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Short Communication

A social identity approach to trust: Interpersonal perception, group membership and trusting behaviour

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Abstract

Trusting behaviour involves relinquishing control over outcomes valuable to the self. Previous research suggests that interpersonal perceptions of trustworthiness are closely related to this behaviour. The present research suggests that the more proximal determinant of trusting behaviour is the expectation that the other will reciprocate. Based on the Social Identity model of Deindividuation Effects (SIDE) model, reciprocity expectations may be created by interpersonal perceptions of trustworthiness or a shared group membership. To investigate this, group membership and individual identifiability were experimentally manipulated (N = 139): When individuals were not identifiable, trusting behaviour was based on expectations of reciprocity inferred from group membership, not on perceived trustworthiness. In contrast, personal identifiability fostered perceptions of trustworthiness for both in- and out-group members. In this case interpersonal trustworthiness enhanced expectations of reciprocity, which in turn increased trusting behaviour. Copyright © 2005 John Wiley & Sons, Ltd.

There has been considerable debate about what trust is, and how it is influenced (for an overview, see Cook, 2001). Trust has been treated as a more or less static interpersonal difference construct (Granovetter, 1985; Rotter, 1967). Another perspective emphasizes the influence of contextual factors, in which trust is seen as a cognitive process associated with the confidence in another's goals or purposes, or the perceived sincerity of another's word (Hosmer, 1995; Lewicki & Bunker, 1995; Mellinger, 1956). In this view, the level of trust is specific to the relationship and to the contextual factors which enhance or inhibit the development and maintenance of trust (Lewicki & Bunker, 1995).

In these approaches, definitions of trust are operationally if not conceptually confined to perceptions of one regarding the other: that is, trust is defined as *perceived trustworthiness*. This, we argue, is a rather restrictive conceptualization, and does not clearly differentiate trust from other

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'relational goods', such as respect, attraction, support, or endorsement. Trust of this kind is undoubtedly valuable in interpersonal relations, and would appear to be closely bound up with the positivity of the relationship between two or more individuals. However, there is a rather different aspect of trust which is not quite captured by this perceptual or relational conceptualization. This feature has to do with the behavioural consequences of trust, in that trust also entails relinquishing some degree of control or power to the other. For example one could trust another to complete a particular task, or give them the keys to one's house and trust them to put the rubbish out for you.

There is a subtle difference between perceptions of trustworthiness and trusting behaviour. Unlike perceptions of trustworthiness, trusting behaviour involves relinquishing power over outcomes valuable to the self (cf. Messick & Kramer, 2001). One key difference between the two, then, is that one is a passive and potentially inconsequential interpersonal evaluation, whereas the other requires an active investment of self-relevant outcomes.

Moreover, whereas the perception of trustworthiness is an assessment of someone's character, trusting behaviour involves expectations about the other's actions. It could be argued that this distinction is one of degree. Indeed, the perception of trustworthiness is likely to affect trusting behaviour to a certain extent. However, we argue that the interpersonal evaluation of someone as 'trustworthy' is not a *necessary* condition for trusting behaviour to follow, and that there is a qualitative difference between perceiving someone as trustworthy and expecting him or her to reciprocate. Indeed, we believe that perceivers are well aware that a target's behaviour is (sometimes) dictated by factors other than their personality. Of course, the two are likely to correspond to each other in most cases, but exceptions exist. For example we might rely on an untrustworthy person to do something for the community (i.e. to reciprocate) because it is in their self-interest to do so (a case where people's actions are for the greater good but not motivated by their personality). Also, we might expect reciprocity simply because rules or laws oblige people to behave in a certain way (a case where compliance is assumed).

These examples illustrate two things. One is that trusting behaviour and perceptions of trustworthiness do not always coincide. Another is that the expectation of reciprocity appears to determine whether people will behave in trusting ways. Although reciprocity expectations can be created by interpersonal perceptions of trustworthiness (and indeed many have treated them as synonymous), we know from research that they can also be created by *higher order* perceptions of similarity and interchangeability, such as those induced by shared social group membership (Brewer, 1981; Yamagishi & Kiyonari, 2000). Shared group memberships (when salient) reduce the relevance of interpersonal distinctions (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) and produce the possibility for individuals to engage in co-action and collective action (Reicher, 1996). So, in certain group contexts, trust is not so much based on the economic calculation of what happens if the other individual preserves or violates the trust (so called *calculus-based* trust) but is based on common membership of a salient social group—i.e. *identification-based* trust (Kramer & Wei, 1999; Lewicki & Bunker, 1996).

INDIVIDUAL IDENTIFIABILITY, GROUP MEMBERSHIP AND TRUST

In order to examine what affects trusting behaviour, the present study examines the two factors underlying reciprocity expectations based on predictions derived from the Social Identity model of Deindividuation Effects (SIDE, Reicher, Spears, & Postmes, 1995; Spears & Lea, 1992). More specifically we manipulate information about the target by providing so-called *cues to identity*. It is important here to differentiate between cues that make salient aspects of *personal identity* and cues to

social identity (or group membership, see Tanis & Postmes, 2003). Both kinds of information are believed to play an important role in the perception people form of each other. In contexts in which cues are informative about personal identity, even relatively minimal cues such as portrait pictures and first names have been shown to reduce ambiguity and to result in more positive interpersonal impressions (Tanis & Postmes, 2003). Not 'knowing' one's interaction partner might increase uncertainty or even apprehensions about the other, and provide a less firm basis for trusting the other. This idea resonates with the general assumption that 'trust needs touch' (Handy, 1995), i.e. that interpersonal contact is important (if not vital) in order to trust someone. Therefore, our first hypothesis would be that cues to personal identity increase perceived trustworthiness, but that group membership does not.

However, people may also engage in trusting behaviour simply because they expect reciprocity from ingroupers. Past research on the SIDE model has demonstrated that when cues to shared social identity are available (and when this identity is salient), the inability to tell group members apart may accentuate the perceptual unity of the group, and thereby enhance group members' feelings of attraction and identification to the group (e.g. Lea, Spears, & de Groot, 2001; T. Postmes, R. Spears, T. Lee, & R. J. Novak, in press; Postmes, Spears, Sakhel, & de Groot, 2001; Sassenberg & Postmes, 2002). Indeed, Sassenberg and Postmes (2002) showed that an inability to individuate ingroup others reduces interpersonal attraction, but at the same time *increases* a sense of shared identity. Conversely, information about idiosyncratic characteristics of group members stresses the unique individuality of each of them, thereby drawing attention away from the person's identity as an ingroup or outgroup member. Extending this to the realm of trust, our second hypothesis would be that a person's group membership would only affect expectations of reciprocity and trusting behaviour when individuation is not possible: In the absence of cues to personal identity, there may be an accentuated expectation of reciprocity based on shared ingroup membership.

This leads us to our third hypothesis which is that trusting behaviour is mediated by the expectancy of reciprocity. As mentioned, the expression of trust in behaviour means that one *invests* trust in that person by giving the other power over outcomes valuable to the self. Therefore, trusting behaviour will only be displayed when people think that others will not take advantage of the situation and when reciprocity is expected. Reciprocity can be expected either on the basis of group membership, or on the basis of individuating cues to personal identity. When the other is an ingroup member, reciprocity would be expected from the other irrespective of whether they are individuated or not (i.e. irrespective of whether there is a basis for interpersonal trustworthiness or not). But when the other is an outgroup member, reciprocity can only be based on an interpersonal evaluation of the other's trustworthiness—in other words an evaluation that depends on one's capacity to individuate the other. Therefore, our fourth hypothesis is that when one's partner is from the outgroup, expected reciprocity and trusting behaviour will be based on perceived interpersonal trustworthiness, when cues to personal identity are available.

OVERVIEW

In order to examine the effects of cues to personal identity and group membership on trust, a so-called *investment game* was designed in which participants were confronted with a dilemma (see Berg, Dickhaut, & McCabe, 1995). Participants could invest the reward they received for participating in the research. They were told that their investment would be tripled by the experimenter, and then transferred to a randomly selected counterpart. Participants were led to believe that the counterpart could choose how much (if any) of this sum was to be returned to the participant. In other words, if the participant decided to invest money, the counterpart would have the power to decide the size of the

reward which the participant would receive. The alleged counterpart was either a member of a salient ingroup or outgroup, and cues to the personal identity of this person were either presented or not. The key dependent variables were perceived trustworthiness, expected reciprocity, and trusting behaviour (measured by whether or not money was invested).

Based on findings that cues to personal identity reduce ambiguity (see Tanis & Postmes, 2003), and consistent with approaches stressing the importance of social presence for personalized interactions (Culnan & Markus, 1987; Rutter, 1987; Short, Williams, & Christie, 1976), the presence of cues to personal identity was expected to increase *perceived trustworthiness* of the other, regardless of whether the counterpart was a member of the ingroup or the outgroup. The reason why group membership should not moderate this effect is twofold: (a) cues to personal identity individuate the counterpart and decrease salience of social identity (e.g. Lea et al., 2001; Sassenberg & Postmes, 2002) and (b) perceived trustworthiness is operationalized as an interpersonal judgment, making it less susceptible to influences by group stereotypes when (as in the present case) the stereotypes of groups do not speak to trustworthiness.

METHOD

University of Amsterdam freshmen students ($N = 139$; 48 male) participated in return for a financial reward in a study with a 2 (partner's group membership: ingroup vs. outgroup) $\times$ 2 (cues to personal identity: no cues vs. cues) between-participants factorial design. The experiment was conducted in a laboratory with eight networked PCs. Participants were guided to an isolated cubicle with a PC, and received brief instructions for its use. All subsequent instructions were provided via the computer. The experiment began by asking participants some demographic questions (age, sex) and ingroup identification, measured with a three-item scale: 'I identify myself with students from the UvA', 'I see myself as a member of the group of students from the UvA', 'I feel connected to the group of students from the UvA'; $\alpha = 0.82$ (Doosje, Ellemers, & Spears, 1995). The outgroup was another university located in the same city with whom mild rivalry existed. Identification with the outgroup was measured using the same scale, substituting 'UvA' with 'VU' ($\alpha = 0.82$).

Participants were then told that they would be given the opportunity to invest their reward for participating (€ 8). They could either keep the money all to themselves or transfer (a part of) their earnings to another person. The computer would randomly team them up with a counterpart who would come to the laboratory later in the day (subtly conveying to participants that they would not meet the other in person, and they were therefore not interdependent or under any implicit pressure from the other). Participants were told that—if they decided to transfer money—the experimenter would triple the amount of money they transferred. It was then for the alleged counterpart to choose how much (if any) of the money to send back.

Participants were told that they would see the picture and name of the alleged counterpart if this was available (cues to personal identity) and information regarding their university (cues to social identity identifying the other as an in- or out-group member). Portrait pictures and first names were randomly drawn from a database of student pictures that were pre-tested for neutrality of expression and attractiveness. In this way, any risk of bias due to visual appearance of stimulus others was expected to be minimal. Cues to social identity were manipulated by presenting the logo of the particular university of the target other. Participants' understanding of the procedure was tested through a multiple-choice question and when answered incorrectly, instructions were repeated.

Subsequently, participants were led to believe that the computer randomly chose a counterpart. This was done by simultaneously portraying two targets (each on one side of the computer screen) by means of the logo of the accompanying university (one of each university). This initial joint

presentation of an in- and out-group counterpart ensured that the intergroup context was made salient for all participants. The counterparts were identified with randomly selected portrait pictures and names in the cues to personal identity condition, or not personally identified, with just a grey square instead of a picture in the condition without cues to personal identity. After 10 s, one of the persons presented faded away and an arrow pointed to the remaining person, who allegedly would be the counterpart, capable of increasing their reward. After this, the participant was asked whether or not (s)he was willing to transfer money, followed by a number of questions measuring dependent variables, followed by a manipulation check. In the debriefing, participants were explained that there would be no counterpart, as we were only interested in their decision to transfer money or not.

Dependent Variables

Trusting behaviour was coded dichotomously (0 = not willing to transfer any money, 1 = willing). Following the choice of transferring money or not, the amount of money that participants were willing to transfer was also measured. However, because of the severe skewness of the distribution (with 40% of the participants transferring nothing and the remaining 60% transferring € 3.72 on average, $SD = 2.38$) nonparametric tests were deemed more appropriate. In addition to this, participants responded to two statements on 7-point scales (1 = I strongly disagree, 7 = I strongly agree) assessing the degree of perceived trustworthiness ('I had faith in the person that was linked to me', 'I think that the other person can be trusted', $\alpha = 0.79$), and a one-item measure of the expected reciprocity ('I believe that the person that is linked to me will reward me').

Data Analysis

Eight participants were excluded from analysis because participants did not recall correctly the counterpart's group membership, as measured by the manipulation check. The rest of the data were scanned for outliers using the method of estimating Mahalanobis distances on the key dependent variables (Tabachnick & Fidell, 1996). Six participants were identified as outliers using this method (with $p < 0.001$), and these cases were excluded from further analysis. This resulted in a total sample size of 125 (40 male, 85 female), with participants approximately evenly distributed across conditions.

The treatment of trusting behaviour, perceived trustworthiness, and expected reciprocity as separate factors was justified with a confirmatory factor analysis which hypothesized the three factors to be correlated but separate factors. This model had excellent fit, $\chi^2(1) = 0.18$, $p = 0.67$, CFI = 1.00, RMSEA = 0.00, which was significantly better than the model predicting that all variables loaded on one factor, $\Delta\chi^2(1) = 25.18$, $p < 0.001$.

RESULTS

As predicted, ingroup identification ($M = 4.67$, $SD = 1.17$) was higher than outgroup identification ($M = 1.68$, $SD = 0.91$), $F(1, 124) = 600.12$, $p < 0.001$. A series of 2 (partner's group membership: ingroup vs. outgroup) $\times$ 2 (cues to personal identity: no cues vs. cues) analyses of variance were conducted.¹ Results are presented in Table 1.

¹Gender was not considered to be a theoretically relevant variable here. Indeed, there were no significant main effects or interactions involving gender on any of the dependent variables.

Table 1. Mean scores of perceived trustworthiness, perceived reciprocity, and trusting behaviour by partner's group membership and cues to personal identity

	No cues to personal identity		Cues to personal identity	
	Ingroup	Outgroup	Ingroup	Outgroup
Perceived trustworthiness	3.73 _a	3.85 _a	4.92 _b	5.05 _b
<i>SD</i>	1.08	1.31	1.33	0.91
Expected reciprocity	4.18 _b	3.35 _a	4.17 _b	4.38 _b
<i>SD</i>	1.45	1.45	1.58	1.40
Trusting behaviour*	66.7 _b	41.4 _a	60.0 _b	70.0 _b

Note: Means in the same row with a different subscript differ significantly from each other at $p < 0.05$.

*Percentage of respondents showing trusting behaviour.

Perceived Trustworthiness

As predicted, cues to personal identity had a positive effect on the level of perceived trustworthiness, $F(1, 121) = 33.16$, $p < 0.001$. When cues were provided, participants indicated that the counterpart was more trustworthy ($M = 4.98$, $SD = 1.12$), compared to when no cues were provided ($M = 3.78$, $SD = 1.18$). Partner's group membership had no statistically significant effect on trustworthiness, $F(1, 121) = 0.35$, *ns*, and the interaction was not reliable either, $F(1, 121) = 0.00$, *ns*. These findings confirm our first hypothesis.

Expected Reciprocity

A main effect of cues to personal identity was found on participants' expectations that their donations would be reciprocated, $F(1, 121) = 4.59$, $p < 0.05$. When cues were present, participants reported a higher level of expected reciprocity ($M = 4.33$, $SD = 1.48$) than when no cues were given ($M = 3.79$, $SD = 1.49$). The partner's group membership had no statistically significant effect on expectancy, $F(1, 121) = 0.98$, *ns*. These effects were qualified by a statistically significant interaction, $F(1, 121) = 4.84$, $p < 0.05$. In order to test whether the pattern of results was as expected, a planned comparison analysis was conducted (Rosenthal, Rosnow, & Rubin, 2000). A contrast specified that the expectation of reciprocity in the outgroup-no cues condition would differ statistically significant from all other conditions. This was confirmed by a highly statistically significant effect, $F(1, 121) = 9.02$, $p < 0.005$. Participants least expected reciprocity from an anonymous outgroup member ($M = 3.35$, $SD = 1.45$) compared to other conditions ($M = 4.23$, $SD = 1.51$; see Table 1). These findings confirm our second hypothesis in that reciprocity expectations are only affected by group membership when cues to personal identity are absent.

Trusting Behaviour

This was measured dichotomously: participants chose to donate money or not. In order to examine the relation between the conditions and trusting behaviour, a chi-square test of independence was performed. The overall between-cell differences in trusting behaviour were not significantly different, $\chi^2(3, N = 125) = 6.09$, $p = 0.11$. However, the focused comparison revealed that the

outgroup-no cues condition differed statistically significant from the other conditions, as predicted, $\chi^2(1, N = 125) = 5.46, p = 0.02$. There was less trusting behaviour when the counterpart was not personally identified and a member of the outgroup, a finding that confirms the second hypothesis for trusting behaviour (see Table 1 for percentages).

Expected Reciprocity as Mediator

Results showed that the availability of cues to personal identity interacted with group membership (in which the outgroup-no cues condition differed from the other conditions) in influencing trusting behaviour. A mediation analysis tested whether this effect was mediated by expected reciprocity (Baron & Kenny, 1986). Results are displayed in Figure 1.

Logistic regression analysis showed that the interaction of cues to personal identity and partner's group membership had a statistically significant impact on trusting behaviour ($B = 0.50$, Wald = 5.26, $p < 0.05$). Subsequent regression analyses showed that the interaction of cues and group membership was also significantly related to expected reciprocity (linear $\beta = 0.26$, $t = 3.03$, $p < 0.005$), and that expected reciprocity had a statistically significant effect on trusting behaviour (logistic $B = 1.18$, Wald = 28.35, $p < 0.005$). With expected reciprocity entered in the regression equation, the interaction effect of cues and group membership was no longer statistically significant ($B = 0.16$, *ns*). The Sobel test (Baron & Kenny, 1986) showed that the mediator significantly reduced the direct effect ($Z = 2.63$, $p < 0.01$). This confirms our third hypothesis, in that trusting behaviour is mediated by reciprocity expectations.

Separate regression analyses for each group provided further support for hypothesis 3. When counterparts were ingroup members, cues to personal identity did not affect trusting behaviour ($B = -0.29$, *ns*) or expected reciprocity ($\beta = -0.01$, *ns*). However, when counterparts were outgroup members, cues to personal identity did affect trusting behaviour ($B = 1.18$, Wald = 4.89, $p < 0.05$) as well as expected reciprocity ($\beta = 0.38$, $t = 3.16$, $p < 0.05$). The effect of expected reciprocity on trusting behaviour ($B = 1.11$, Wald = 13.53, $p < 0.005$) reduced the direct effect of cues to personal identity ($B = 0.36$, *ns*). So, when the counterpart was an outgroup member, more behavioural trust was

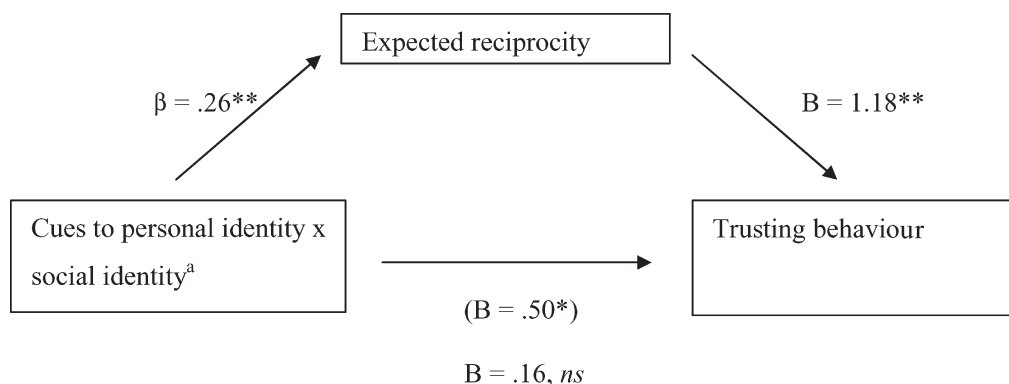


Figure 1. Path model for the effect of the interaction of cues to personal and social identity and expected reciprocity on trusting behaviour. ^aThe interaction as specified by the contrast (i.e. contrasting the no cues-outgroup condition with all other conditions). $^{**}p < 0.005$; $^*p < 0.05$

shown when cues to personal identity were present, because these cues increased expectations of reciprocity.

Trust in Outgroup Members

When looking at the pattern of results as displayed in Table 1, it is clear that for those whose counterpart was a member of the *ingroup*, cues had no marked effect on perceived reciprocity or trusting behaviour, only on the perception of trustworthiness. For those participants whose counterpart was a member of the outgroup, however, cues did affect all three variables: perceived trustworthiness, expected reciprocity, and trusting behaviour. When the counterpart was an outgroup member, expectations of reciprocity can (obviously) not be based on positive stereotypes that may exist of the ingroup, or on grounds of being part of the same social group. Rather, it seems likely that for an outgroup member, any expectation of reciprocal behaviour stems from a feeling of *interpersonal* trustworthiness which is induced by cues to personal identity. In other words, if it is the case that cues to identity had the effect of making salient the *personal identity* of outgroup members, then the difference between conditions should be accounted for by differences in interpersonal perceptions of trustworthiness.

In order to test this, a structural equation model was tested in structural equation modeling software EQS 5.7a, which predicted that the cues to personal identity condition would affect perceived trustworthiness, which in turn would give rise to expected reciprocity, which in turn predicted trusting behaviour (see Figure 2). All variables were sufficiently normally distributed with kurtosis values that met assumptions for structural equation. The predicted model had excellent fit, $\chi^2(3) = 3.46$, $p = 0.33$, CFI = 0.99, RMSEA = 0.05. All expected parameters were statistically significant and the direction of the relations matched the expectations, confirming our fourth hypothesis.

In order to test the direction of causality, we tested a reverse causality model in which the expectancy of reward influences perceived trustworthiness. This reverse causality model did not predict well: All fit indices suggest it failed to account for the pattern of covariation among variables, $\chi^2(3) = 15.14$, $p < 0.001$, CFI = 0.85, RMSEA = 0.26.

Thus, cues to personal identity significantly affected perceived trustworthiness ($\beta = 0.48$, $p < 0.05$), which significantly predicted reciprocity expectations ($\beta = 0.70$, $p < 0.05$), which determined trusting behaviour ($\beta = 0.60$, $p > 0.05$). We also tested a fully saturated model, including all the direct paths.

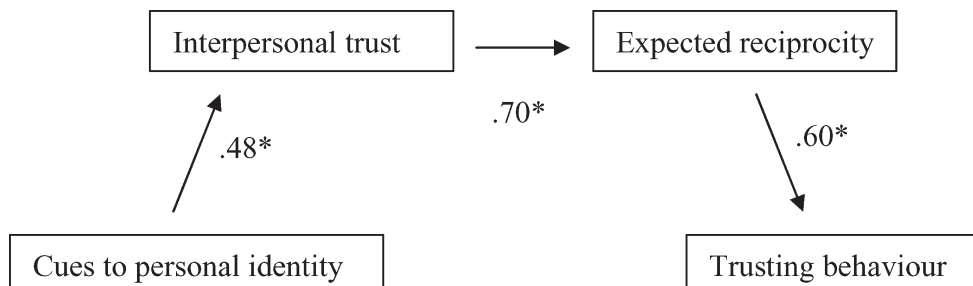


Figure 2. Structural equation model for trusting behaviour in members of the outgroup. This model includes only those participants who were assigned to the outgroup partner conditions. * $p < 0.05$

The direct path of the presence of cues to personal identity to reciprocity expectation proved statistically insignificant ($\beta = 0.05$, *ns*), as did the path of cues to personal identity to trusting behaviour ($\beta = 0.01$, *ns*). In this model, perceived trustworthiness also did not directly affect trusting behaviour ($\beta = 0.25$, *ns*). In other words, the pattern is one of full mediation by perceived trustworthiness and reciprocity.

DISCUSSION

Results confirm predictions that cues to personal identity such as portrait pictures and first names affect how others are perceived as individuals. These results mirror the finding that individuating information affects impressions people form of strangers through reducing ambiguity (Hancock & Dunham, 2001; Tanis & Postmes, 2003; Walther, Slovacek, & Tidwell, 2001). Our assumptions are consistent with notions that the presence of cues to personal identity affects the interpersonal relationships of people and leads to feelings of 'intimacy' and 'immediacy' (cf. Kiesler, Siegel, & McGuire, 1984; Rutter, 1987; Spears & Lea, 1992; Sproull & Kiesler, 1991). Indeed, results show that people are perceived as more trustworthy in the presence of cues to personal identity. This is in line with the general belief that 'trust needs touch' (Handy, 1995), suggesting that in order to achieve perceived trustworthiness, personal contact (even if this is not physical, but virtual in the form of pictorial or textual information) is beneficial, if not necessary. It should be emphasized that the portrait pictures that were used in this study did not portray particularly distinctive targets, which makes unlikely any alternative explanation in terms of attractiveness.

However, results also showed that perceived trustworthiness is not the only factor which leads to the behavioural trust. Group membership was an independent and strong predictor of trusting behaviour. In particular, whether or not cues to personal identity (and the *perceived trustworthiness* accompanying it) mattered for the behavioural trust was largely determined by the target's social identity—for ingroup members such cues to personal identity made no difference. We believe this is because the shared social identity compensates for any loss of individuating information (and the perceived trustworthiness associated with it). When, a decreased possibility to distinguish between the individual and the group, group members' 'individuality' is de-emphasized, perceptions are more likely to be based on group membership and social identity (Postmes, Spears, & Lea, 1998; Reicher et al., 1995). For members of the ingroup this means that the emphasis lies on the *shared* social identity, while for outgroup members such a shared identity is obviously not available. When these individuating cues are not available, social identity has a strong influence in guiding co-action and, in this case, trusting behaviour.

As was shown by the mediation analyses, trusting behaviour was largely determined by expected reciprocity. So, participants were most willing to transfer their money when they expected that their counterpart would reward them. Reciprocity was not expected from an anonymous outgroup member and, as a consequence, less trusting behaviour was demonstrated under those conditions. However, when cues to personal identity were present, participants expected more reciprocity *even from an outgroup member*, and proved to be more willing to transfer their money as a result.

The outcome was entirely different for ingroupers: here cues to identity had no influence on trusting behaviour. This is despite the fact that, according to SIDE, trustful behaviour towards ingroup members is under influence of the same process, in which cues to personal identity individuate one's counterpart, automatically drawing away the attention from the social identity of that person. However, when an ingroup member is not individuated by the presence of such cues, and hence remains anonymous, there still is the same level of expected reciprocity and concomitant trusting

behaviour, for the simple reason that a shared group membership provides a sufficient basis for the expectation of benevolence of the other.

It could be argued that the opposite effect could also have occurred: cues to personal identity drawing away attention from the shared social identity, consequently decreasing reciprocity expectations, and thereby decreasing trusting behaviour. Indeed, this would be to some extent what research on SIDE has shown regularly: That social influence within the group is *reduced* when attention is drawn to personal characteristics (e.g. Lea et al., 2001; Postmes et al., 2001). Due to the presence of cues to personal identity, interpersonal differences become salient. This de-emphasizes the unity of the group, diminishing the influences exerted by shared social identity (Spears & Lea, 1992). The reason for this reverse pattern not occurring in the present experiment, we believe, is that the dependent variable of *trusting behaviour* is one that is influenced both by interpersonal perceptions of attraction, liking (and particularly trustworthiness), as well as by common ingroup membership. Traditional SIDE research has been concerned with social norms that are specific to social groups, and which are to some degree independent of intra-group relations. In the present case, however, an increased emphasis on interpersonal relationships would not be inconsistent with reciprocity if the ingroup reciprocity norm is, itself, proscribing a particular interpersonal relational style within the group.

The effects of group membership on trust are most clearly illustrated in the comparison between the two no-cues conditions, where more trusting behaviour was displayed towards ingroupers than outgroupers, but importantly where there were *no differences in perceived trustworthiness*. It seems that this difference in trusting behaviour and expected reciprocity across groups is related to norms of reciprocity being stronger in intra-group interactions, and weaker or absent across group boundaries. In addition to these positive expectations of ingroup members in general, interpersonal perceptions of trustworthiness are very strongly related to the behavioural outcomes of trust. Moreover, cues to personal identity fostered perceived trustworthiness of *ingroupers as well as outgroupers*.

In sum, our findings suggest that in interactions with members of the ingroup, two different processes are taking place which can be held responsible for trusting behaviour. On the one hand, expectations of reciprocity are greater for ingroup members than for outgroup members when social identity is salient. When cues to personal identity are present, participants view both ingroup and outgroup members as interpersonally trustworthy, and therefore expect greater reciprocity regardless of their partner's group membership. In other words, trust between persons is not a unitary construct, but can be beneficially distinguished between perceptions of trustworthiness and trusting behaviour. Trusting behaviour is predicted first and foremost by expected reciprocity. Reciprocity, in turn, is differentially predicted by factors at individual and group levels, by perceptions of trustworthiness and by group membership.

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REFERENCES

- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173–1182.

- Berg, J., Dickhaut, J., & McCabe, K. (1995). Trust, reciprocity, and social history. *Games and Economic Behavior*, 10, 122–142.
- Brewer, M. B. (1981). Ethnocentrism and its role in interpersonal trust. In M. B. Brewer, & B. E. Collins (Eds.), *Scientific inquiry and the social sciences* (pp. 214–231). San Francisco: Jossey-Bass.
- Cook, K. S. (Ed.). (2001). *Trust in society*. New York: Russell Sage foundation.
- Culnan, M. J., & Markus, M. L. (1987). Information technologies. In F. M. Jablin, L. L. Putnam, K. H. Roberts, & L. W. Proter (Eds.), *Handbook of organizational communication: An interdisciplinary perspective* (pp. 420–443). Newbury Park, CA: Sage.
- Doosje, B., Ellemers, N., & Spears, R. (1995). Perceived intragroup variability as a function of group status and identification. *Journal of Experimental Social Psychology*, 31, 410–436.
- Granovetter, M. S. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91(3), 481–510.
- Hancock, J. T., & Dunham, P. J. (2001). Impression formation in computer mediated communication revisited: An analysis of the breadth and intensity of impressions. *Communication Research*, 28(3), 325–347.
- Handy, C. (1995). Trust and the virtual organization. *Harvard Business Review*, 73(3), 40–50.
- Hosmer, L. T. (1995). Trust: The connecting link between organizational theory and philosophical ethics. *The Academy of Management Review*, 20(2), 379–403.
- Kiesler, S., Siegel, J., & McGuire, T. W. (1984). Social psychological aspects of computer-mediated communication. *American Psychologist*, 39, 1123–1134.
- Kramer, R. M., & Wei, J. (1999). Social uncertainty and the problem of trust in social groups: The social self in doubt. In T. R. Tyler, R. M. Kramer, & O. P. John (Eds.), *The psychology of the social self* (pp. 145–168). Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Lea, M., Spears, R., & de Groot, D. (2001). Knowing me, knowing you: Anonymity effects on social identity processes within groups. *Personality and Social Psychology Bulletin*, 27(5), 526–537.
- Lewicki, R. J., & Bunker, B. B. (1995). Trust in relationships: A model of trust development and decline. In B. Bunker, & J. Rubins (Eds.), *Conflict, cooperation and justice* (pp. 133–173). San Francisco: Jossey-Bass.
- Lewicki, R. J., & Bunker, B. B. (1996). Developing and maintaining trust in work relationships. In R. M. Kramer, & T. R. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research* (pp. 114–139). Thousand Oaks, CA: Sage Publications, Inc.
- Mellinger, G. D. (1956). Interpersonal trust as a factor in communication. *Journal of Abnormal and Social Psychology*, 52, 304–309.
- Messick, D. M., & Kramer, R. M. (2001). Trust as a form of shallow morality. In K. S. Cook (Ed.), *Trust in society* (pp. 89–117). New York: Russell Sage Foundation.
- Postmes, T., Spears, R., & Lea, M. (1998). Breaching or building social boundaries? SIDE-effect of computer-mediated communication. *Communication Research*, 25(6), 689–715.
- Postmes, T., Spears, R., Lee, T., & Novak, R. J. (in press). Individuality and social influence in groups: Inductive and deductive routes to group identity. *Journal of Personality and Social Psychology*.
- Postmes, T., Spears, R., Sakhel, K., & de Groot, D. (2001). Social influence in computer-mediated communication: The effects of anonymity on group behavior. *Personality and Social Psychology Bulletin*, 27, 1243–1254.
- Reicher, S. (1996). 'The Battle of Westminster': Developing the social identity model of crowd behaviour in order to explain the initiation and development of collective conflict. *European Journal of Social Psychology*, 26(1), 115–134.
- Reicher, S., Spears, R., & Postmes, T. (1995). A social identity model of deindividuation phenomena. In W. Stroebe, & M. Hewstone (Eds.), *European Review of Social Psychology* (Vol. 6). Chichester, England: Wiley.
- Rosenthal, R., Rosnow, R. L., & Rubin, D. B. (2000). *Contrasts and effect sizes in behavioral research: A correlational approach*. New York: Cambridge University Press.
- Rotter, J. B. (1967). A new scale for the measurement of interpersonal trust. *Journal of Personality*, 35, 615–665.
- Rutter, D. R. (1987). *Communicating by telephone*. Oxford: Pergamon.
- Sassenberg, K., & Postmes, T. (2002). Cognitive and strategic processes in small groups: Effects of anonymity of the self and anonymity of the group on social influence. *British Journal of Social Psychology*, 41, 463–480.
- Short, J. A., Williams, E., & Christie, B. (1976). *The social psychology of telecommunications*. New York: John Wiley & Sons.
- Spears, R., & Lea, M. (1992). Social influence and the influence of the 'social' in computer-mediated communication. In M. Lea (Ed.), *Contexts of computer-mediated communication* (pp. 30–65). Hemel Hempstead: Harvester Wheatsheaf.

- Sproull, L., & Kiesler, S. (1991). *Connections: New ways of working in the networked organization*. Cambridge, MA: The MIT Press.
- Tabachnick, B. G., & Fidell, L. S. (1996). *Using multivariate statistics* (3 ed.). New York: HarperCollins.
- Tanis, M., & Postmes, T. (2003). Social cues and impression formation in CMC. *Journal of Communication*, 53(4), 676–693.
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Oxford: Basil Blackwell.
- Walther, J. B., Slovacek, C. L., & Tidwell, L. C. (2001). Is a picture worth a thousand words? Photographic images in long-term and short-term computer-mediated communication. *Communication Research*, 28(1), 105–134.
- Yamagishi, T., & Kiyonari, T. (2000). The group as the container of generalized reciprocity. *Social Psychology Quarterly*, 63(2), 116–132.