THE UNIVERSITY OF CHICAGO

Trust in Uncertainty: The Link between Expectations of Trustworthiness and Information Sharing in Negotiation

By

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Abstract

Trust plays an important role in social interaction. While previous studies show the positive correlation between perceived trustworthiness, trust, and trusting behaviors, numerous theories and empirical studies provide strong evidence against the bond between perceived trustworthiness and trust, as well as the bond between trust and trusting behaviors. Moreover, less attention has been put in investigating the situations where people lack definitive information on others' trustworthiness, especially in the context of negotiation. To unravel the insistency in the relationship between perceived trustworthiness, trust, and trusting behaviors, as well as to elucidate trust in uncertainty, we experimentally manipulated participants' perception on the other negotiation party, and examined the following trust and trusting behaviors. The results suggest that people are not willing to mentally trust the other untrustworthy negotiation party, but nevertheless display the same trusting behaviors as they are negotiating with trustworthy people. Besides, in situations of uncertainty, the extent to which people perceive others as trustworthy and trust others falls between the circumstances where others are certainly trustworthy and certainly untrustworthy. However, no difference is detected in their trusting behaviors. Together, our work provides evidence against the bond between trust and trusting behaviors specifically in a negotiation context, and sheds light on the role of uncertainty in trust.

1. Introduction

Interpersonal trust plays a central role in social behavior. It has long been identified as a social construct of far-reaching significance (Corazzini, 1977; Weinmann & Kujala, 2004), and the ability to trust others is necessary to build interpersonal relationship and support successful social functioning (Erikson, 1950). Though definition of trust varies as researchers investigate it from different perspectives, two critical elements, vulnerability (or risk) and expectation (Evans & Krueger, 2009), remain consistent across different definitions. A widely accepted definition of trust is "a psychological state comprising the intention to accept vulnerability based upon the positive expectations of the intentions or behaviors" (Rousseau, Sitkin, Burt, & Camerer, 1998). Such a psychological state was further specified as a willingness (Werbel & Henriques, 2009), which is largely influenced by its antecedent perceived trustworthiness, and is manifested in its following trusting behaviors.

The trustworthiness of the trustees is the attributes that inspire trust (Heyns & Rothmann, 2015). It is expected to be a strong predictor of trust (Nooteboom, Berger & Noorderhaven, 1997), given that the interpersonal trust does not exist without a positive evaluation of trustworthiness, and the alignment between trustworthiness and trust is the key factor that determines the effectiveness of trust as a social functioning principle (McEvily, Perrone & Zaheer, 2003). Similarly, trust is very closely related to trusting behaviors (Thielmann & Hilbig, 2017), and some studies treat trust as a proxy for trusting behaviors (Gillespie, 2003; McEvily & Tortoriello, 2011; Caldwell & Dixon, 2009), though they are two separate concepts and should be differentiated in trust studies.

However, there are also theories and empirical studies that provide strong evidence against the bond between perceived trustworthiness and trust, as well as the bond between trust

and trusting behaviors. While perceived trustworthiness largely depends on the actual attributes of the trustees and is thus relatively objective, the neoclassical economic theory suggests that individuals are purely self-interested (Von Neumann & Morgenstern, 1944) and maximizing personal own payoffs (especially monetary payoffs) is the only goal. As a result, trust and trusting behaviors are generally regarded as irrational regardless of perceived trustworthiness of others, because of the existence of uncertainty in the nature of trust which makes trust likely to work against individuals' own interests. Even though one may perceive others as trustworthy, it is not necessarily the case that the person will engage in trusting behaviors towards others (Gillespie, 2003). While self-interest does matter, it is not the only influential factors to human trust and trusting behaviors in most cases (Krueger, Massey, & DiDonato, 2008). Unlike the previous situation, even though one may perceive others as untrustworthy, one may still display trusting behaviors in the interactions with the untrustworthy others (Fetchenhauer & Dunning, 2019). Norm-based theories of trust and reciprocity serve as an alternative explanation, according to which the role of context is crucial and trust and trusting behaviors occur because social norms motivate them to do so (Krueger et al., 2008), for example, being altruistic, public reputation (Barclay, 2004), and moral principles (Dunning et al., 2013; 2014).

While the two theories above predict trust and trusting behavior to the opposite direction, there are not necessarily conflicts between them. The rational choice theory assumes individual aims being maximize utility without necessary limitation on monetary rewards (Becker, 1976), with other preferences including social norms as well as emotions (e.g., avoiding being guilty). People trust and display trusting behaviors so long as the overall utility overweighs not doing so, which largely depends on the decision context as well as individual's perception of the context.

In this study, we are interested in how people trust specifically in the context of negotiation, which is the communication between parties with divergent interests in an effort to reach an agreement on a certain topic. On one hand, monetary interests are the common topic, and people become more self-confused and less likely to help others when they are mentally thinking about money (Vohs, Mead & Goode, 2006). The competence in the nature of negotiation seems to lead people to a less trusting state. On the other hand, however, this happens when the interests of two parties are clearly negatively correlated, with an increase in one party's interest resulting in a corresponding decrease in the others'. In negotiations where integrative outcomes could be achieved, such that a win-win situation would be possible, trusting behavior has a higher utility in outcome because of the highly possible reciprocity, and focusing only on self-interests becomes not only less rational, but also more socially inappropriate.

Thus, when two parties trust each other in a negotiation, information exchange behaviors are increased (De Dreu et al., 1998; Butler, 1999; Pruitt, 2013), because parties who trust each other are less concerned that their counterpart may exploit the information they provided (De Dreu et al., 1998; Pruitt and Kimmel, 1977; Rubin and Brown, 1975), which in turn facilitates mutually favorable agreements identification (Tompson & Hastie, 1990; Sinaceur, 2010). As a result, trust facilitates value creation (e.g., joint outcomes) (De Dreu et al., 1998; De Dreu et al., 2006), resulting in considerable benefits in negotiation. However, in negotiations where one finds it difficult to trust others, we argue trusting behaviors will nevertheless be displayed given that distrusting explicitly violates general social norms while personal willingness to trust remains implicit to others.

While the majority of existing studies examine how reports of trust after the fact influence negotiation processes such as information sharing, we examine the question above by

experimentally manipulating expectations of trust prior to the negotiation. By testing situations where a party knows their counterpart is trustworthy or not trustworthy, we hope to provide evidence that there is not necessarily a strong causal relationship between expectation of trust and the negotiation process.

The aim of this study is to offer a valid lens to have an insight into the role of trust in a real-world negotiation context with high ecological validity. Thus, to reflect the range of prior knowledge of trustworthiness individuals have when entering a negotiation in the real world, we also investigate the situations in which parties lack definitive information on their counterpart's trustworthiness altogether. On the behavioral level, we predict that individuals will be more likely to share key and private information in the trust than distrust conditions. However, it remains unclear how participants will respond under uncertainty. Therefore, we will explore whether participants will assume trust (Trust = Uncertain; Trust | Uncertain > Distrust), assume distrust (Distrust = Uncertain; Trust > Uncertain | Distrust), or will behaviorally respond with information sharing that falls between trusting and distrust (Trust > Uncertain > Distrust). On the psychological state level, belief is based on probabilities (Nooteboom, Berger & Noorderhaven, 1997) and the trustor's trust is expected to be strongly predicted from trustee's trustworthiness (Heyns & Rothmann, 2015). As a result, we predict that perceived trustworthiness in uncertain situations should fall between the trust and distrust situations as they represent the certain upper and lower level of trust. Thus, how people trust in this condition would also fall within the range.

However, little evidence is presented to support which side the uncertain condition would incline to. There is a large degree of freedom in uncertainty, where individual differences are more likely to come into play. Propensity differs in different people, which is thought to drive trusting belief especially when little information is available for one to generate reliable

perception of the trustee (Gill, Boies, Finegan & McNally, 2005; Colquitt, Lepine & Wesson, 2009). It can shape trusting behaviors even after trusting information becomes available (Searle et al., 2011), exerting a top-down influence on biasing perception of the trustee's trustworthiness. Social projection serves as an important source of propensity, which are a set of processes that people expect others to be similar to themselves (Robbins & Krueger, 2005). It offers a readily available and often correct prediction about the social world (Krueger, 1998, 2000) and has been believed to be a major determinant of general expectations and in trust particularly (Krueger, Massey, & DiDonato, 2008). Thielmann and Hilbig (2014) found the positive association between Honesty-Humility trait in the HEXACO model of personality structure and trustworthiness expectation with cooperativeness mediating the relationship. We hypothesize that Honesty-Humility trait is positively correlated with general perceived trustworthiness, with this effect being stronger in the uncertain condition.

2. Methods

2.1 Participants

Participants were recruited from Prolific who fulfilled the criteria for inclusion (i.e., completion of all tasks, no repeated participation, and marked that they were fluent in English). The final sample included in this study was 180 participants (53.9% female, mean age = 36.06. s.d. = 12.25), with 61 participants randomly assigned to the Certain Trust condition, 61 participants in the Certain Distrust condition, and 58 participants in the Uncertain Trust condition.

2.2 Materials

All participants were assigned to the Dr. Huguet role from the Miracle Plant exercise (see Appendix I). However, each trust group saw a modified version of the exercise depending on

their condition. Specifically, included in the role information there was a set of key sentences that introduced the trustworthiness of the other negotiating party (Dr. Turner):

For the trust group, “However, other than knowing he is the Head Scientist of the Anti-Virus Research Lab, you have heard a bit about Dr. Turner from your colleagues. They have told you that Dr. Turner is a very kind and caring person and is almost always willing to help others in need. In general, people often describe him as a person of high integrity and is certainly someone who can be relied on when working as a team.”.

For the distrust group, “However, you have heard a bit about Dr. Turner from your colleagues. They have told you that Dr. Turner is a very inconsiderate and uncaring person and is almost never willing to help others in need. In general, people hardly describe him as a person of high integrity and is certainly not someone who can be relied on when working as a team.”.

Lastly, for the uncertain trust condition, “However, other than knowing he is the Head Scientist of the Anti-Virus Research Lab, you have not heard much about Dr. Turner from your colleagues”. See Appendix I for full content of the material.

2.3 Procedure

At the beginning of the study, participants were told they would be participating in an online negotiation with another real person who shared the same aim to buy a finite resource (henceforth referred to as the miracle plant’), and would be assigned a role. Following the introduction, participants received one of three versions of their role corresponding to their randomly assigned condition: Certain Trust, Certain Distrust, and Uncertain Trust. In certain trust and certain distrust condition, participants received profile information of the other negotiation party which described them as trustworthy or untrustworthy, respectively. In

uncertain trust condition, the description participants received contains no information about trustworthiness.

Following the role information, participants were then provided with a detailed description of their role as Dr. Huguet, which introduced the background, goal, and requirement (e.g., budgets) of the negotiation. They had five minutes to read the material and to think how they would negotiate with Dr. Turner before they were able to proceed to the next page. After that they were provided with an initial email from Dr. Turner. In this email, Dr. Turner told why he needed the miracle plant and asked for more information about what participants planned to do with the plants to start the negotiation (See Appendix II for details). Participants were then asked to write an email to respond to Dr. Turner. In the email, they were told to feel free to share any information from their role information sheet that they thought would be helpful to the negotiation. They could not make up any details not included in their role, and finally their response should be no less than 500 characters.

After that, participants will rate the characteristics (including trustworthy, likeable, dishonest, competent, arrogant, fair, intelligent, and caring) of Dr. Turner from 1 (*not at all*) to 7 (*extremely*). They also have the option of indicating *unsure* if they are uncertain of a given trait characteristic of Dr. Turner. Then they indicate their willingness to negotiate with Dr. Turner from 1 (*completely not willing*) to 5 (*completely willing*), and the extent to which the participant will take advantage of the private information if they share from 1 (*not at all*) to 6 (*very much*). Finally, they complete the 10-item Honesty-Humility measurement (Moshagen, hilbig, & Zettler, in press) of the HEXACO personality Inventory-Revised (HEXACO-60; Ashton & Lee, 2019). At the end of the study, they are debriefed following the demographic section.

3. Results

3.1 Email coding scheme

We are interested in how people perform trusting behaviors in the first offer to start the negotiation. Following a previous study of the similar kind (Tompson & Hastie, 1990), we coded the written first offer emails on five characteristics, which included two main dependent variables and three secondary dependent variables.

The first main DV is *sharing key information*. In this particular negotiation, there is an opportunity for a fully integrative agreement between negotiating parties. Specifically, the participants (Dr. Huguet) only need the *leaves* of the miracle plants while the other negotiating party (Dr. Turner) only needs the berries of the plants. However, they do not know that the other party needs a different part of the plant, and hence this information has to be shared during the negotiating for the pair to have the possibility of achieving a fully efficient, integrative outcome. Thus, we examine sharing key information, which here is defined as expressing a desire or need for the leaves of the plants. This variable was coded to be 0 or 1, with 0 representing they did not mention the leaves and 1 representing they mentioned the leaves.

The second main DV is *sharing private information*. Private information in this context is defined as the information Dr. Huguet knows that Dr. Turner does not know. Seven pieces of information are considered private information: 1) the key information that Dr. Huguet needs the leaves, 2) he needs at least 500 fully-grown plants, 3) if he is not able to obtain all the plants, he will have to delay his clinical tests, 4) he spent $5000 to buy two fully-grown miracle plants before, 5) he would like to spend less than $1500 on each plant, 6) if necessary, he can pay as much as $2000 for each plant, 7) he is not allowed to spend more than $1000000 in total for all plants. This variable is coded as how many times in total that the participant mentions the private

information. If one single piece of information is mentioned more than once, then the final number of this particular information piece depends on the actual mentioned times (but not always once).

Finally, we coded a number of secondary DVs. First, *asking interests*, which is defined as how many times the participants explicitly ask for information about Dr. Turner's interests. For example, what part of the plant does Dr. Turner need, how many plants he need, and the process of his study, etc. Second, *suggesting concession*, defined as whether or not the participant offers to concede or give up something. Third, *suggest working together,* a binary variable represented by a participant disclosing a willingness to work together on this particular project in this negotiation or some other future projects. Lastly, we also coded for *word length* of email which is simply the word count of the first offer they write to Dr. Turner as we consider it a rough sign of how much information they give in the first offer.

3.2 Manipulation check

A manipulation check was performed to ensure that our trustworthiness manipulation resulted in differences in perceived trustworthiness of Dr. Turner. An ANOVA revealed that there was a significant effect of trustworthiness condition on perceived trustworthiness ratings ($F(2, 177) = 18.81$, $p < .001$). Further investigation of the impact of trustworthiness manipulation on perceived trustworthiness using planned contrasts revealed that participants in the trust condition perceive Dr. Turner as more trustworthy ($M = 6.02$, s.d. = 0.99) than the uncertain condition ($M = 5.38$, s.d. = 1.41; $t = 5.125$, $p < .001$). Participants in the uncertain condition also perceive Dr. Turner as more trustworthy than the uncertain condition ($M = 4.62$, s.d. = 1.35; $t = 5.440$, $p < .001$; see Figure 1)). We concluded from these results that our trustworthiness manipulation was successful.

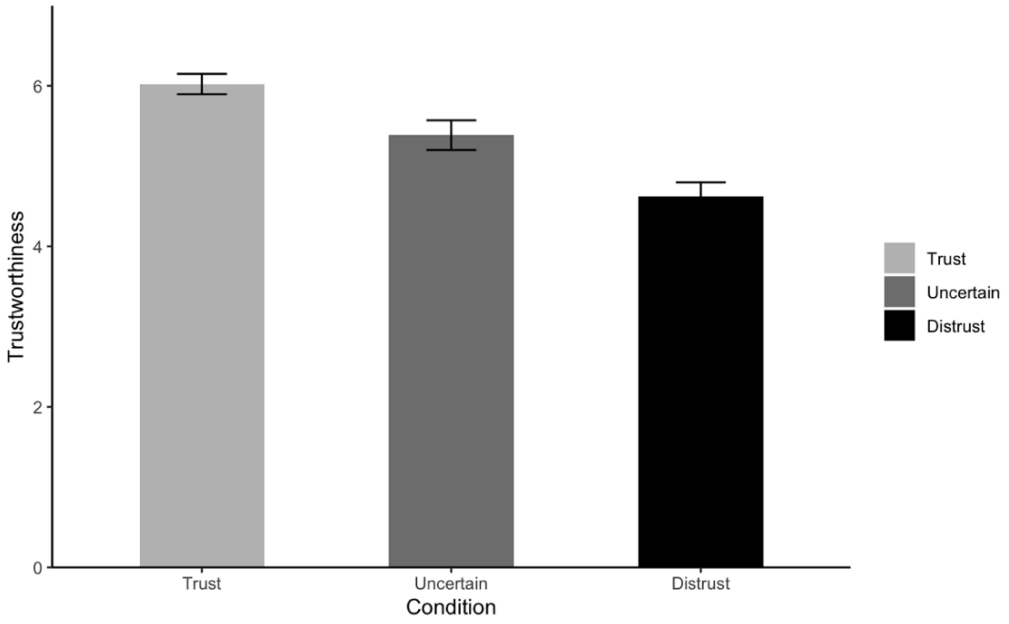
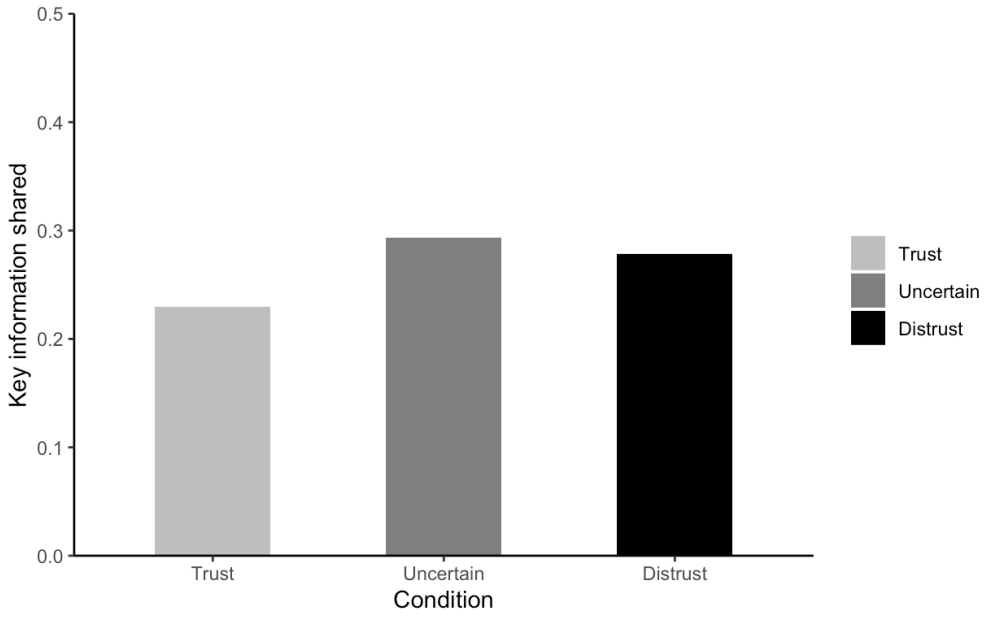


Fig. 1. Perceived trustworthiness under trust, uncertain and distrust conditions

3.3 Trusting behaviors under conditions of trustworthiness

To test our hypothesis, we compared the six DVs on the behavioral level across the different conditions. For the main DVs, no significant differences were found in both sharing key information ($\chi^2(2) = .683$, $p = .711$; see Figure 2A) and sharing private information ($F(2, 177) = .284$, $p = .753$, see Figure 2B), suggesting that perceived trustworthiness did not impact key information and private information sharing behaviors between parties.

A



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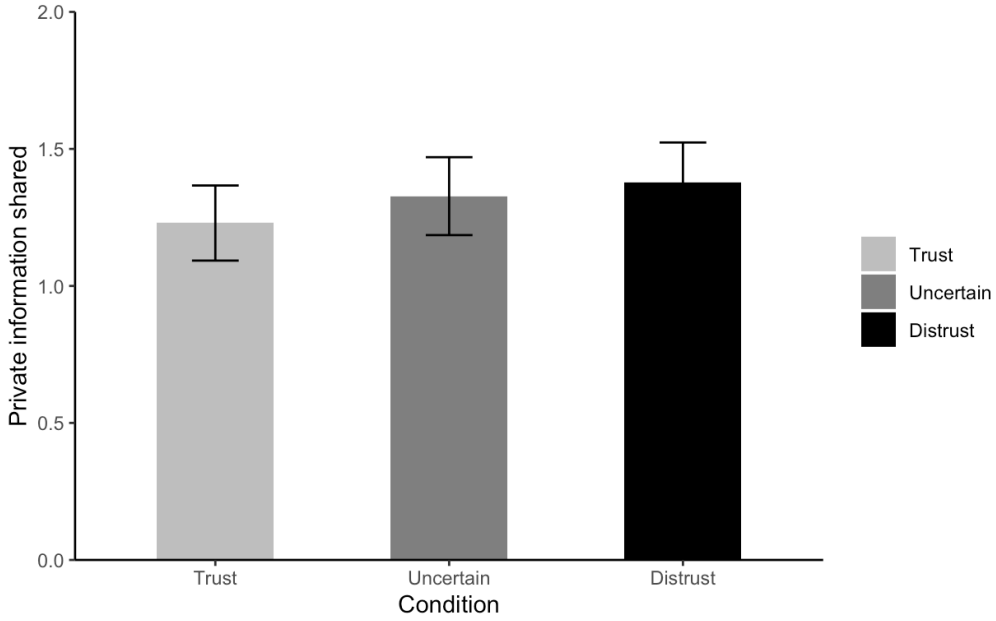
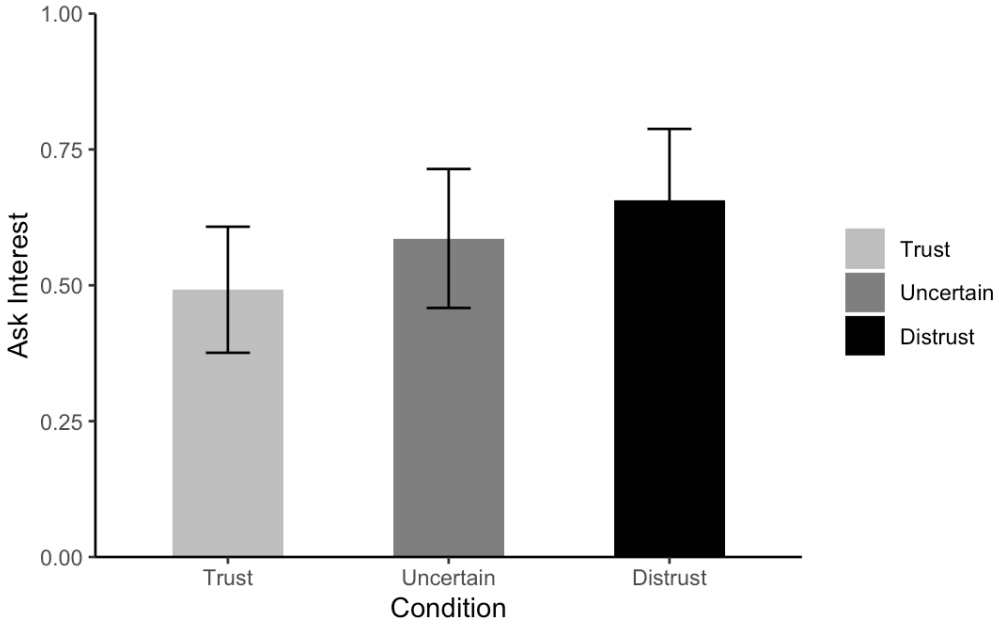


Fig. 2. Main trusting behaviors across trustworthiness conditions. (A) Whether the key information (Dr. Huguet wants the leaves part of the plant); (B) How many times the private information is shared.

For the secondary dependent variables, no significant differences were detected in asking interests ($F(2, 177) = .437$, $p = .646$), suggesting to work together ($\chi^2(2) = 2.010$, $p = .366$), and email length ($F(2, 177) = 1.757, p = .176$; See Figure 3A-C). These results suggest that though people have different perceived trustworthiness of the other party in the negotiation, they display no differences in asking interests, suggesting to work together, or the length of emails.

A



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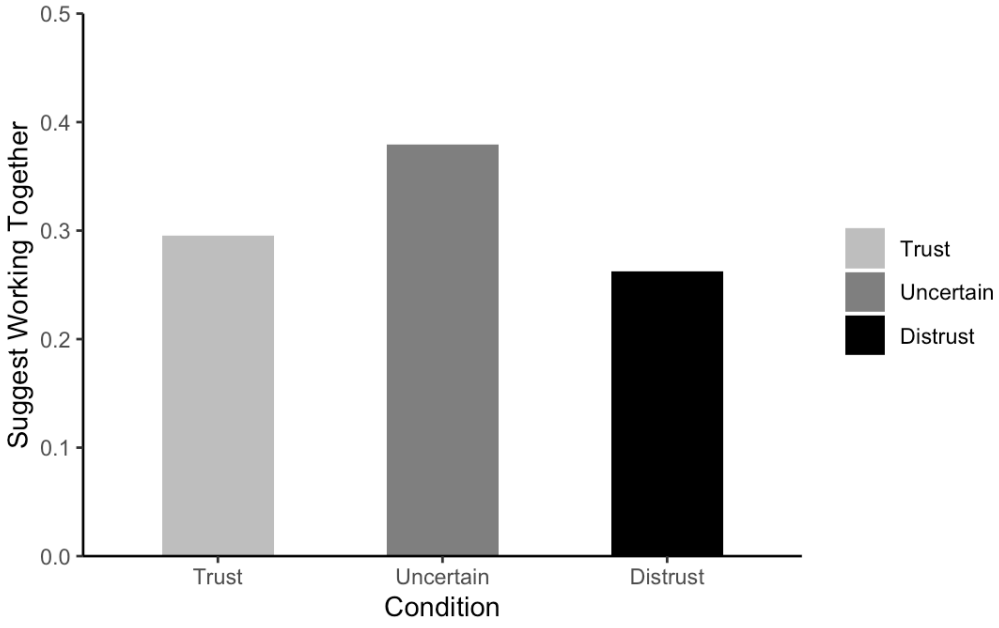

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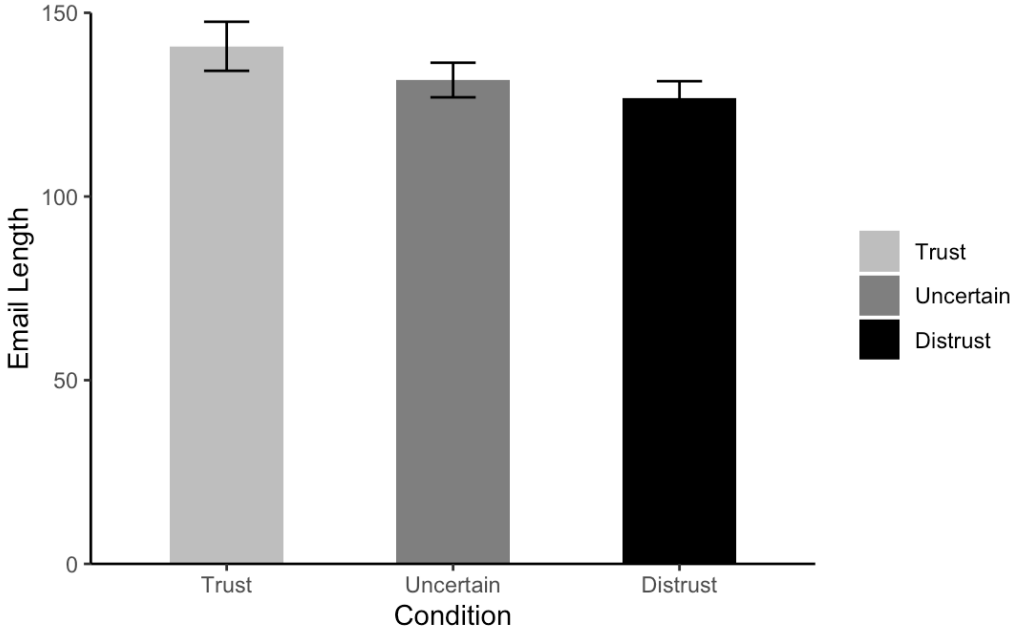


Fig. 3. Secondary trusting behaviors across trustworthiness conditions. (A) how many times the participant asked Dr. Turner's interest, (B) whether the participant suggested working together, (C) the first offer email length

A marginally significant different was found in suggesting concessions ($\chi^2(2) = 4.641$, $p = .098$). A further comparison suggested a significant difference between the uncertain (.172) and distrust condition (.295), $t = -2.133$, $p = .034$, but there was no significant difference between trust (.148) and uncertain condition, $t = -1.361$, $p = .175$ (Figure 4).

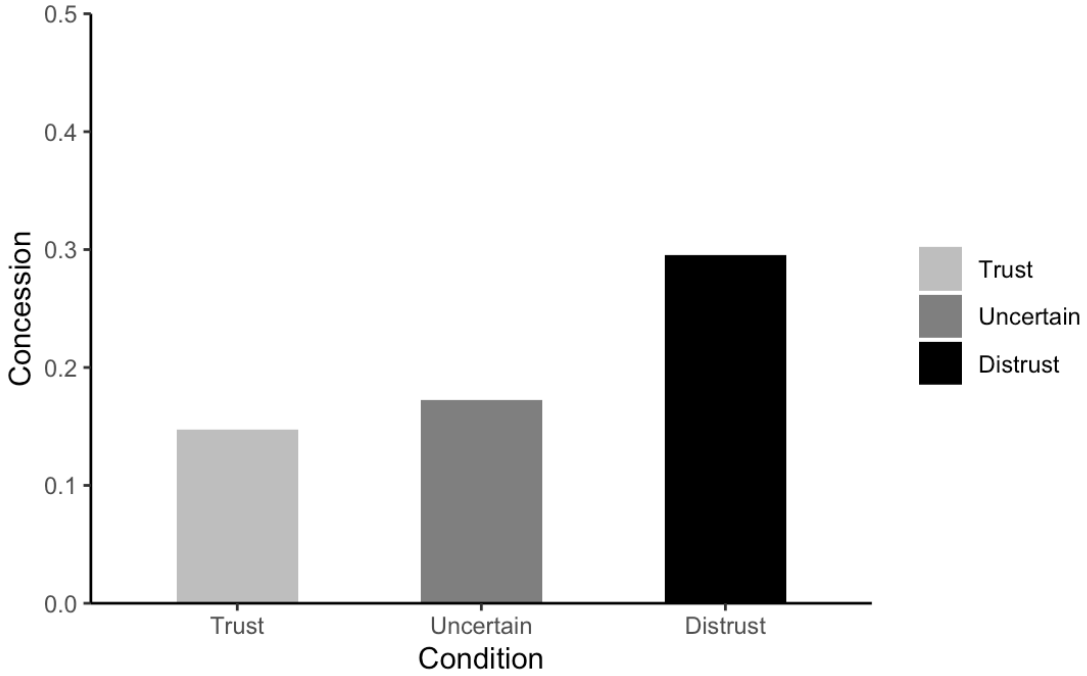


Fig. 4. Secondary trusting behaviors (suggesting concession) across trustworthiness conditions

Finally, we were interested in examining that no there was no significant behavioral difference between people in the high and low Honesty-Humility group. Results from t-tests confirmed our previous results, such that no significant differences were found both for sharing key information ($\chi^2(2) = 1.140$, $p = .566$) and sharing private information ($t = .810$, $p = .419$).

3.4 Perceived trust under conditions of trustworthiness

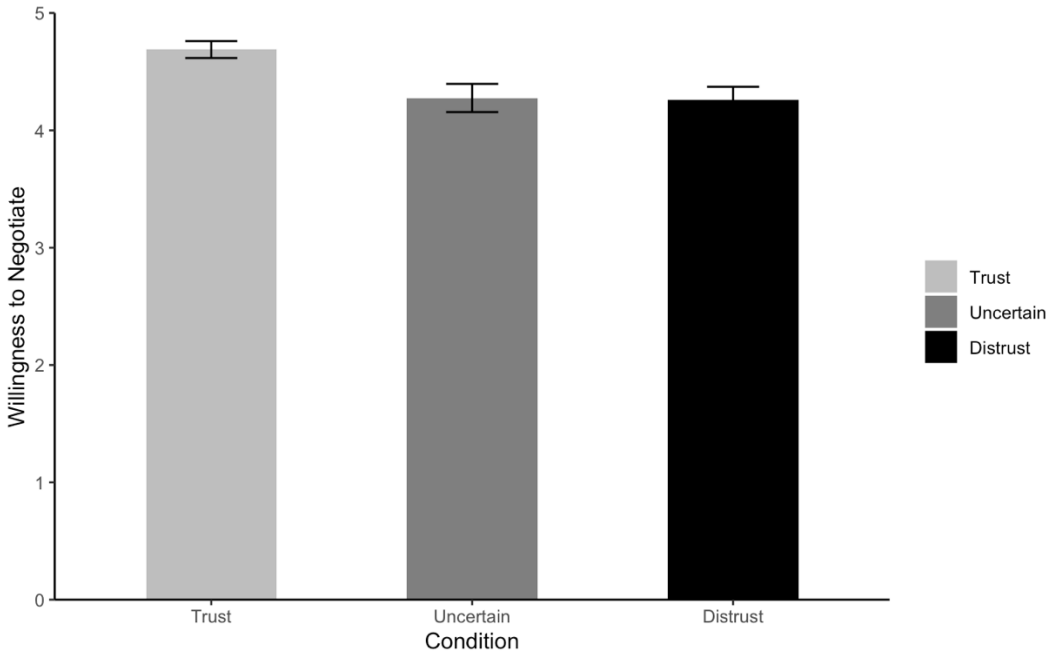
To test our hypothesis that initially perceived trustworthiness will influence trust as a psychological state, we compared participants' willingness to negotiate and the belief that the other party may take advantage of them across different condition of perceived trustworthiness.

Results revealed significant differences in the willingness to negotiate ($F(2, 177) = 5.693, p = .004$). Further comparison between trustworthiness conditions suggested that people are more willing to negotiate with others ($M = 4.688$, s.d. = 0.56) with certain high perceived

trustworthiness than others whom they do not have information to infer how trustworthy they are (M = 4.276, s.d. = 0.91), t = 3.371, p < .001, and people's willingness to negotiate with others of unknown trustworthiness is marginally significantly larger than with certain untrustworthy (M = 4.262, s.d. = 0.85; t = 1.767, p = .079; Figure 5A).

Regarding the extent they feel Dr. Turner will take advantage of their private information if they share, overall there was a significant difference across the three trustworthiness conditions ($F(2, 177) = 16.24, p < .001$). Further comparison reveals that people worry significantly less that the other party will take advantage of their private information when the other party are trustworthy (M = 2.148, s.d. = 1.08) than when their trustworthiness is uncertain (M = 2.966, s.d. = 1.60; t = -5.193, p < .001). And people worry even more about their private information being taken advantage of when they are negotiating with untrustworthy people (M = 3.525, s.d. = 1.31) than people who they do not have information about their trustworthiness (t = -4.580, p < .001; see Figure 5B).

A



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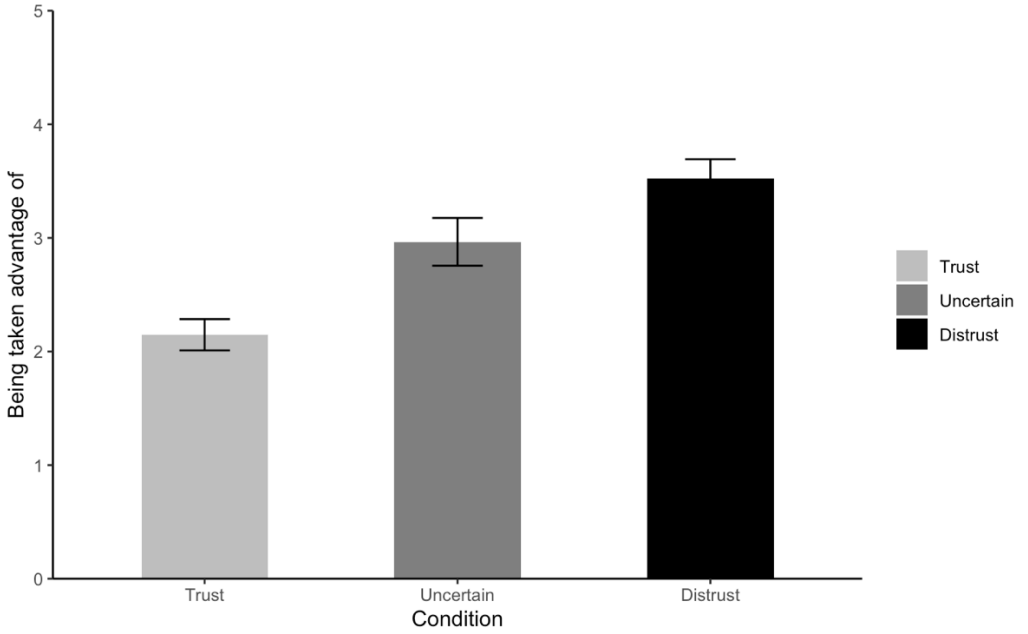


Fig. 5. Trust under three trustworthiness conditions. (A) Participants' willingness

In addition, we tested whether people perceive Dr. Turner differently across numerous personality traits under different trustworthiness conditions. The negative traits were reversly scored and the unsure choice was coded as the average ratings across the whole participant group. A significant difference was found in the overall trait evaluations across trustworthiness conditions ($F(2, 177) = 11.15, p < .001$). People think others have better personal traits if they are trustworthy (M = 5.110, s.d. = 0.55) than those whose trustworthiness is uncertain (M = 4.849, s.d. = 0.56; t = 4.115, p < .001), and untrustworthy people are thought to have the worst overall personal traits (M = 4.603, s.d. = 0.66; t = 4.028, p < .001; see Figure 6).

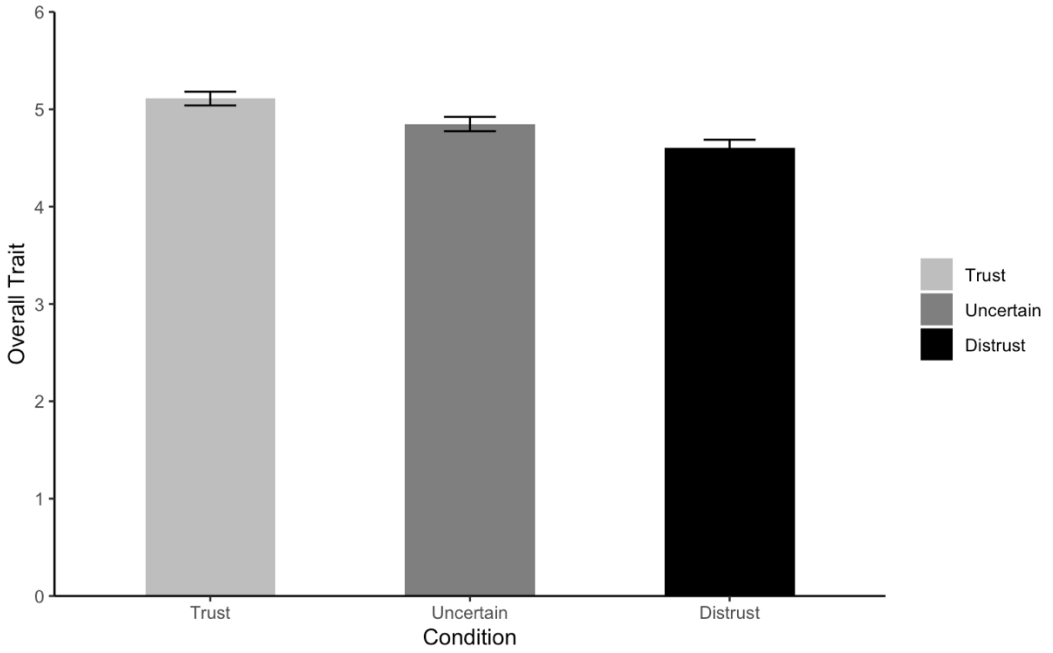


Fig. 6. Personal overall traits under three trustworthiness conditions

A closer examination on the specific traits (including likeable, dishonest, competent, arrogant, fair, intelligent, and caring) using ANOVAs revealed that all personal traits, except competent, are significantly different across three trustworthiness conditions. Evaluations on positive traits (likeable, fair, and caring) suggest that the ratings are significantly higher for people to perceive others with high trustworthiness than ambiguous trustworthiness (*ps* < .001), and others uncertainly untrustworthy are rated lowest on those positive traits (see Figure 7).

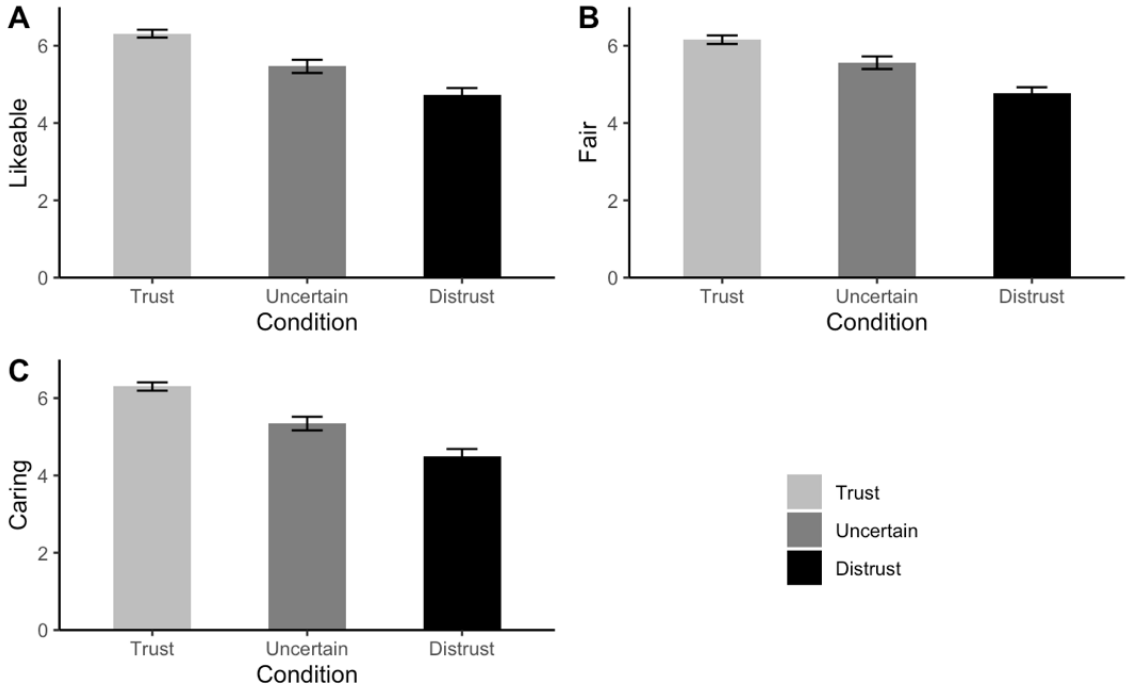


Fig. 7. Positive traits under three trustworthiness conditions. (A) Likable, (B) Fair, (C) Caring

Evaluations on negative traits (dishonest and arrogant) suggest that the ratings are significantly lower for people to perceive others with high trustworthiness than ambiguous trustworthiness (*ps* < .001), and the ratings for others not trustworthy are significantly higher than uncertain conditions on the evaluations on the negative traits (*ps* < .001, see Figure 8).

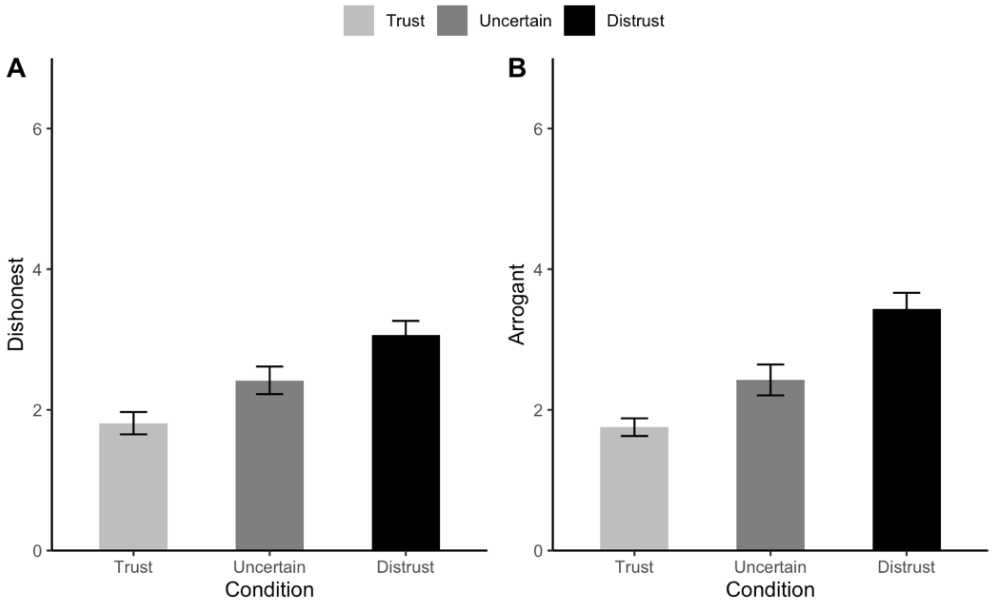


Fig. 8. Negative traits under three trustworthiness conditions. (A) Dishonest, (B) Arrogant

For traits related with abilities, competent and intelligent, a significant difference was found in intelligence ratings ($F(2, 177) = 3.52, p = .032$). People perceive trustworthy people as more intelligent (M = 6.41, s.d. = 0.80) than people with unknown trustworthiness (M = 6.12, s.d. = 1.09; t = 2.47, p = .015), who are perceived as more intelligent than certain untrustworthy people (M = 5.95, s.d. = 0.97; t = 2.05, p = .042). However, no significant difference was found in competence ($F(2, 177) = 2.158, p = .119$), suggesting that perceived trustworthiness does not influence perception on perceived competence (see Figure 9).

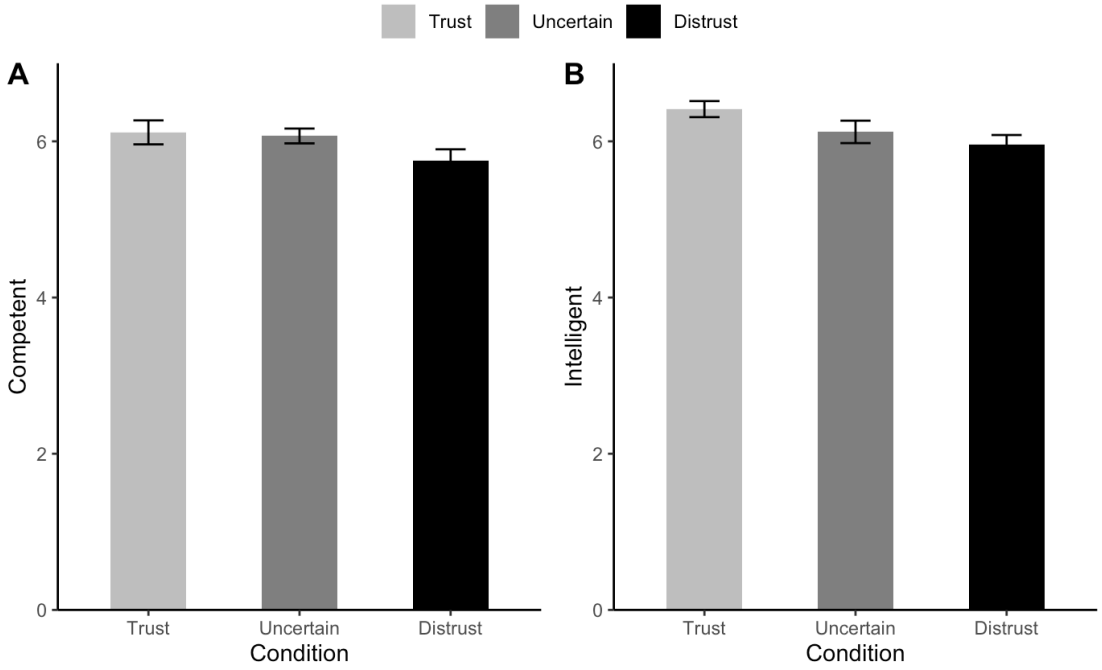


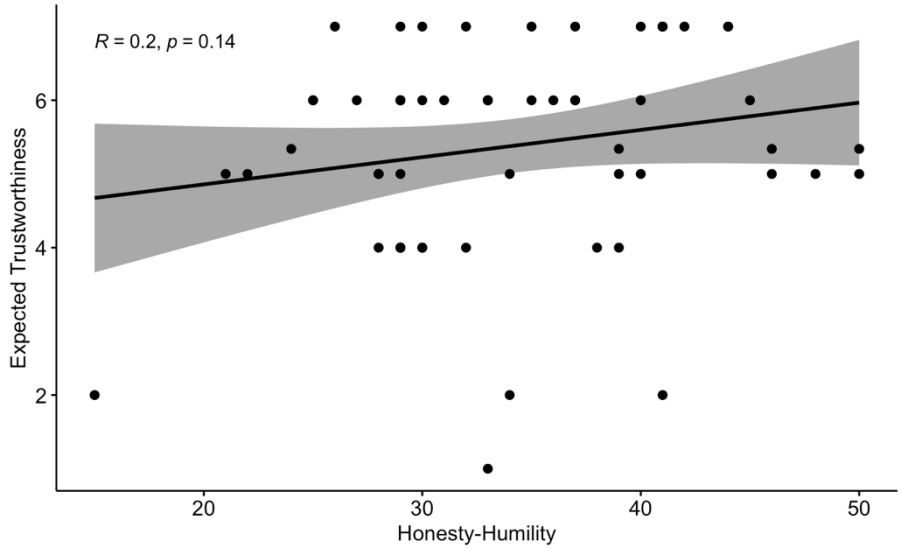
Fig. 9. Traits related with abilities under three trustworthiness conditions. (A) Competent, (B) Intelligent

3.4 Social projection theory

To test the hypothesis that Honesty-Humility trait is positively correlated with general perceived trustworthiness, with this effect being stronger in the uncertain condition, we

examined the correlation between the Honesty-Humility trait and expected trustworthiness in the uncertain condition. While the correlation was not significant (r = .2, p = .14, see Figure 10A), when we did the same correlation analysis in the whole group, a significant correlation was found between Honesty-Humility trait and perceived trustworthiness (r = .17, p = .019, see Figure 10B)

A.



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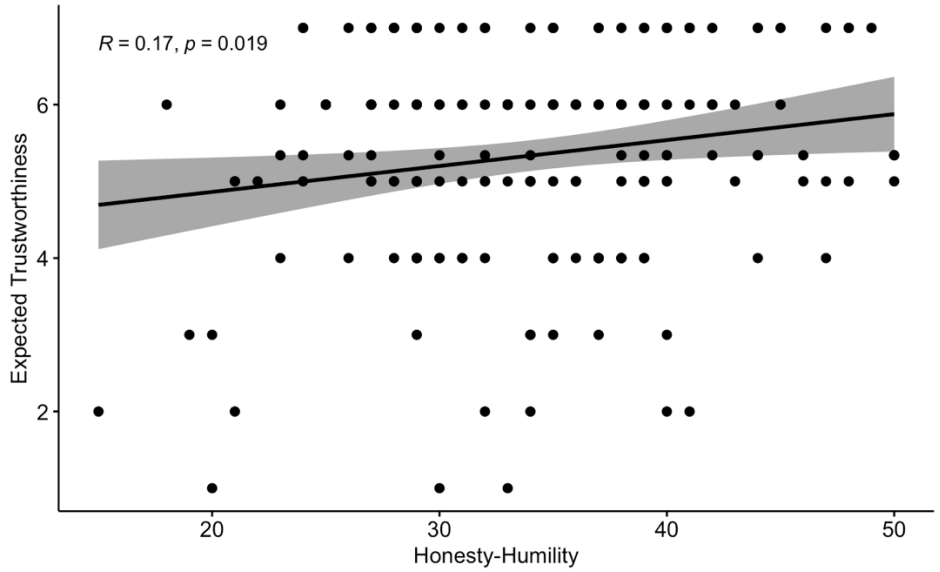

Fig. 10. Correlation between Honesty-Humility trait and general perceived trustworthiness. (A) in the uncertain condition, (B) in all conditions

To further test this hypothesis, we split the participants into two groups according to their Honesty-Humility trait score. People with the score larger than the median was assigned to the High Honesty-Humility group (n = 89), and people with the score larger than the median was assigned to the low Honesty-Humility group (n = 91). A t-test was performed to examine whether there was a significant difference between perceived trustworthiness in these two groups. The results suggest people who scored higher on Honesty-Humility perceived others as marginally significantly more trustworthy than people in the low Honesty-Humility group (t = 1.726, p = .086), which provides extra evidence to support the social project hypothesis in this study.

4. Discussion

Interpersonal trust plays a central role in social behavior. In this study, we designed an experiment to take a close look at the relationship between perceived trustworthiness, trust, and trusting behaviors, by experimentally manipulating the trustworthiness of the trustee. The results show that in the context of negotiation, people are not willing to mentally trust the other negotiation party who are not trustworthy, but nevertheless display the same trusting behaviors as they are negotiating with people who they trust. This effect was shown in most of the behavioral aspects, including sharing key information, sharing private information, asking interests, as well as suggesting working together.

Numerous possible explanations for this behavioral mystery have been offered, for example, people being generally altruistic due to the benefits of having a good reputation (Barclay, 2004). However, others argue reputation is not the reason for people to perform trusting behaviors. For example, some argue moral principles are the key reason (Dunning et al., 2014; Dunning & Fetchenhauer, 2013), such that people choose to do what their moral principles

tell them the "right" thing is, even though they are aware of incoming negative consequences. This argument was further supported by a study which revealed that people trust much less when their self-control to do morally right things was depleted (Ainsworth, Baumeister, Ariely & Vohs, 2014). Such trust goes beyond rational choices in economic games, and has an emotion component that people *feel* they are mandated to trust (Higgins, 1987; Schloesser, Dunning & Fetchenhauer, 2013), and they feel anxious when they do not behaviorally trust others (Schloesser et al., 2013; Dunning et al., 2014). The key normative component of this was believed to be the norm of respect (Goffman, 2021; Dunning et al., 2016) especially when people do not know the other person well, and even when the other person is not trustworthy.

While we find comparable differences among the trustworthiness conditions for most of the variables of interest, people unexpectedly made concessions more often when they are negotiating with untrustworthy people than trustworthy people or even others with uncertain trustworthiness. We consider it a probable negotiation strategy to reduce uncertainty, such that by explicitly offering tradeoffs in the form of concessions, potential gains and losses are placed clearly on the table so that much unforeseen losses are prevented. But when they are negotiating with trustworthy people, doing so is not the interest maximization strategy because they see the potential of achieving more integrative outcomes with the other trustworthy party, so they will not limit their negotiation by concession. Thus, we argue that concession is not a simple signal for cooperation, which is worth further research to explore the nature of it.

As predicted, with regard to the trust level, people are more willing to negotiate and are less afraid of being taken advantage of if they share private information when they negotiate with trustworthy people than untrustworthy people. Additionally, trustworthiness perceptions lead people be perceived as having better personal traits in all dimensions except competence, which

is highly related to ability. This makes sense as we explicitly state the role of Dr. Turner as the head scientist of a research group to treat cancer which should inform people of his high ability in the field. Also, belief is based on probabilities (Nooteboom, Berger & Noorderhaven, 1997). If one person's trustworthiness is uncertain, one should expect him to be less trustworthy than certainly trustworthy people, and more trustworthy than certainly trustworthy people. sin willingness to negotiate, worrying about being taken advantage of, as well as perception on personal traits all fall between the trust and distrust conditions, and significant differences were found in its comparison between both two conditions.

Further, it is interesting to highlight that the uncertain condition is slightly closer to the distrust than the trust condition. This is consistent with the general finding that people are mentally "cynical" of others. They underestimate how often others are generous about requests to them for help (Flynn & Lake, 2008), how much people's attitude and actions are not driven by selfish concerns (Miller, 1999), being altruistic (Balcetis & Dunning, 2008; Balcetis, Dunning & Miller, 2008). For trustworthiness especially, they underestimate others' trustworthiness (Fetchenhauer & Dunning, 2009; Dunning, Fetchenhauer & Schlosser, 2019), and empirical studies show that although 80%-90% trustees honor trust, trustors on average estimate this rate to be only 40%-50% (Fetchenhauer & Dunning, 2010). One possible explanation for this is the experience-sampling hypothesis (Fetchenhauer & Dunning, 2010), which states that real-life experience informs people in an asymmetric way about the mistakes they made about the trustworthiness of others. They do not trust when they think the others are not trustworthy, so no outcomes are available for feedbacks. But negative consequences happen when they choose to trust, they learn from the failure when they trust though positive outcomes do occur as well.

In conclusion, by experimentally manipulating trustworthiness of the trustee in the context of a negotiation, we find that people trust others with high trustworthiness more than untrustworthy people, and the extent to which people trust others with uncertain trustworthiness falls between trust and distrust. On the behavioral level, people display the same trusting behaviors regardless of the levels of their perceived trustworthiness. This study sheds lights on the processes by which trustworthiness works to influencing trust and trusting behaviors specifically in negotiation.

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Appendix I Role description of Dr. Huguet

You are the Head Scientist at Anti-Virus Research Lab. Currently you are studying a promising new medicine that may protect people from the Nipah virus. This is important because the Nipah virus can be very dangerous for people. It is easy for people to catch this virus and to spread it to others. The Nipah virus can even cause severe illness and death. You already did some promising studies in the lab on your new medicine. Now you are ready to begin the clinical tests.

A key part of this new medicine comes from the leaves of a rare plant. This rare "miracle plant" only grows in Brazil. You have been studying this plant's healing abilities for years. You recently found that it may protect people from the Nipah virus. Unfortunately, there are only a limited number of fully-grown plants available this year. You need the leaves of at least 500 fully-grown plants to do the official clinical tests of this medicine.

You are confident that your clinical tests will go well. While your company has started growing its own plants, the plants take over a year to fully-grow and produce useful leaves. Therefore, you need to buy some fully-grown plants from Brazil. This seller from Brazil has 500 fully-grown miracle plants. If you could obtain all of the plants, you would be able to run your clinical tests. If you do not obtain at least 500 fully-grown plants, you will have to delay your clinical tests.

Recently, you learned that Dr. Turner, Head Scientist at Cancer Research Lab, is also trying to buy the miracle plants. He knows about the same seller from Brazil. As head scientists of different departments, you compete directly with each other for resources. This Nipah medicine could make you become the top anti-virus researcher in the world. And it could stop

the Nipah virus from harming people and preventing future worldwide outbreaks! You need these plants!

You are sure that the seller will sell the plants to the buyer who is willing to pay the most money. However, you do not want to start bidding against Dr. Turner. It turns out Dr. Turner also does not want to bid against you. You and Dr. Turner have agreed to discuss the situation via email and find a solution.

Six months ago, you spent $5,000 to buy two fully-grown miracle plants for your research program. The company has approved you to buy 500 plants from Brazil. You would like to spend less than $1,500 a plant, but if necessary, you can pay as much as $2,000 per plant. You are not allowed to spend more than $1,000,000 in total for all the plants.

Appendix II Email from Dr. Turner

"Dear Dr. Huguet,

Thanks again for being willing to discuss buying the miracle plants together. I know there are only a few plants available, but hopefully we can find some way to make this work.

Just to start, perhaps you could tell me a bit more about why you are interested in purchasing these plants? I need them to do some cancer research that is looking promising, but from what I gather you want to use them for a completely different line of research. If you can tell me a bit more about what you are planning on doing with them, maybe we can find some kind of solution.

Best,

Dr. Turner"