norm, although being deactivated by the selfish expectation, remained active to some minimal extent and affected allocations accordingly.

A similar explanation applies to the cooperative-trust condition, in which allocations to the trust giver were significantly higher than allocations in the selfish-trust condition. According to the model, cooperative trust may have activated the equality, reciprocity and compliance constructs, and deactivated the self-interest construct. All these processes should produce equal allocations. The result indicating that, in this condition, recipients of trust allocated to the trust givers below 50%, could be explained by the operation of a residual level of activation of the self-interest norm, a norm that although being deactivated, may have still been operative given its predominance in individualist societies (Fiske, Kitayama, Markus, & Nisbett, 1998; Miller, 1999). It is also possible that some level of reactance could be at play, since the expression of equal expectations by the trust giver may be perceived by the trust recipient as a restraint on his or her freedom to act selfishly.

In the pure-trust condition, as in the cooperative-trust condition, allocations to the trust giver were significantly higher than allocations in the selfish-trust condition. Our model could account for this result, provided that we assume that the act of trust giving, per se, could be perceived as a prosocial act and/or that recipients of pure trust may have ascribed to the trust giver an (unexpressed) expectation for equal allocation. The perception of the trust giver’s act as prosocial entails the activation of the

<table>
<thead>
<tr>
<th>Constructs that potentially mediate the effect of different types of trust on the reaction of trust recipients</th>
<th>Selfish (high expectation)</th>
<th>Cooperative (equal expectation)</th>
<th>Pure (no expectation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equality norm</td>
<td>Negative (!!) Self-favouring allocation</td>
<td>Positive (!!) Equal allocation</td>
<td>Positive (!!) Equal allocation</td>
</tr>
<tr>
<td>Self-interest norm</td>
<td>Positive (!!) Self-favouring allocation</td>
<td>Negative (!!) Equal allocation</td>
<td>Negative (!!) Equal allocation</td>
</tr>
<tr>
<td>Reciprocity norm</td>
<td>Positive (!!) Self-favouring allocation</td>
<td>Positive (!!) Equal allocation</td>
<td>Positive (!!) Equal allocation</td>
</tr>
<tr>
<td>Reactance</td>
<td>Positive (!!) Self-favouring allocation</td>
<td>Positive (!!) Self-favouring allocation</td>
<td>No effect No effect</td>
</tr>
<tr>
<td>Sanctioning violation of equality</td>
<td>Positive (!!) Self-favouring allocation</td>
<td>No effect No effect</td>
<td>No effect No effect</td>
</tr>
<tr>
<td>Compliance</td>
<td>Positive (!!) Other-favouring allocation</td>
<td>Positive (!!) Equal allocation</td>
<td>Positive (!!) Equal allocation</td>
</tr>
</tbody>
</table>

(1) Moderate effect; (2) strong effect.
equality and the reciprocity constructs, while the assumption of expectation for equal allocation entails that the reciprocity and compliance constructs should be activated. Perceiving the act of trust as prosocial, without the explicit expression of expectations, should cause only moderate deactivation of the self-interest construct. Thus, some level of activation of the self-interest construct may still be at play, which could account for the observed result of less than 50% allocated to the trust giver.

Recommendations for Future Research

The model proposed in the preceding section constitutes an attempt to account for the cognitive processes that mediate the effect of different types of trust on the behaviour of the trust recipient. Future research may attempt to disentangle the specific effects of each of the involved constructs. One way to accomplish this is to use a reaction time task (e.g. a lexical decision task), and compare reaction times obtained for words related to different constructs, under each of the trust conditions. For example, it can be predicted that response latencies to words related to the equality norm (e.g. justice, equal, honest) will be longer under conditions of selfish trust, and that the reaction time to such words will mediate actual resource allocation by the trust recipient. Similarly, with regard to the reactance construct, it can be predicted that in comparison to the other trust conditions, in the selfish-trust condition shorter latencies will be found for words that imply a restraint of freedom (e.g. restriction, handicapping, tied) and that in this case too reaction time will mediate allocation behaviour.

A limitation of this study is the absence of a control condition in which allocations are made with no preceding gesture of trust giving. A proper control is the dictator game (Kahneman, Knetsch, & Thaler, 1986) as used in a study by Dufwenberg and Gneezy (2000). In the dictator game one player (the dictator) divides money between him or herself and another player. Comparing the allocations made under various trust conditions with allocations made under corresponding dictator conditions enables one to test whether trust giving per se activates equality-related constructs and elicits cooperative behaviour.

Finally, future research may study the interaction between types of trust and personality variables. A relevant dispositional variable is social value orientation (Messick & McClintock, 1968). Van Lange and Semin-Goossens (1998) have shown that, although prosocial individuals basically react to others more cooperatively than do 'proselfs', the difference between the reactions of these two social types is narrowed if the target person is seen as moral. In the context of trust, a trust giver may be perceived as moral, if he or she expresses an expectation of equal allocation, as in the cooperative-trust condition. This suggests the prediction that differences between prosocial and proself individuals may be attenuated in conditions of equal expectations.

Implications

It should be stressed that we do not assume that in everyday interactions trust givers voluntarily reveal their selfish motives to those whom they had trusted. In fact, the results of the present study imply that selfish trust givers have a good reason to conceal their real motives from recipients of their trust, simply because revealing their intent is likely to result in sub-optimal outcomes for them. Thus, rather than communicating selfishness, it is predicted that trust givers will communicate cooperative intents, whether they are really cooperative or only feign to be so.

An interesting possibility that was not treated in the present study but deserves future inquiry is the case of altruistic expectations on the part of the trust giver (i.e. altruistic-trust). If communicating fairness benefits trust givers more than communicating selfishness, then perhaps an even better
strategy would be to communicate selfless, altruistic motives. The possibility of behaving reciprocally to an altruistic expectation may elicit more prosocial behaviour from the recipient than to any other kind of expectation. It is possible, though, that an altruistic expectation may elicit exactly the opposite behaviour: it can deactivate the equality norm due to the unequal allocation that it prescribes. It can also prompt a compliant process, resulting in selfish rather than altruistic reaction.

The results of the present study suggest that on some occasions trust givers might be better off not communicating any expectations. In such a case they might enjoy the natural tendency of people to react cooperatively to the trust placed in their hands, even without knowing the intentions behind it. The pure-trust condition in the present study might model a common situation in which the trust recipient can only guess the expectations of the trust giver. Of course, in reality situations are rarely as sterile as those constructed in the laboratory, and trust recipients might be able to find situational cues from which they can infer the expectations and motives of those who trusted them. For example, interactions in everyday life are often of a sustained nature, which gives trust recipients the possibility of using their knowledge about the person who trusted them to learn about his or her expectations. Importantly, when no expectation is being explicitly stated by the trust giver, the recipient’s knowledge about the giver’s expectation is not certain, and such uncertainty can suppress selfishness directed towards the trust giver. For example, if the recipient believes that the giver’s motives are selfish, he or she may still be reluctant to react with selfishness, due to the possibility that he or she might suspect that his or her belief might be mistaken.

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