Political Corruption and Social Trust:

An Experimental Approach

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Abstract

Few experimental studies have investigated important factors for people's perceptions of the trustworthiness of others. Building on theories that point at the importance of trustworthy government institutions, an experiment was conducted to examine factors of importance for people's propensity to relate trust in authorities to trust in others. A group of 64 undergraduate students responded to a number of scenarios in which they observed another person's efforts to try to receive immediate assistance from an authority. Descriptions of the other person's encounter with the authority varied within groups in terms of whether or not a bribe was used in order to receive immediate assistance, whether the other person or the authority was the initiator, and outcome in terms of whether immediate assistance was approved or declined. Type of authority was a between-groups factor. Subsequent to each scenario, participants' levels of various aspects of vertical and horizontal trust were measured. As hypothesized, the results showed strong effects of bribe, initiator, and outcome on all dependent measures. Bribe, initiator, and approved assistance decreased both vertical and horizontal trust. The results give support for the idea that trust in an authority influences the perceptions of the trustworthiness of others in general.

Key words: vertical trust, horizontal trust, social trust, social capital, corruption

Political Corruption and Social Trust

People's trust in authorities and trust in others have interested researchers for a long time. Whereas trust in others normally is labeled *social trust or horizontal trustt*, trust in authorities is typically labeled *political trust or vertical trust*. The former is closely connected to the term *social capital*, a term which often is used mainly by political scientists to describe citizens' levels of horizontal trust and network activities in different societies (Hooghe & Stolle, 2003; Prakash & Selle, 2004; Putnam, 2002).

Researchers from various disciplines have approached the investigation of people's trust differently. For instance, since survey data indicates that there is a positive relationship between people's vertical and horizontal trust political scientists have for long been interested in this relationship (Rotter 1971, Luhman 1979; Gambetta 1988, Pharr & Putnam, 2000). The correlation could suggest that people fail to distinguish between the different forms of trust and treat them similarly. However, results indicate that two different forms really exist. For instance, survey data shows that the variance in people's vertical trust is a lot larger than the variance in people's horizontal trust (Rothstein, 2002). However, perhaps the most notifying indication of that there are two distinct forms of trust is survey data showing that whereas vertical trust (in Sweden) decreased during 1986 and 2003, horizontal trust has remained high (Holmberg & Weibull, 2004, Kumlin & Rothstein 2005). A major issue in that area of research is to try to illuminate how this positive relationship is to be understood (e.g., is it causal or merely correlational?, cf. Brehm & Rahn, 1997). Some researchers argue that the relationship is causal (e.g., Rothstein & Stolle, 2003). Those researchers debate in what direction the causality works (Uslaner 2004). For instance, Putnam (1993) argues that high horizontal trust emerges out of people's participation in

voluntary associations, and forms high levels of vertical trust. However, this hypothesis has not received any direct support (Delhey & Newton, 2003; Uslaner, 2002). In contrast, recent experimental research (Eek & Rothstein, 2004) indicates that, if there is a causal mechanism between the two forms of trust, it is more likely that vertical trust affects horizontal trust than the reverse.

Social psychological research on trust has for long focused on why people obey the law implemented by different authorities (e.g., the police) (e.g., Tyler & Lind, 1992). This stream of research relies heavily on concepts within research on social justice (mainly *procedural* but also *distributive justice*), and shows that people are more willing to obey the law and trust authorities if they are treated fairly, both in terms of procedures and outcomes (Tyler & Lind, 1992). The fair process effect (e.g., Van den Bos, Lind, Vermunt, & Wilke, 1997; Van den Bos, Vermunt, & Wilke, 1997) suggests that if authorities allocate outcomes according to fair procedures, recipients are more willing to voluntarily accept the outcomes they receive from the authorities. As a consequence, people judge the outcomes received from fair procedures more positively than outcomes received from unfair procedures, even if the substantial (distributive) outcome was negative for them. Van den Bos, Wilke, and Lind (1998) studied how the fair process effect works under given information about the trustworthiness of the authorities. They argued and found that perceived procedural fairness is only relevant for the judgments of outcomes received from an authority when people lack information about whether or not the authority can be trusted. When people were explicitly told that the authority could or could not be trusted, procedural fairness were not of any importance for their outcome judgments. Thus, procedural fairness concerns are closely related to trust. Still, perceptions of procedural fairness and trust are not the same thing. For instance, Tyler and Lind

(1992) showed that trustworthiness is more important for long-term behavior, such as willingness to comply with decisions made by an authority, than for short-term behavior, such as outcome judgments.

Similar to the approach by political scientists, sociologists have often treated trust as a societal ingredient important for the understanding of citizens' behavior. For instance, Yamagishi (e.g., Yamagishi, 1986) has developed tools measuring people's levels of social trust. These tools classify people into low-, medium-, and high-trusters on the basis of their responses to statements about the trustworthiness of other people in general. After such a classification, Yamagishi has shown that behavioral differences exist between low-, medium-, and high-trusters in, for instance, social dilemmas (situations in which people choose between acting in line with their own interest or acting in line with a collective interest). In recent research by Yamagishi and colleagues on motivational and behavioral differences between high-, medium-, and low-trusters, it was found that high-trusters are more accurate in estimating the behavior of others and they are more sensitive to information about the trustworthiness of others (Yamagishi, 2001). This measure has also successfully contributed to an increased understanding of cultural differences in the relationship between people's social trust and willingness to cooperate with one another Yamagishi & Yamagishi, 1994).

Trust often means different things in different studies and is therefore sometimes confused with other concepts. For instance, in early research on prisoner's dilemmas and trust, trust was often confounded with cooperation (Deutsch, 1960). Thus, when a person cooperated, it was treated as an indicator of trust. In later studies by Orbell et al. (1984), participants in prisoner's dilemmas not only chose between cooperation and defection, they also had the option of not participating in the

prisoner's dilemma at all. Here, choosing to participate in the game was regarded as an indicator of trust. The trust game (e.g., Snijders & Keren, 1999) is a further extension of the prisoner's dilemma mirroring trust more directly. When a person cooperates in the trust game, he or she gives total control to the other player of the division of a specified sum of money between him- or herself and the other player.

Yamagishi's trust scale aims at studying the effect of individual differences in the propensity to trust others on various behaviors. Little research has investigated situational factors of importance for people's propensity to trust others (cf. Uslaner, 2002). The present research aims at investigating factors that affect people's levels of vertical and horizontal trust, as well as how these are causally related. Even though there is a positive correlation between the two forms of trust, one factor that affects one form of trust must not necessarily have the same effect on the other form of trust. Still, we assume that the same factors in general will be important for both forms of trust.

Clearly, trust is important for a society. For instance, in societies where people trust others compared to countries in which people do not trust others, economic growth is larger (Knack & Keefer, 1997; Woolcook, 1998), the democratic machinery works better (Putnam, 1993), citizens are happier and healthier (Helliwell, 2002), and redistributions from richer to poorer citizens are more common (Uslaner, 2002). Therefore, it is important to study what causes people to trust others, and under what circumstances they will not trust others. The present research addresses the issue of what makes people trust others. Previous research addressing the same issue has most often focused on Putnam's hypothesis about the positive effects of involvement in voluntary association on people's trust (Woolcock, 2001). Although there has been a long discussion in political science and sociology of the relation between political and

social forms of trust, the experimental research on trust has to our knowledge not investigated the relation between horizontal trust (trust in other people) and trust in political authorities (cf. Ostrom & Walker, 2003).

What makes an authority trustworthy? Certain aspects that are assumed to be of importance for people's willingness to trust an authority are, for instance, that the authority treats everyone equally (e.g., impartiality to the law) and refuses to accept a bribe (e.g., no corruption) (Kornai & Rose-Ackerman, 2004; Levi, 1998). Swedish citizens generally place high trust in most authorities and believe that corruption is very uncommon in their society (Rothstein, 2002, 2005). Similarly, equal distributions and equal treatments are ideals that Swedish citizens value highly (Eek, Biel, & Gärling, 2000). In support of the idea that corruption affects social trust negatively, data at an aggregate level (showed that the correlation between citizens' trust in others and the Transparency International index of the level of corruption in their society[2] was 0.75 (Rothstein & Stolle, 2003, Uslaner 2004). However, experimental research on whether or not it is corruption or other forms of unequal treatment that decreases horizontal trust is still lacking.

We conducted an experiment aiming at investigating how people's levels of vertical and horizontal trust vary with certain factors in a fictitious situation where a person is in need of immediate assistance from an authority. In this particular situation, immediate assistance cannot be received since there are other people already waiting to receive assistance. Thus, the person in need of assistance has to wait in line. Still, the person considers that their own need is so severe that (s)he should not have to wait in line. What will happen with people's vertical and horizontal trust if this person should be offered immediate assistance without waiting in line? Here, we assume that several factors will be important. It is important to note that we do not

think that a situation as the one described above would affect people's levels of vertical trust if the situation takes place where people already "know" to what extent others can be trusted. Thus, when we know (e.g., culturally) to what extent others can be trusted, it is unlikely that isolated events such as the one described here will have any impact on to what extent people believe that *others in general* can be trusted (Uslaner, 2002). However, should the situation take place in an unknown country where people are uncertain as to whether others in general can be trusted, we believe that several factors will be important.

First, since *not* receiving immediate assistance can have different consequences dependent on what kind of assistance is called for, we assume that the type of need (i.e., type of authority) is important for people's trust. For instance, if the person should receive immediate assistance, we expect that people's trust will decrease less if the person is in immediate need of assistance because of illness than because he is rushed.

Second, since trust in others is assumed to be negatively correlated with corruption, we expect that being asked to pay a bribe in order to receive immediate assistance will have large effects on people's trust. More specifically, we hypothesize that people's trust will decrease more when a bribe is demanded in order to receive immediate assistance.

Third, we expect that it is important for people's trust whether the authority or the "other person" takes the initiative to jump the queue (with or without corruption). . Here, we expect different effects on vertical and horizontal trust. For instance, should the authority take the initiative (e.g., demand a bribe), vertical trust should be expected to decrease more than horizontal trust. On the other hand, should the other

person in need of assistance take the initiative, horizontal trust should be expected to decrease more than vertical trust.

Another factor of potential importance is the outcome of the situation. Are the same factors of equal importance should the person's request to receive immediate assistance (e.g., in exchange for a bribe) *not* be approved? If the request is declined, trust is expected to increase since such an outcome signals honesty and equal treatment from the authority. For the same reason, trust is expected to decrease less as an effect of bribe when the request is declined compared to when it is approved.

In sum, four factors were assumed to be important for the levels of horizontal trust in a hypothetical situation where another person, in need of assistance from an authority, attempts to receive immediate assistance without waiting in line. These factors were (i) type of authority, (ii) bribe, (iii) role of initiator (authority as initiator) or requesting (the other person as initiator)instant assistance, and (iv) outcome.

Method

Participants

Sixty-four undergraduates at different educational programs at Göteborg University participated in the experiment. Thirty-three were men with a mean age of 26.2 years ($SD = 4.2$) and 31 were women with a mean age of 29.8 years ($SD = 10.9$). Participants were promised SEK 50 (approximately US$ 6.5) in return for their participation, and were randomly assigned to one of two between-subjects conditions. One group consisted of 14 male and 18 female participants. In the other group, 19 were male and 13 female participants.

Procedure and Materials

Participants were contacted through telephone calls from an available pool of participants. They were invited to the laboratory to participate in a study about decision making. On arrival to the laboratory, participants were met by a male experimenter and seated in private booths where they were asked to complete the experimental materials.

The experimental material consisted of a questionnaire including ten pages. On the first page, participants were instructed that they on the following pages would be asked to complete two tasks. The first task was to respond to statements regarding to what extent other people can be trusted. The second task was to imagine that they were on a journey in a foreign city in an unknown country[3], and to respond to a number of questions in relation to different scenarios that would be described. Lastly on the first page, participants were requested to indicate their age and sex and were informed that their responses in the questionnaire were anonymous.

On the second page of the questionnaire, participants completed a slightly revised version of Yamagishi's trust scale (Yamagishi & Sato, 1986) consisting of the following six items measuring social trust: "Most people are basically honest", "Most people are trustworthy", "Most people trust a person if the person trusts them", "Most people are basically good-natured and kind", "Most people trust others", and "Generally, I trust others". The following five caution items were also included: "People always think about their own gain", "In today's society, if you are not careful, people will use you", "In today's society, we do not have to worry about being used by someone", "Most people really do not like to make the effort to help others", and "If we assume everyone has the capacity to be malicious, we will not be in trouble". Participants responded to the items on 7-point Likert scales where 1 corresponded to "Strongly disagree" and 7 corresponded to "Strongly agree".

On each of the eight following pages in the questionnaire participants read the following scenario (translated from Swedish): "Imagine that you are in a foreign city in an unknown country. You wake up one morning and feel very ill and in need of a doctor's assistance. In the elevator to the doctor's surgery you meet a man who is also on his way to the doctor. The man tells you that he also feels very ill. When you arrive at the doctor's surgery you notice that there are already several people in the waiting room. You go up to the receptionist and thereafter sit down in the waiting room. You can see that the man from the elevator approaches the doctor and says that he feels very ill. The doctor says that the man still has to wait in line. The man continues to appeal to the doctor."

The above-mentioned first paragraph of the scenario was identical for each of the eight scenarios. The second paragraph varied the three within-subject factors *bribe*, *initiator of offering/requesting immediate assistance*, and *outcome*, respectively. Thus, whereas a bribe was used in order to receive immediate assistance from the authority for half of the scenarios, a bribe was not used for the other half of scenarios. Similarly, for half of the scenarios, the man from the elevator (henceforth referred to as *the elevator man*) took the initiative, and for the other half, the authority took the initiative. Finally, for half of the scenarios, the elevator man's request for immediate assistance was approved and, thus, he received immediate assistance, and for the other half, the elevator man's request was declined, and, thus, he had to wait in line. As an example, in the condition where a bribe was used in order to receive immediate assistance, the elevator man was the initiator, and the request was approved, the scenario read[1]: "The man from the elevator takes the doctor aside but you can still hear him whisper and offer the doctor the equivalence of SEK 500

(approximately US $ 66) to receive immediate assistance. The doctor accepts the offer. The man from the elevator receives immediate assistance."

Type of authority was the between-subjects factor. The authority was either a doctor (as in the scenario described above) or a police officer. For groups where the authority was a police officer, the first paragraph of the scenarios read: "Imagine that you are in a foreign city in an unknown country. One morning someone has broken into your car. You go to the police station to report the break-in. You are rushed. In the elevator to the reception, you meet a man who is also about to report a car break-in. The man tells you that he is also rushed. When you arrive at the reception you notice that there are already several people in the waiting room. You go up to the receptionist and sit down in the waiting room. You can see that the man from the elevator approaches a police officer and says that he wants to report a car break-in and that he is rushed. The police officer says that the man still has to wait in line. The man continues to appeal to the police officer."

Subsequently to each scenario, participants were asked to answer a number of questions on 7-point Likert scales. The first question asked participants how fair or unfair they perceived the outcome (e.g., that the elevator man received immediate assistance). The endpoints of the scale were defined as "Very unfair" and "Very fair". The following six questions asked respondents how high or low trust they put in (1) the authority's way of handling his work, (2) the authority's way of helping people, (3) the authority in general (i.e., doctors or police officers in general) in this city, (4) the authority as a fellow person, (5) the elevator man, and (6) people in general in this city, respectively.

Completing the questionnaire required about 30 minutes, after which participants were paid and debriefed.

Results

Participants' mean ratings on Yamagishi's trust scale were analyzed and compared between participants groups to ensure that the two between-subjects groups did not differ in their general propensity to trust others. Similarly, since the number of men and women were not equally balanced between the two groups, the analysis also included sex as a factor. Thus, a 2 (type of authority) by 2 (sex: male vs. female) by 2 (item: trust vs. caution) analysis of variance (ANOVA) with repeated measures on the last factor was performed on participants' mean ratings on Yamagishi's trust scale. The only significant effect was a main effect of the item factor, $F(1, 60) = 18.42$, $p <$ .001. Participants scored higher on items measuring trust ($M = 4.91$) than on items measuring caution ($M = 4.33$). No other effects were significant. Thus, both between-subjects groups can be considered as comparable with regard to social trust levels.

The presentation of the results is divided into two sections. First, we present analyses on the effects of the manipulated variables on vertical trust will be examined. Thereafter, corresponding analyses on horizontal trust will be presented.

Vertical trust

Participants' ratings on the three scales measuring different aspects of vertical trust (i.e., trust in (i) the authority's way of handling his work, (ii) the authority's way of helping people, and (iii) the authority as a fellow person) showed high internal consistency (in each of the eight within-subject conditions, Cronbach's α = .78, .93, .74, .90, .86, .92, .74, and .88). Therefore, means of participants' ratings on these scales were used in the analysis on the effects of the manipulated factors on vertical trust in the specific authority described in the scenarios. Table 1 presents these mean ratings.

Table 1 about here

A 2 (type of authority: doctor vs. police) by 2 (outcome: approved vs. declined) by 2 (initiator: the authority vs. the elevator man) by 2 (bribe: bribe vs. no bribe) analysis of variance (ANOVA) with repeated measures on the three last factors was performed on participants' ratings of vertical trust. The main effect of outcome was significant, $F(1, 58) = 22.04$, $p < .001$. As hypothesized, this effect indicated that vertical trust was higher when the request was declined ($M = 4.21$) than when it was approved ($M = 3.50$). The main effect of initiator was also significant, $F(1, 58) = 90.84$, $p < .001$, and indicated that vertical trust was lower when the authority was the initiator ($M = 3.33$) compared to when the elevator man was the initiator ($M = 4.36$). The significant main effect of bribe, $F(1, 58) = 160.39$, $p < .001$, indicated, as expected, that vertical trust was lower when a bribe was used ($M = 3.11$) compared to when no bribe was used ($M = 4.58$). This effect was qualified by a significant two-way interaction effect between bribe and the between-subjects factor type of authority, $F(1, 58) = 3.99$, $p = .05$. Bonferroni corrected t-tests at $p = .05$ revealed that the difference in vertical trust between the two groups was not significant when a bribe was used ($M = 3.12$ for doctor as authority and $M = 3.09$ for police as authority), but when a bribe was not used, vertical trust was significantly higher for the doctor ($M = 4.87$) than for the police ($M = 4.31$).

The two-way interaction effect between outcome and initiator was significant, $F(1, 58) = 111.34$, $p < .001$. Bonferroni corrected t-tests at $p = .05$ showed that when the elevator man was the initiator and requested assistance, vertical trust was significantly higher when the request was declined ($M = 5.21$) compared to when it was approved ($M = 3.51$). Similarly, when the authority was the initiator and

immediate assistance was not given, vertical trust was significantly lower ($M = 3.16$) compared to when the elevator man was the initiator ($M = 5.21$). However, when the request for immediate assistance was approved, vertical trust did not differ dependent on whether assistance was offered by the authority ($M = 3.49$) or requested by the elevator man ($M = 3.51$). Similarly, when the authority was the initiator, vertical trust did not differ dependent on outcome ($M = 3.49$ for approved request vs. $M = 3.16$ for declined request).

The two-way interaction between outcome and bribe was also significant, $F(1, 58) = 81.53$, $p < .001$. Bonferroni corrected t-tests at $p = .05$ showed that, irrespective of whether the request was approved or declined, vertical trust was significantly higher when no bribe was offered compared to when a bribe was offered. However, whereas vertical trust was significantly higher in scenarios where a bribe was used and the request declined ($M = 3.94$) compared to when a bribe was used and the request approved ($M = 2.28$), there was no difference in vertical trust in the no-bribe-conditions ($M = 4.45$ for declined request vs. $M = 4.70$ for approved request).

The two-way interaction between initiator and bribe was also significant, $F(1, 58) = 79.69$, $p < .001$. Bonferroni corrected t-tests at $p = .05$ showed that, irrespective of whether the authority or the elevator man was the initiator, vertical trust was significantly higher when no bribe was offered compared to when a bribe was offered. However, whereas vertical trust was significantly higher in scenarios where a bribe was offered by the elevator man ($M = 4.04$) compared to when a bribe was requested by the authority ($M = 2.17$), there was no difference in vertical trust in the no-bribe-conditions ($M = 4.49$ when authority was the initiator vs. $M = 4.68$ when the elevator man was the initiator).

Finally, the hypothesized three-way interaction between outcome, initiator, and bribe, $F(1, 58) = 30.31$, $p < .001$, was also significant. In line with what was expected, this effect shows that vertical trust was highest when the elevator man offered the authority a bribe in order to receive immediate assistance, and this offer was turned down by the authority. The lowest vertical trust was observed when the authority offered the elevator man immediate assistance in exchange for a bribe and the elevator man accepted the offer (see Table 1).

One important question relates to whether participants infer the trustworthiness of the type of authority in general on the basis of the specific encounters they observe. One way to test this is to analyze whether trust in the type of authority in general is affected similarly by the independent factors as trust in the specific authority described in the scenarios. In Table 2, means of the second measure of vertical trust - trust in the authority (i.e., police officers or doctors) in general - are presented. A closer look at Tables 1 and 2 reveals two things. First, participants' vertical trust towards the specific authority described in the scenarios, generalize to their vertical trust in the type of authority in general. Thus, the mean differences between the different scenarios are similar in both tables. Second, the differences are less pronounced for vertical trust in the type of authority in general (Table 2) than for vertical trust in the specific authority (Table 1). These patterns were confirmed in a parallel 2 (type of authority: doctor vs. police) by 2 (outcome: approved vs. declined) by 2 (initiator: the authority vs. the elevator man) by 2 (bribe: bribe vs. no bribe) ANOVA with repeated measures on the three last factors. All effects from the analysis on trust in the specific authority were replicated, although one two-way interaction effect (between the factors bribe and type of authority) did not reach significance due to the less pronounced differences. In contrast to the analysis on trust

in the specific authority, the analysis on trust in type of authority in general yielded a significant main effect of type of authority, $F(1, 61) = 5.65$, $p < .05$. Overall, trust in doctors was higher ($M = 4.62$) than trust in the police ($M = 3.96$). Although not expected, this is in line with research indicating that doctors are generally perceived as more trustworthy than are police officers (Holmberg & Weibull, 2004).

Table 2 about here

Horizontal trust

From the previous two analyses, two major conclusions can be made. Trust in the specific authority was strongly affected by the manipulated factors in line with what was expected. This means that participants, on the basis of the observed encounter between the elevator man and the specific authority, put lower trust in the authority when he (i) accepted (as compared to not accepted) a bribe, (ii) offered (as compared to not offered) a bribe, and (iii) gave immediate assistance to the elevator man (as compared to leaving the elevator man to wait in line). More interestingly though, participants inferred the trustworthiness of authorities in general based on their observations. Thus, the effects of the manipulated factors not only affected participants' judgments of the trustworthiness of the authority that they observed, but also participants' judgments of to what extent authorities in general in the "unknown" society could be trusted. One question to be answered is to what extent horizontal trust also was affected by the manipulated factors.

Horizontal trust was measured in two ways. First, participants rated their degree of trust in the elevator man. The elevator man was, we hope, regarded as an "ordinary citizen" in this "unknown and foreign" city. We hypothesized that trust in the elevator

man would also be affected by the manipulations in the same way as trust in authority was affected. Thus, we expected horizontal trust to decrease when a bribe was present and when immediate assistance was approved as an effect of corrupt behavior. More interestingly, participants also rated to what extent they believed that other people in general in this city could be trusted. Should trust in other people in general, that clearly are without responsibility for what is happening in the specific encounters, be influenced by the manipulated factors, this would indirectly suggest a causal relationship from vertical trust to horizontal trust. That is, if people lose trust in authorities, they also lose trust in "people in general". Separate ANOVAs were performed on both measures of horizontal trust.

Means of participants' trust in the elevator man are presented in Table 3. A 2 (type of authority: doctor vs. police) by 2 (outcome: approved vs. declined) by 2 (initiator: the authority vs. the elevator man) by 2 (bribe: bribe vs. no bribe) ANOVA with repeated measures on the three last factors was performed on these ratings. The main effect of outcome was significant, $F(1, 61) = 31.66$, $p < .001$, and indicated that when the elevator man had to wait in line, trust in him was higher ($M = 4.30$) compared to when he received immediate assistance ($M = 3.82$). This main effect was unexpected since the elevator man does not control the outcome. As expected, however, the two-way interaction effect between outcome and initiator was significant, $F(1, 61) = 7.81$, $p < .01$. Bonferroni corrected t-tests at $p = .05$ revealed that all relevant mean differences between these two factors were significant. Thus, as seen in Table 3 and revealed by the unexpected main effect of outcome, irrespective of initiator, trust in the elevator man was always higher when immediate assistance was declined compared to when immediate assistance was approved. Similarly, irrespective of outcome, trust in the elevator man was always higher when the

authority and not the elevator man himself was the initiator. The interaction effect is explained by the fact that the highest trust in the elevator man was observed when the authority was the initiator and immediate assistance was not received.

As expected, the significant main effect of initiator, $F(1, 61) = 24.97$, $p < .001$, indicated that trust in the elevator man was higher when the authority was the initiator ($M = 4.28$) compared to when the elevator man was the initiator ($M = 3.83$). This effect was qualified by a significant two-way interaction effect between initiator and authority, $F(1, 61) = 5.09$, $p < .05$. Bonferroni corrected t-tests at $p = .05$ revealed that the effect of initiator on trust was significant for doctor as authority ($M = 4.43$ when authority was the initiator vs. $M = 3.77$ when the elevator man was the initiator), but not for police as authority ($M = 4.15$ when authority was the initiator vs. $M = 3.90$ when the elevator man was the initiator). The main effect of bribe was significant, $F(1, 61) = 7.28$, $p < .01$, and showed that trust in the elevator man was higher when no bribe was involved ($M = 4.25$) compared to when a bribe was involved ($M = 3.87$).

The two-way interaction effects between outcome and bribe, $F(1, 61) = 20.49$, $p < .001$, and between initiator and bribe, $F(1, 61) = 17.77$, $p < .001$, respectively, were both significant. As hypothesized, these effects were qualified by the significant three-way interaction effect between outcome, bribe, and initiator, $F(1, 61) = 9.81$, $p < .01$. As seen in Table 3, participants' trust in the elevator man was highest when the authority offered the elevator man to receive immediate assistance in return for a bribe, and this offer was turned down by the elevator man. Participants showed the lowest degree of trust in the elevator man when he managed to bribe the authority to receive immediate assistance. Bonferroni corrected t-tests at $p = .05$ revealed that means for these two scenarios differed significantly from means from the other scenarios.

Table 3 about here

Table 4 provides means of participants' trust in other people in general in the unknown city related to the manipulated variables. This measure is the main measure of horizontal trust, given that it relates to trust in people who are clearly not involved in the situations described. Instead, this measure should be regarded as the extent to which trust in others in general is influenced by trust put in the people involved in the situation (i.e. the authority and the elevator man). A 2 (type of authority: doctor vs. police) by 2 (outcome: approved vs. declined) by 2 (initiator: the authority vs. the elevator man) by 2 (bribe: bribe vs. no bribe) ANOVA with repeated measures on the three last factors was performed on these ratings. The main effect of outcome was significant, $F(1, 61) = 18.30$, $p < .001$, indicating a higher degree of trust in people in general when the elevator man did not receive immediate assistance ($M = 4.52$) compared to when he did ($M = 4.33$). The main effect of bribe was also significant, $F(1, 61) = 7.32$, $p < .01$. When no bribe was present, horizontal trust was higher ($M = 4.49$) than when a bribe was present ($M = 4.36$). More interestingly, the interaction between outcome and bribe was significant, $F(1, 61) = 21.78$, $p < .001$. Bonferroni corrected t-tests at $p = .05$ showed that horizontal trust was significantly lower when immediate assistance was received thanks to a bribe ($M = 4.17$) than when a bribe was used without immediate assistance being received ($M = 4.55$) or when no bribe was used ($M = 4.49$ for approved and $M = 4.48$ for declined).

The two-way interaction effect between initiator and outcome was also significant, $F(1, 61) = 5.36$, $p < .05$. This effect indicates that horizontal trust was lower when the elevator man was the initiator and managed to get assistance

immediately ($M = 4.30$) than when he was the initiator and did not get immediate

assistance ($M = 4.57$), or when the authority was the initiator ($M = 4.36$ for approved

immediate assistance and $M = 4.46$ for declined immediate assistance).

In sum, the analysis on trust in people in general showed that participants made

inferences of the trustworthiness of other people, not involved in the situation, on the

basis of the observed encounters between an authority and another person.

Table 4 about here

Discussion

As pointed out in a recent review of experimental research on trust (Cook &

Cooper, 2001), trust often means different things in different studies. For instance,

whereas trust is sometimes regarded as a subjective state of being, other studies focus

on trusting behavior. To complicate things further, in the latter stream of research,

trusting behavior means very different things in different studies. For example, in

some studies trust is treated as equivalent to cooperation. Previous research on trust as

a subjective state of being has regarded trust as an individually formed attitude

towards how others should be regarded. This research has developed measures for

classifying people into high-, medium-, and low-trusters, and has found several

behavioral differences between the different classifications. However, previous

experimental research on situational factors that influence the degree of trust that

people put in others is to a large extent still lacking. Moreover, there is virtually no

previous social psychological research on the relationship between vertical trust (trust

in political and administrative authorities) and horizontal trust. The present

experiment used scenarios to study the effects of different factors on people's propensity to trust other groups of people.

The basic assumption put forward in the present experiment was that if people do not know whether or not another person can be trusted, the trustworthiness of the other person will be inferred from what is taken as typical of other people's behavior in an unknown society. Moreover, we hypothesized that whether or not one person can be regarded as trustworthy influences the extent to which other people could be regarded as trustworthy. To avoid that participants' preconceptions about the trustworthiness of others would affect the results, participants were asked to imagine that they were in a foreign city in an unknown country and different encounters between an authority and another citizen were described to them. In the scenarios, the other citizen (i.e. the elevator man) demanded to jump the queue and receive immediate assistance from the authority. We believe that this setup prevented that the effects of potential factors of importance for the trustworthiness participants would place in others would not be bias with their (cultural) preconceptions. Furthermore, since our participants were undergraduate students, we believe that they had no difficulties in imaging that they were on a journey in an unspecified country as this is a very common behavior by this category of Swedes.

Four factors were assumed to be important for people's propensity to trust others. These factors were type of authority, whether or not a bribe was used in order to receive immediate assistance, role of initiator of offering (authority as initiator) or requesting (the other person as initiator) immediate assistance, and outcome of the situation (i.e. whether or not the demand to jump the queue and receive immediate assistance was successful). Several hypotheses were tested. For instance, we believed that type of authority would be important since declining a request for immediate

assistance can have different consequences dependent on what kind of assistance is called for. Furthermore, since corruption has been found to be negatively related to social trust on an aggregate level, the prevalence of bribery was assumed to have a negative effect on the trustworthiness put in other people. We also expected that whether the authority or the other person was the initiator would affect the trustworthiness put in other people by the participants. For instance, when the authority was the initiator, vertical trust was expected to decrease more than horizontal trust. When the person in need of assistance was the initiator, horizontal trust was expected to decrease more than vertical trust.

The results showed that the manipulated factors had strong effects on the level of trust that the participants put in others, and most of our hypotheses were supported by the results. The lowest degree of trust was placed in the authority when the authority offered immediate assistance in return for a bribe, and this offer was accepted by the person in need. These negative effects on vertical trust spread to participants' perceptions of to what extent other authorities in general in the city could be trusted. Most importantly, however, the same factors also affected horizontal trust, and not only the trustworthiness of the elevator man, but also trust in other people in general in the city. Similarly, the highest vertical trust was measured in the scenario where the elevator man offered a bribe in return for immediate assistance, and the authority turned down the offer. The positive effects on vertical trust were also found in the analyses on horizontal trust.

In sum, the results showed clear effects of the manipulated factors in accordance with what had been hypothesized. However, the hypothesized two-way interaction between type of authority and outcome did not receive any support. Thus, participants made no difference between whether the elevator man needed assistance from the

doctor or from the police. The manipulation aimed at operationalizing more or less severe consequences of not receiving assistance. The only effects of type of authority could be explained by the fact that doctors were in general regarded as more trustworthy than the police.

Since previous experimental research addressing what factors are of importance for people's propensity to trust others to a large extent is lacking, it is difficult to draw any strong conclusions from the results. Still, it is promising that the manipulated factors proved to be of importance. Given that it is important for a society that citizens trust one another, more research should address factors of importance for social trust to emerge. We strongly believe that one important factor for social trust is vertical trust. If authorities behave in line with their ethical codes, treat everyone with equal concern and respect, they will be regarded as fair and trustworthy, and people will be willing to accept the decisions made by the authorities (Tyler & Lind, 1992). Research on procedural justice clearly shows that the behavior of authorities is very important for people's willingness to accept their decisions. Fair procedures are for instance characterized by letting people voice their opinion (e.g., Folger, 1977). When given such an opportunity, people regard the outcome of the authority's decision as fairer[4], people are more willing to accept subsequent decisions made by the authority, and people perceive qualitatively better relations with the authority (for an overview, see Lind & Tyler, 1988). More importantly, as indicated by the results of the present experiment, when authorities are perceived as trustworthy, people will also regard other people as more trustworthy. On the contrary, if authorities fail to act in line with their ethical codes, people will be offended by their behavior, treat them as unfair, and they will not trust the authority. What is worse, however, is that people will infer that other people in that particular society cannot be trusted.

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Appendix

Scenarios Used in the Different Conditions

Between-Subjects Condition: Doctor as Authority

   Within-Subject Condition: Bribe, Initiated by the elevator man, Leading to immediate assistance. "The man from the elevator takes the doctor aside but you can still hear him whisper and offer the doctor the equivalence of SEK 500 to receive immediate assistance. The doctor accepts the offer. The man from the elevator receives immediate assistance."

   Within-Subject Condition: Bribe, Initiated by the elevator man, Not leading to immediate assistance. "The man from the elevator takes the doctor aside but you can still hear him whisper and offer the doctor the equivalence of SEK 500 to receive immediate assistance. The doctor does not accept the offer. The man from the elevator has to wait in line."

   Within-Subject Condition: Bribe, Initiated by the authority, Leading to immediate assistance. "The doctor takes the man from the elevator aside but you can still hear him whisper and offer the man that he does not have to wait in line if he gives the doctor the equivalence of SEK 500. The man accepts the offer. The man from the elevator receives immediate assistance."

   Within-Subject Condition: Bribe, Initiated by the authority, Not leading to immediate assistance. "The doctor takes the man from the elevator aside but you can still hear him whisper and offer the man that he does not have to wait in line if he gives the doctor the equivalence of SEK 500. The man does not accept the offer. The man from the elevator has to wait in line."

   Within-Subject Condition: No bribe, Initiated by the elevator man, Leading to immediate assistance. "The man from the elevator takes the doctor aside but you can

still hear him whispering that he wants to receive immediate assistance since he feels very ill. The doctor accepts the man's request. The man from the elevator receives immediate assistance."

Within-Subject Condition: No bribe, Initiated by the elevator man, Not leading to immediate assistance. "The man from the elevator takes the doctor aside but you can still hear him whispering that he wants to receive immediate assistance since he feels very ill. The doctor does not accept the man's request. The man from the elevator has to wait in line."

Within-Subject Condition: No bribe, Initiated by the authority, Leading to immediate assistance. "The doctor takes the man from the elevator aside but you can still hear him whisper and ask the man how ill he feels. The man says that he feels very ill. The man from the elevator receives immediate assistance."

Within-Subject Condition: No bribe, Initiated by the authority, Not leading to immediate assistance. "The doctor takes the man from the elevator aside but you can still hear him whisper and ask the man how ill he feels. The man says that he feels very ill. The man from the elevator has to wait in line."

Between-Subjects Condition: Police Officer as Authority

Within-Subject Condition: Bribe, Initiated by the elevator man, Leading to immediate assistance. "The man from the elevator takes the police officer aside but you can still hear him whisper and offer the police officer the equivalence of SEK 500 to receive immediate assistance. The police officer accepts the offer. The man from the elevator receives immediate assistance."

Within-Subject Condition: Bribe, Initiated by the elevator man, Not leading to immediate assistance. "The man from the elevator takes the police officer aside but you can still hear him whisper and offer the police officer the equivalence of SEK 500

to receive immediate assistance. The police officer does not accept the offer. The man from the elevator has to wait in line."

Within-Subject Condition: Bribe, Initiated by the authority, Leading to immediate assistance. "The police officer takes the man from the elevator aside but you can still hear him whisper and offer the man that he does not have to wait in line if he gives the police officer the equivalence of SEK 500. The man accepts the offer. The man from the elevator receives immediate assistance."

Within-Subject Condition: Bribe, Initiated by the authority, Not leading to immediate assistance. "The police officer takes the man from the elevator aside but you can still hear him whisper and offer the man that he does not have to wait in line if he gives the police officer the equivalence of SEK 500. The man does not accept the offer. The man from the elevator has to wait in line."

Within-Subject Condition: No bribe, Initiated by the elevator man, Leading to immediate assistance. "The man from the elevator takes the police officer aside but you can still hear him whispering that he wants to receive immediate assistance since he is so rushed. The police officer accepts the man's request. The man from the elevator receives immediate assistance."

Within-Subject Condition: No bribe, Initiated by the elevator man, Not leading to immediate assistance. "The man from the elevator takes the police officer aside but you can still hear him whispering that he wants to receive immediate assistance since he is so rushed. The police officer does not accept the man's request. The man from the elevator has to wait in line."

Within-Subject Condition: No bribe, Initiated by the authority, Leading to immediate assistance. "The police officer takes the man from the elevator aside but

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you can still hear him whisper and ask the man how rushed he is. The man says that he is very rushed. The man from the elevator receives immediate assistance."

Within-Subject Condition: No bribe, Initiated by the authority, Not leading to immediate assistance. "The police officer takes the man from the elevator aside but you can still hear him whisper and ask the man how rushed he is. The man says that he is very rushed. The man from the elevator has to wait in line."

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Footnotes

1. All scenarios are provided in the appendix.

2. For methods and research techniques for this corruption index, see
www.transparency.org.

3. The reason as to why we asked the participants to imagine that they were on a
journey "in a foreign city in an unknown country" was that we assumed that it was
unlikely that the manipulated factors would affect participants' levels of vertical trust
if they should experience the same situations in their own home country.

4. Participants in the present experiment were also asked to rate how fair they
perceived the outcome of the situation (i.e., that the elevator man received immediate
assistance or that he had to wait in line). An ANOVA on participants' fairness ratings
showed reliable effects of the within-subject factors outcome and bribe, and no effect
of the between-subjects factor type of authority. In support of a fair process effect, the
effects mirrored those in the analyses on trust. Thus, fairness ratings were higher (1)
when the elevator man had to wait in line compared to when he received immediate
assistance and (2) when a bribe was not used compared to when a bribe was used.
Finally, a three-way interaction effect between initiator, outcome, and bribe showed
that the outcome was perceived as most unfair when the authority offered the elevator
man immediate assistance in return for a bribe, and the elevator man accepted the
offer. The situation where the elevator man offered the authority a bribe and the
authority declined the offer was perceived as the fairest situation.

Table 1

Mean Ratings of Vertical Trust Related to Type of authority, Initiator, Outcome, and Bribe

| | | Outcome and Bribe | | | |
| | | Approved request | | Declined request | |
Type of authority	Initiator	Bribe	No bribe	Bribe	No bribe
	The authority	2.06	5.38	2.40	4.49
Doctor					
	The elevator man	2.41	4.60	5.71	4.88
	The authority	2.11	4.44	2.18	3.61
Police					
	The elevator man	2.54	4.36	5.48	4.82

Table 2

Mean Ratings of Trust in Authority in General Related to Type of authority, Initiator, Outcome, and Bribe

Type of authority	Initiator	Outcome and Bribe			
		Approved request		Declined request	
		Bribe	No bribe	Bribe	No bribe
Doctor	The authority	3.94	5.19	3.68	4.97
	The elevator man	4.03	4.77	5.35	5.00
Police	The authority	3.12	4.12	3.47	4.16
	The elevator man	3.28	4.09	4.78	4.66

Table 3

Mean Ratings of Trust in the Elevator Man Related to Type of authority, Initiator,

Outcome, and Bribe

| | | Outcome and Bribe | | | |
| | | Approved request | | Declined request | |
Type of authority	Initiator	Bribe	No bribe	Bribe	No bribe
Doctor	The authority	3.71	4.32	5.10	4.58
	The elevator man	3.22	4.00	3.61	4.22
Police	The authority	3.44	4.31	4.69	4.16
	The elevator man	3.34	4.19	3.81	4.25

Table 4

Mean Ratings of Horizontal Trust Related to Type of authority, Initiator, Outcome,

and Bribe

| | | Outcome and Bribe | | | |
| | | Approved request | | Declined request | |
Type of authority	Initiator	Bribe	No bribe	Bribe	No bribe
Doctor	The authority	4.13	4.61	4.42	4.52
	The elevator man	4.06	4.45	4.71	4.55
Police	The authority	4.22	4.47	4.50	4.41
	The elevator man	4.28	4.44	4.59	4.47