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Egocentric Foundations of Trust

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Abstract

Trusting the trustworthy brings benefits whereas trusting the untrustworthy brings harm. Discriminating between the two is key to every social encounter. We propose that humans turn to internal information, namely the self, when judging the trustworthiness of others. Simulating how oneself would behave in situations that involve trust helps to predict how a counterpart may behave. Importantly, using the same self as a basis for judgments about others may result in diverging outcomes, depending on how the information is processed. If a judge focuses on similarities between the self and the target person, the judge expects the counterpart to act alike. However, if a judge focuses on differences, the target is expected to behave in ways opposite to the self. In Study 1 natural variations in self-ascribed levels of trustworthiness correlate positively with expectations of a target person's trustworthiness. Inducing a similarity-focus increases this correlation as compared to a difference-focus. Interestingly, this effect holds even if information speaks to the target's trustworthiness. In manipulating the perception of the participants' own trustworthiness as well as the processing focus, Studies 2-4 demonstrate that when individuals focus on similarities, those who perceive themselves as highly (vs. less) trustworthy perceive others as similarly highly (less) trustworthy. However, when they focus on differences, the reverse pattern tends to occur. These effects hold for trust judgments (Study 2-3) and trust behavior in an economic game (Study 4). Together, these findings demonstrate that trust involves egocentric inferences that are flexible enough to adjust for basic social relations.

Keywords: trust, egocentrism, similarity, economic decisions, judgment

Egocentric Foundations of Trust

Trust bears benefits and trust bears risks (Rousseau, Sitkin, Burt, & Camerer, 1998; Schoorman, Mayer, & Davis, 2007). Trusting the trustworthy holds substantial personal, interpersonal, and economic rewards, but trusting the untrustworthy holds serious and sometimes even fatal costs. Identifying which interaction partner is trustworthy and which is not is crucial for our personal (Koranyi & Rothermund, 2012), interpersonal (Simpson, 2007), and economic welfare (Knack & Keefer, 1997). Regarding the pivotal importance of telling apart the trustworthy from the untrustworthy it is little surprising that across different eras and cultures, human societies have developed a broad array of devices that help to separate the chaff from the wheat. In medieval Europe, for example, convicted perpetrators were visibly marked by scars to warn future interaction partners (Du Cane, 1885). In ancient China, evidence for tattoos signaling criminal records can be backdated to 1100 BC (Reed, 2000), and even within the 18th century US counterfeiters were marked through cropping (Staples, 1853). The modern era equivalent of such drastic measures are reputation systems such as those that are often used on online platforms and the like (Bolton, Katok, & Ockenfels, 2004).

While such societal and institutional devices help to predict whether a counterpart will behave in a trustworthy manner, they are not always available. Humans often need to make trust predictions based on minimal, novel, or even contradicting information that they encounter on the spot. To do so, they rely on a rich arsenal of cues, some of which originate from the target person who is or is not to be trusted and some of which originate from the judges themselves. Of the multitude of external cues, the face of the target person seems to be particularly indicative to the judge. Within milliseconds, humans make trust judgments by looking at a counterparts' face (Todorov, Pakrashi, & Oosterhof, 2009). In slightly longer interactions, a counterpart's pupil reactions, (Kret, Fischer, & De Dreu, 2015), smiles

(Krumhuber et al., 2007), or blushing behavior (Dijk, Koenig, Ketelaar, & de Jong, 2011) co-determine the amount of trust that is experienced. In contrast to a large body of research that investigated such external cues to trust, internal cues – that is cues that originate in the perceiver rather than the perceived – have received only scarce attention. Of the identified internal cues, the current level of the hormone oxytocin (Kosfeld, Heinrichs, Zak, Fischbacher, & Fehr, 2005), the content of social stereotypes (Foddy, Platow, & Yamagishi, 2009), or one's unintentional mimicry of a counterpart's pupil size (Kret et al., 2015) influence interpersonal trust. Importantly, all of these cues, external and internal in origin alike, are associated with considerable levels of uncertainty because they may not be available, difficult to interpret, or inconsistent with one another.

Interacting with a person that has a trustworthy face, but a stereotypically untrustworthy group membership, or interacting with a stranger via a website that does not feature information about someone's reputation may leave a judge equally puzzled about the counterpart's trustworthiness. In short, humans often have to make a highly important and potentially consequential judgment about the trustworthiness of a person about whom they have little, unreliable, or contradictory information. In this situation, we suggest, they resort to a person about whom they have a lot of reliable information available, namely the self.

We propose that when judging a counterpart's trustworthiness humans consult information they have about themselves. Based on their self-knowledge, they simulate how they would behave in the upcoming situation and use this information as a basis for their judgment. This hypothesis is in line with research demonstrating that humans tend to be egocentric when judging others (Cho & Knowles, 2013; Dunning & Hayes, 1996; Ross, Greene, & House, 1977). While trust research has increased its interest in internal cues, it has largely ignored the self as one of the most natural sources of such information. Information about the self is abundant, relatively certain, chronically accessible, and automatically

activated whenever another person is judged (Dunning & Hayes, 1996; Kihlstrom & Cantor, 1984; Mussweiler, 2003a), even though it may be biased (John & Robins, 1994; Zell & Krizan, 2014). While in principle also information about persons different from the self can help judges to predict how a target person may behave (Mussweiler, 2003b), typically individuals initially refer to the self when judging others (Dunning & Hayes, 1996). When asked about how they judge other's behavior, people report that they use their own behavior as a basis (Dunning & Hayes, 1996). Moreover, upon judging others, individuals can access information about themselves faster, suggesting that it had been activated while judging others (Dunning & Hayes, 1996).

Importantly, the self can serve as a base for judgments about others in two different ways that yield distinct outcomes. How egocentric thinking influences judgments about others critically depends on whether information processing highlights self-other similarities or differences. If a counterpart is perceived to be similar to the self, the judge selectively attends to evidence that indicates that the target thinks, feels, and acts alike. Consequently, the target is assimilated to the self. However, if a counterpart is perceived to be different from the self, the judge selectively attends to information that indicates that the counterpart is different. Predictions about the target on a critical dimension will be based on evidence stressing differences between the self and the target. Accordingly, the judge predicts the target to behave in ways opposite to oneself (Mussweiler, 2003a). Manifold psychological studies document assimilation and contrast as two dominant outcomes in social judgment (Biernat, 2012; Schwarz & Bless, 1992; Sherif & Hovland, 1961). Remarkably, judging the very same target using the very same self as a reference can thus result in two opposing target judgments, depending on whether self-other similarities or differences are emphasized.

The upshot of this reasoning is that the decision to trust depends on two components, (a) one's own perceived level of trustworthiness and (b) whether one focuses on self-other

similarities or differences. In specific, people who focus on similarities should assimilate others' trustworthiness toward their own level of trustworthiness. This leads to high trust for people who see themselves as trustworthy and to low trust for people who see themselves as untrustworthy. The reverse should occur when people focus on differences.

The first component of our hypothesis holds that people use themselves as an internal source of information when deciding whether to trust or not to trust others. Consequently, the extent to which they trust others depends on the level of trustworthiness they ascribe to themselves. The second component of our hypothesis holds that how these different levels of self-trustworthiness influence the decision to trust others critically depends on whether self-other similarities or differences are highlighted. To examine the influence of the self, in Study 1, we measured how trustworthy participants perceived themselves to be. Then we unobtrusively manipulated a focus on similarities versus differences using a content-free procedural priming task that influences information processing in subsequent tasks (Mussweiler, 2001; Mussweiler & Ockenfels, 2013). We assessed judgments of trustworthiness in information-rich environments in which participants can infer trustworthiness directly from portrait pictures of the target. In Studies 2-3, we experimentally manipulated how trustworthy participants perceive themselves to be before experimentally directing their processing focus on either similarities or differences. We then measured trust judgments in information scarce paradigms (Study 2 and 3) and trust behavior (Study 4) in an incentivized economic trust game (Berg, Dickhaut, & McCabe, 1995). In sum, four studies systematically test for the egocentric nature of trust, by measuring and varying (a) the perceived self-trustworthiness and (b) a focus on self-other similarities versus differences.

Study 1

Study 1 investigates whether egocentric processes influence trust judgments of others in the presence of trustworthiness-indicating target information.

Method

Participants and design. We recruited 379¹ participants (206 female; $M_{age} = 40.10$, $SD = 11.94$) on Amazon's Mechanical Turk (MTurk) in exchange for \$0.50. Participants were randomly assigned to a one-factorial between-subjects design (focus: similarity vs. difference) with a correlational factor. To detect a medium effect of $q = 0.3$ between two independent correlations with a power of .80, apriori power calculations using G*Power (Faul, Erdfelder, Lang, & Buchner, 2007) suggested a total sample size of $N = 356$. The study was preregistered at aspredicted.org with the aim of recruiting 400 participants and a comparison of the correlations between the experimental conditions as planned analysis (<http://aspredicted.org/blind.php?x=py2dz4>). Materials, de-identified data, and analysis scripts of all studies are available online via mendeley.com.

Materials and procedure.

Self-trustworthiness measure. To assess participants' self-ascribed level of trustworthiness, we asked them to imagine nine situations that involve trust-related interactions between themselves and a stranger. For instance, they were asked how likely they would watch a stranger's bag while the stranger was swimming in a lake. The critical trustworthiness question asked how likely they would leave the stranger's bag unattended. Three scenarios were reverse-coded.

Focus manipulation. To induce a processing focus on similarities versus differences, participants worked on a paper-pencil procedural priming task. This task is designed to induce similarity- versus difference-focused information processing (Mussweiler, 2003b). Participants looked at three pairs of pictures, displayed on consecutive screens. For each pair, they listed three similarities or three differences between the individual pictures (Crusius & Mussweiler, 2012).

Trust measure. Participants judged the trustworthiness of others within the same nine situations as in the self-trustworthiness measure. This time, they were asked to imagine being in the role of the trustor and predict the trustworthiness of their counterpart, portrayed on a picture. To increase the ecologic validity, the pictures presented either a trustworthy or untrustworthy person (portraits taken from Schul, Mayo, & Burnstein, 2008, p. 1299), counterbalanced between-subjects. This time, the corresponding trust question asked how likely their counterpart would leave their bag unattended while they were swimming.

Results

We expected that a similarity-focus aligns participants expectations of others trustworthiness more with their own perceived self-trustworthiness than a difference-focus. Therefore, we expected the correlation between the perceived self-trustworthiness and the expected trustworthiness of the stranger to be higher in the similarity-focus condition ($n = 184$) as compared to the difference-focus condition ($n = 195$). We averaged the self-judgments (Cronbach's Alpha = .593) and the other-judgments (Cronbach's Alpha = .802) into two independent trust indices. As predicted, in the similarity-focus condition, the perceived trustworthiness of the participants correlated significantly higher with the expected trustworthiness of the counterpart ($r = .355, p < .001$) than in the difference-focus condition ($r = .149, p = .038$), $z = 2.143, p = .032$.

A stimuli manipulation check revealed that the trustworthy-looking target was judged as more trustworthy ($M = 60.62, SD = 16.28$) than the untrustworthy-looking target ($M = 43.94, SD = 18.54$), $t(367^2) = 9.30, p < .001$. This indicates, that in addition to egocentric information trust-relevant target information was incorporated in the judgments (see Supplementary Materials for further analysis).

Overall, these results demonstrate that the self is used as basis for judgments of others' trustworthiness even in the presence of strong trust-indicating visual information and, hence, egocentric processes seem to be an important contributor to interpersonal trust.

These results demonstrate that the influence of egocentric information depends on whether a focus on similarities or differences is present. Notably, we do not find evidence of contrast under a difference-focus, which could be apparent in a negative correlation. We reason that this might be due to methodological specifics of Study 1. First, participants judged their own level of trustworthiness in the context of the exact same scenarios in which they then judged the trustworthiness of the target. This is likely to foster assimilative tendencies in at least two distinct ways. For one, imagining oneself and the target person in the exact same situation highlights self-other similarities that are likely to work against the induced difference-focus. Furthermore, imagining behavior in these scenarios twice highlights the power of situational constraints which make it more difficult to imagine that someone else may behave in drastically different ways. Both of these mechanisms work against the hypothesized contrastive influence of an induced content-free difference-focus. Third, from a methodological point of view, in this correlational design the counterpart's behavior could potentially be contrasted upwards or downwards from one's own trustworthiness. It is not as clear which direction a contrast would go. Fourth, for a negative correlation to occur, individuals who see themselves as highly trustworthy (or untrustworthy) would need to deviate in their judgments of the target stronger from their own anticipated behavior than participants who are rather centered on the self-trustworthiness dimension. Thus, overall, we feel that Study 1 might not have been ideal to identify contrast.

Study 2

To remedy these shortcomings, Study 2 differs in three substantial ways: First, we used two different paradigms for self-trustworthiness and other-trustworthiness. Second, to

make any possible contrast effect methodologically better measurable, we experimentally manipulated participants' own trustworthiness. This should clarify in which direction contrast effects occur and at the same time would not require differences in the deviation between self- and other-judgments dependent on one's own standing on the trustworthiness dimension. Third, to isolate the effect of the self on the judgment of others' trustworthiness, we used an information-scarce paradigm that holds few information about the trustee.

Method

Participants and design. On campus of a German university, 169 (22 female; $M_{age} = 25.01$, $SD = 3.96$) participants participated in exchange for a chocolate bar or coffee voucher. We used a 2 (Own Trustworthiness: high vs. low) x 2 (Focus: self-other similarity vs. difference) between-subjects experimental design. Particularly, (i) we experimentally varied the degree of trustworthiness that people ascribed to themselves with a scale-manipulation (Schwarz, Hippler, Deutsch, & Strack, 1985) and (ii) manipulated whether participants focused on similarities versus differences (Mussweiler, 2003b). Subsequently, we measured how likely (0-100%) participants estimated strangers to act in a trustworthy manner. We randomly assigned participants to the experimental conditions. The sample size of 169 participants allowed to find a medium effect of $f = 0.25$ with a power of .90.

Materials and procedure. Participants worked on a personal computer in separate cubicles in the lab.

Self-trustworthiness manipulation. The first task was a scale manipulation (Schwarz et al., 1985) designed to influence the level of participants' perceived own trustworthiness. We asked participants to think about how often they had interacted with other persons during the last month and put their own interests first – even though the actions may have been to the other individuals' disadvantage. We specified that these situations include behavior such as bringing forward little lies, declining a favor one had previously agreed to do, or reporting

contents of a private conversation to third parties. A pretest ($n = 42$; 26 female; one missing gender information) that we conducted on campus revealed that on average participants reported that they had engaged in such untrustworthy behavior about five times during the last month ($M = 5.18$, $SD = 4.38$). To account for extreme outliers, one answer that exceeded the mean by more than 5 standard deviations was excluded. Building on the results of the pretest, we asked participants in the main study to mark the frequency of this kind of behavior on a scale displayed on the subsequent screen. The scale was the critical trustworthiness manipulation. The scale depicted the (average) number five either on the upper end or on the lower end. In the low-own-trustworthiness condition, participants saw a scale representing the following frequencies of untrustworthy behavior: “0, 1, 2, 3, 4, 5”. Thus, the number five appeared on the upper end of the scale. Participants in the high-own-trustworthiness condition saw a scale portraying the following ranges of numbers: “ ≤ 5 , 6-10, 11-15, 16-20, 21-25, >25 ”. This time, we placed the number five on the lower end of the scale. According to the logic that participants would use the scale as a reference frame to infer their own relative standing on the trust dimension, this scale affects their self-perception (Schwarz et al., 1985). For example, a participant reporting the average of five instances of untrustworthy behavior should infer the following depending on the experimental condition: In the low-own-trustworthiness condition in which five constitutes the high-end reference point of untrustworthy behavior, five instances indicate a high frequency of untrustworthy behavior. In the high-own-trustworthiness condition, however, in which the number five represents the low end of the scale, the exact same number of five indicates a low frequency of untrustworthy behavior. Using the scale to make an inference of one’s own standing should hence lead to a low perception of one’s own trustworthiness in the former case and a high perception of one’s own trustworthiness in the latter case.

Focus manipulation. To induce a focus on similarities versus differences, participants worked on a paper-pencil procedural priming task (Mussweiler, 2001; Mussweiler, 2003b). They compared two black-and-white drawings and listed similarities or differences between them (Corcoran, Hundhammer, & Mussweiler, 2009).

Trust measure. Participants then judged the trustworthiness of others. They judged how trustworthy an interaction partner would behave in the scenarios of Study 1. This time, they did not receive visual information about their counterpart.

Mood. Then, we asked participants about their current mood (1 = *not at all good*; 9 = *very good*).

Results

We hypothesized that participants who previously engaged in similarity-focused processing assimilate the trustworthiness of others toward their own perceived level of trustworthiness. Hence, we expected them to judge others as more trustworthy if they perceived themselves to be highly trustworthy. However, we expected participants with a difference-focus to contrast others' trustworthiness away from their own perceived level of trustworthiness. Thus, we anticipated them to trust others less when they perceived themselves to be highly trustworthy. Again, we averaged the trust judgments across the scenarios into one trust-index (Cronbach's Alpha = .67). We submitted this index to a 2 (Own Trustworthiness: high vs. low) x 2 (Focus: similarity vs. difference) between-subjects ANOVA. The means (Table 1) revealed that the focus manipulation differentially affected trust judgments for participants with a high versus low perceived own level of trustworthiness. This resulted in a significant interaction effect, $F(1, 165) = 8.54, p = .004, \eta^2_p = .049$. Specifically, a similarity-focus led participants to trust more in the high-own-trustworthiness condition compared to the low-own-trustworthiness condition, $F(1, 165) = 5.99, p = .015, d = 0.52$. The reverse pattern emerged under a difference-focus. In that case,

high levels of perceived own trustworthiness tended to lead to lower trust ratings of strangers compared to low levels of perceived own trustworthiness, $F(1, 165) = 2.83, p = .094, d = 0.39$. Neither the main effect for focus, $F(1, 165) = 2.56, p = .112$, nor the main effect for own trustworthiness, $F(1, 165) = 0.30, p = .583$, reached significance.

Table 1
Means (and Standard Deviations) of Trust Ratings as a Function of Own Trustworthiness and Processing in Study 2

Own Trustworthiness	Focus			
	Similarity		Difference	
	<i>n</i>	<i>M (SD)</i>	<i>n</i>	<i>M (SD)</i>
High	44	61.27 (11.38)	41	52.21 (12.61)
Low	40	54.31 (15.72)	44	56.96 (12.19)

To investigate the influence of the manipulations on participants' mood, we entered mood as a dependent variable into the same 2 (Own Trustworthiness: high vs. low) x 2 (Focus: similarity vs. difference) between-subjects ANOVA. Neither a main effect of own trustworthiness ($M_{low} = 5.94, SD = 1.63; M_{high} = 6.01, SD = 1.54$), $F(1, 165) = 0.10, p = .748$, nor a main effect of focus ($M_{sim} = 5.88, SD = 1.75; M_{diff} = 6.07, SD = 1.40$), $F(1, 165) = 0.62, p = 0.433$, or interaction was found, $F(1, 165) = 0.08, p = .783$.

Study 3

Study 3 uses an US online sample to replicate Study 2 with an increased sample size.

Method

Participants and design. We recruited 488 participants (234 female; $M_{age} = 34.75, SD = 11.55$) via MTurk in exchange for \$0.75. Accounting for a possibly smaller effect

within an online sample, this sample size allowed us to find a small effect of $\eta^2 = .02$ with a power of .88. Participants were randomly assigned to the experimental conditions using the same design as in Study 2.

Materials and procedure.

Self-trustworthiness manipulation. The first task was an English version of the scale-manipulation used in Study 2. An independent pretest ($n = 44$; 15 female; $M_{age} = 30.93$, $SD = 9.70$) demonstrated that on MTurk participants reported about comparable amounts of untrustworthy acts during the last month as in the German lab sample ($M = 4.68$, $SD = 5.23$). This suggests that the critical value of five is also suitable as an end-point for the scale manipulation with a US MTurk sample.

Focus manipulation. To alter their processing focus, participants worked on the same task as in Study 1.

Trust measure. To measure trust, we used the same set of scenarios as in Study 2.

Results

We expected participants with a similarity-focus to assimilate others' trustworthiness toward their own perceived trustworthiness. Hence, we expected that participants in the high-own-trustworthiness condition would judge others to be more trustworthy than participants in the low-own-trustworthiness condition. For the difference-focus condition, we expected the opposite pattern of results. We calculated the average trust score as in the previous studies (Cronbach's Alpha = .63) and submitted this index to a 2 (Own Trustworthiness: high vs. low) x 2 (Focus: similarity vs. difference) between-subjects ANOVA. Indeed, the observed pattern of means (Table 2) resulted in the hypothesized interaction effect, $F(1, 484) = 10.24$, $p = .001$, $\eta^2 = .021$.

Table 2
Means (and Standard Deviations) of Trust Ratings as a Function of Own Trustworthiness and Processing Focus in Study 3

Own Trustworthiness	Focus			
	Similarity		Difference	
	<i>n</i>	<i>M (SD)</i>	<i>n</i>	<i>M (SD)</i>
High	110	52.82 (12.77)	128	49.33 (13.74)
Low	130	48.45 (14.23)	120	52.73 (12.60)

Similarity-focused participants trusted more in the high-own-trustworthiness condition than they did in the low-own-trustworthiness condition, $F(1, 484) = 6.36, p = .012, d = 0.32$. The opposite pattern emerged under a difference-focus. Participants tended to trust more in the low-own-trustworthiness condition than in the high-own-trustworthiness condition, $F(1, 484) = 3.99, p = .046, d = 0.26$. None of the main effects reached significance, all F 's $< 0.17, p$'s $> .689$.

Study 4

Study 4 tests whether this effect holds for trust behavior in an incentivized one-shot two-person trust game (Berg et al., 1995).

Method

Participants and design. We recruited 370 participants (156 female, $M_{age} = 32.46, SD = 11.83$) via MTurk. We randomly assigned them to the role of the trustor ($n = 184$) or the trustee in an incentivized two-person trust game. We determined a total sample size of at least 155 participants in the role of the trustee, based on power analysis of an estimated effect size of .049 (as obtained in Study 2) and a desired power of .80 with an alpha level of .05.

Participants received a compensation of \$0.25 plus a bonus (\$0-1.80) dependent on the

outcome of the incentivized trust game. Participants were randomly assigned to the conditions.

Materials and procedure.

Self-trustworthiness manipulation. We used the same scale-manipulation as in Study 3.

Focus manipulation. Participants worked on the same procedural priming task as in Study 3 to influence their processing focus.

Trust measure. Participants engaged in the strategy version of an incentivized two-person one-shot trust game (Berg et al., 1995). All instructions of the game were visible to all players. Each of our critical participants was in the role of the trustor and upon completion of the study randomly matched with another MTurker who had participated in the role of the trustee. Each trustor received an initial endowment of \$0.60, of which they could send any amount in increments of \$0.10 to the trustee. Each amount sent was tripled. The trustee could return any portion of the amount received back to the trustor. The amount returned did not change in value. To match trustors and trustees randomly upon completion of the study, all trustees specified their return for each potential amount received.

Results

We expected participants who had engaged in similarity-focused processing to trust more if they perceived themselves to be highly trustworthy and less if they perceived themselves to be low in trustworthiness. For participants who had engaged in difference-focused processing, we expected the reverse pattern. To test this hypothesis, we submitted the amount sent (in US dollar) by the trustor to a 2 (Own Trustworthiness: high vs. low) x 2 (Focus: similarity vs. difference) between-subjects ANOVA. As Table 3 reveals, this was indeed the case. The pattern of results yielded a significant interaction effect, $F(1, 180) = 9.35, p = .003, \eta^2_p = .049$. Participants with a similarity-focus trusted more in the high-own-

trustworthiness condition than in the low-own-trustworthiness condition $F(1, 180) = 5.03$, $p = .026$, $d = 0.48$. However, participants with a difference-focus trusted less in the high-own-trustworthiness condition than in the low-own-trustworthiness condition, $F(1, 180) = 4.33$, $p = .039$, $d = 0.43$. None of the main effects reached significance, all F 's < 0.14 , all p 's $\geq .718$.

Table 3
Mean Sending Behavior (and Standard Deviations) and Conditional Median Return in the Trust Game (in ¢) as a Function of Focus and Own Trustworthiness in Study 4.

Own Trustworthiness	Focus					
	Similarity			Difference		
	Amount Sent	Return		Amount Sent	Return	
	<i>n</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>n</i>	<i>M (SD)</i>	<i>M (SD)</i>
High	44	37.73 (20.10)	46.36 (28.83)	50	27.60 (20.46)	32.45 (27.87)
Low	47	28.30 (19.26)	32.55 (25.97)	43	36.28 (20.36)	44.01 (29.24)

Analyzing the return rates revealed that trusting did not come at the cost of the trustors (see Table 3). Across all conditions, the typical return rate (for further analysis see Supplementary Materials; Figure S1 and Figure S2), represented by the conditional median return³ ($M = 38.51$, $SD = 28.46$), significantly exceeded the trustor's initial sending amount ($M = 32.23$, $SD = 20.40$), $t(183) = 9.73$, $p < .001$. This is also true for each of the individual experimental conditions (all t s ≥ 3.82 , p s $< .001$).

Notably, not only in Study 1, but also across the three experimental Studies 2-4, the similarity-focus evoked a stronger effect than the difference-focus. In the context of Study 2, this even results in a non-significant effect in the difference-focus condition. In light of this divergence, we further explored the robustness of the contrast effects obtained in Studies 2

through 4. To test for the overall reliability of the effect, we conducted a meta-analysis (cf. Rosenthal, 1991) across Studies 2 to 4 using the Stouffer method (weighted for dfs). The results reveal that the difference-focus provoked contrast effect seems to be reliable ($z = 2.97$, $p = .003$). However, in light of the partial divergence in the results of the experimental Studies 2-4 and Study 1, it seems most prudent to conclude a difference-focus at least works against egocentric assimilation effects and might – under some conditions – result in contrast effects.

Discussion

Four studies demonstrate how people's self-perception of trustworthiness in conjunction with their focus on self-other similarities versus differences shape trust judgments of and trust behavior towards others. Particularly, when individuals focused on self-other similarities, those who perceived themselves as highly trustworthy also trusted more. However, when they perceived themselves as less trustworthy, they also trusted less. In the correlational design of Study 1, a difference-focus reduced assimilation. In the experimental Studies 2-4 contrast effects tended to occur when participants focused on self-other differences. Study 1 highlights the importance of the self as a source of trust formation by showing that the self informs trust judgments even when strong cues about another person's trustworthiness are present.

In general, powerful social and cognitive pressures make a similarity-focus the default in social information processing (Mussweiler, 2003b). This is the case because humans seek company of similar others (McPherson, Smith-Lovin, & Cook, 2001), similarities often constitute the starting-point of comparison (Gentner & Markman, 1994), are processed more efficiently (Corcoran et al., 2009), and reduce uncertainty (Posten & Mussweiler, 2017). Trust has been shown to foster default information processing (Schul et al., 2008), including similarity-focused processing. Distrust fosters difference-oriented processing (Posten &

Mussweiler, 2013). This gives rise to an interesting possibility. The present findings show that a similarity- as well as a difference-focus can result in higher or lower trust. Once content information about one's own trustworthiness as a standard of comparison has been activated, consequentially a trust or distrust mindset might also be elicited, involving a focus on similarities or differences. In principle, this focus can be congruent or incongruent to the initial mindset-eliciting similarity-or difference-focus and augment or attenuate it, depending on its compatibility. For instance, if people activate trustworthy content information about themselves and engage in similarity-focused processing, a trust mindset might arise and augment the similarity-focus leading to even higher trust. Shedding light on this potentially complex interplay of different processing foci is an interesting avenue for future research.

In the present research, the effect of egocentrism on trust behavior was apparent in an incentivized trust game as well as in trust judgments within information scarce and information richer judgmental situations. The many existing versions of the trust game foreshadow how complex the measurement of trust is (for a meta-analysis see Johnson & Mislin, 2011). However, by triangulating the different measures used in the present set of studies and by finding converging results, we feel confident that the studies captured central aspects of trust and generalize to further trust-involving situations.

Trust is inherently related to the self. Trusting someone means by definition to expect the other person to take one's own personal interests into account and to make oneself vulnerable to the other person (Rousseau et al., 1998; Schoorman et al., 2007). This is fundamentally different from other evaluative dimensions. Considering a person as fast, nice, or adventurous does not necessarily imply the self. Therefore, investigating how self-information influences the evaluation of the counterpart seems to be especially meaningful in the case of trust. At the same time, recognizing egocentrism as one instance of a more general tendency to engage in comparison processes suggests that standards other than the self (e.g.,

other people, numeric standards) may also influence judgments about a target's trustworthiness. Whether this is indeed the case, and if so, to which extent, will need to be clarified by future research.

The present set of studies provides evidence for the self as a powerful internal cue that provides humans with accessible information to judge a counterpart's trustworthiness. Evaluating the trustworthiness of another person thus appears as an egocentric process. If people see themselves as trustworthy and focus on ways in which others are similar to them – by default – this egocentric process fosters trust in others. At the same time, the egocentric processes that underlie trust judgments allow for the flexibility that is required to reap the benefits of trust and protect oneself from its potential downfalls. Specifically, interactions in which people often experience trusting as a risky strategy – such as those with distant others – typically activate a focus on self-other difference that in turn lowers trust. The egocentric foundations of trust thus provide people as social information processors with the flexibility they need to successfully navigate their complex and often unpredictable social worlds.

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Author contributions

All authors contributed to the study concepts and design. Testing and data collection were performed by A.-C. Posten. A.-C. Posten drafted the manuscript, and T. Mussweiler provided critical revisions. All authors approved the final version of the manuscript for submission.

Disclosure statement

We confirm that for each study reported in the manuscript, the total number of excluded observations and the reasons for making these exclusions have been reported in the Method sections. We confirm that all independent variables or manipulations, whether successful or failed, have been reported in the Method sections. We confirm that all dependent variables or measures that were analyzed for this article's target research question have been reported in the Methods sections. In Study 2, we analyzed the data after half of the data had been collected ($n = 81$). We found a significant interaction effect, as we predicted, but not all predicted contrasts were significant. We collected the second half of the participants afterwards.

Open practice and data statement

Study 1 was the only formally preregistered study. Materials and de-identified data of all studies along with the data analysis scripts are available on mendeley.com.

Ethical considerations

The conducted studies fully complied with the ethical guideline of the Association of German Professional Psychologists and the German Psychological Association (BDP & DGPs).

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¹All study descriptions include all data gathered. Analyzing criteria were set to adult native speakers (i.e. English in Study 1, 3, and 4 and German in Study 2) that did not know the study materials, finished the study in the required order, did not consume alcohol, or were not distracted (Meade & Craig, 2012). In the online studies 1, 3, and 4 to be eligible for participation, participants were required to be located in the US, and have an approval rating in previous MTurk tasks of $\geq 95\%$. Participants who reported being medium or highly distracted (value ≥ 4 on a 9-point scale) were excluded. This led to the exclusion of 24 participants in Study 1, 8 participants in the pretest of Study 2, 50 participants in Study 2, 70 participants in Study 3, 29 participants in in the role of the trustor and 80 participants in the role of the trustee in Study 4.

²Degrees of freedom were adjusted for unequal variances, $F(1, 377) = 4.97, p = .026$.

³Analyzing the mean return rates revealed the same significant results across all treatments, $t(183) = 8.37, p < .001$, and for each individual treatment, (all $t_s \geq 3.26, p_s < .002$).