Bachelor Thesis

The opportunities and risks of errors: The effect of purposeful and accidental errors on trust in individuals and organizations in crisis negotiations

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Abstract

Making mistakes is part of human nature, and errors occur even in crisis negotiations. This study investigates the effects of purposeful and accidental errors on trustworthiness in individuals and trustworthiness in organizations in a setting of crisis negotiations. The study included a participant set of 64 participants that were asked to imagine themselves in a crisis situation and were approached in an online-chat session by a preprogramed crisis negotiator. Participants were randomly assigned to one of seven conditions: 2(Error: purposeful, accidental) x 3(Response: apology, denial, deflection) + control group. Trust in the crisis negotiator and the police were measured. The analysis of the data showed no significant effects. Still, there were indications that accidental errors resulted in a slightly higher trust score in crisis negotiators than purposeful errors. Furthermore, an apology seemed to be the most suitable response for trust reparation. There was no measurable effect on trust in the police after shifting the blame to a colleague. The response to an error may be a determinant for the trust in the crisis negotiator and should be considered carefully.

Introduction

Resolving problematic situations through communication is often challenging, regardless of the circumstances. In extreme cases such as hostage situations or suicide attempts, it is difficult to deescalate in such a way that nobody gets injured.

Crisis situations can last for extended periods of time and one of the most famous and most controversial is the hostage situation of Waco in 1993. A leader of the religious cult called the Branch Davidians and crisis negotiators are negotiating for 51 days to release the cult members, including many children. According to the lead negotiator Gary Nosner, communication moved slowly, but he achieved some success. He achieved the peaceful release of 35 hostages (Shaw, 2016).

However, about a month into the negotiations, Nosner was replaced by another crisis negotiator. The two crisis negotiation teams disagreed on the negotiation tactics. The new crisis negotiator felt that the negotiation progress was moving too slowly. More aggressive strategies were implemented such as playing unbearably loud music and crushing the cars of the cult members ("Waco Siege", 2018). Ultimately, a tear gas attack was launched and caught fire, killing the remaining 76 people inside ("Waco Siege", 2018). Nosner attributed the disaster to the change of strategy (Romeo, 2010). In hindsight, this more aggressive strategy and the individual actions were proven to be significant errors that diminished the previous negotiation progress.

There may be scenarios in which a more aggressive approach would work adequately. However, in this case, for example, the destruction of the cars turned out to severely damage the relationship and trust in the negotiation team. The response by the second negotiation team was to apply more aggressive approaches. Was it already too late by then to repair the relationship to a degree that makes cooperation possible?

It turns out that there is plenty of research regarding what to say and what not to say in crisis negotiations (Johnson, Thompson, Hall, & Meyer, 2018). Contrarily, no crisis situation is like the other. It is inevitable that even skilled crisis professionals encounter unfamiliar situations or make a mistake. What happens in these situations? Surprisingly, little research was conducted to investigate the effects of errors in crisis negotiations. If there exist unknown strategies to further increase the chances for negotiation success, it could save lives if it is implemented by law

enforcement. Errors in crisis negotiations are often not further investigated and are generally framed as a negative influence on the relationship and trust (Earle, Siegrist, & Gutscher, 2012; Slovic, 1993). However, previous research showed that errors can also positively influence the crisis negotiation outcome (Ferrin, Kim, Cooper, & Dirks, 2007; Oostinga, Giebels, & Taylor, 2018-b). Errors might be used as a mechanism to receive extra feedback because the suspect might be inclined to correct the mistake and thus provides more information (Oostinga, Giebels, & Taylor, 2018-a). Since there are some positive aspects that could be utilized to increase the trust ratings through errors, it must be investigated if the error could be produced purposefully as an alternative. If the crisis negotiator is faced with a situation in which no progress is being made, a purposeful error might be viable as an alternative strategy. Furthermore, it will be investigated if the response after an error is made will affect trust during a crisis negotiation.

Current strategies in Law Enforcement

To understand the effects of purposeful and accidental errors on trust, it is important to investigate the theoretical approaches that are currently applied by law enforcement and how an error might influence them. Current strategies such as the Law Enforcement Tactical Negotiation (LETN) or Behavioral Influence Stairway Model (BISM) that are used by crisis negotiators are based on a rational suspect. While these models are helpful in the later stages of the negotiation, first alternative approaches are needed to ensure the other party is in a rational state (Vecchi, Wong, Wong & Markey, 2019).

There are different versions of the effective LETN approach, but they are commonly based on a rational suspect and the credibility of the negotiator. This approach is used in a wide range of settings ranging from kidnapping to suicide attempts. In this approach, the credibility of the negotiator is seen as the key to influence the suspect and is achieved through careful communication (Vecchi, Wong, Wong, & Markey, 2019).

The risk of escalation is considerably higher with high emotional involvement (Wong, Yik, & Kwong, 2006). According to lead crisis negotiator Gary Nosner, the individuals have rarely planned out a situation. It is rather the case that an extreme emotional reaction started the crisis situation and the individuals do not know how to get out of it (Shaw 2016). It could be argued that

a suspect under high emotional distress will react differently to an accidental and purposeful error than a suspect that has planned out the situation beforehand.

Another approach is the Behavioral Influence Stairway Model (BISM) which is used when a personal crisis occurs. In this scenario, the negotiator is supposed to take over the role of the social support mechanism such as family and friends. The negotiator tries to change his/her role from an antagonist to a cooperating helper. Similar to the LETN approach, the goal is to build rapport and trust through empathy. According to the BISM, without the trust in the negotiator, the final objective to influence the suspect's behaviour is not achievable (Johnson et al., 2018; Vecchi et al., 2019). According to this model, an accidental or purposeful error might affect the trust and rapport between the crisis negotiator and the suspect and therefore influence the negotiation process.

The strategies used, partly depend on the type of crisis situation and especially if there are hostages involved or not. But there are underlying concepts that are always applied. First, force is generally only used if there is no other option and it does not pose a large risk. Second, teamwork and patience are needed. Third, skills such as active listening are used in order to build trust and rapport between the negotiator and the suspect (Vecchi et al., 2019). The effect of accidental and purposeful errors is generally perceived to have a negative influence on trust (Slovic, 1993). However, this approach does not include the possible responses to an error and how they might influence the crisis negotiation. This is the reason the specific responses to an accidental and purposeful error will be the focus of this study.

Model of Trust, Confidence, and Cooperation

One model that might be applicable in crisis negotiations is the model of Trust, Confidence, and Cooperation (TCC model) (see Figure 1). Like the strategies of law enforcement, the TCC model suggests that trust is the basis of crisis communication and is crucial to reach the final goal of cooperation (Earle, Siegrist, & Gutscher, 2012). According to Twyman, Harvey, & Harries (2008) trust is largely dependent on shared values and past experiences. A crisis negotiator has only a short amount of time to build trust and does not necessarily share any past experiences or shared values with the other party. During the negotiation, the negotiator actively listens to the concerns and problems of the suspect and shows empathy (Noesner, 1999). It is not necessary to agree with the suspect’s statements and opinions to show your understanding (Earle, Siegrist, &

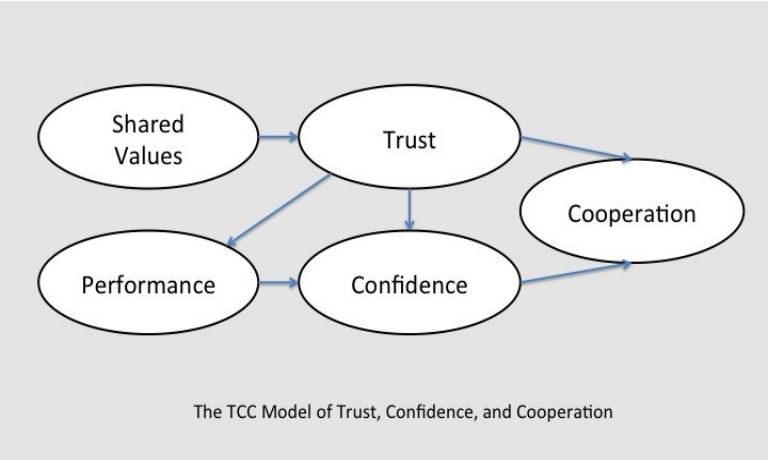
Gutscher, 2012). If the prerequisite of shared values is not met, the crisis negotiator first must validate his trustworthiness. This, in turn, would contribute to positive past experiences and increase the overall trust.

However, crisis negotiators are often faced with paranoia and an initial distrust that naturally occurs in highly stressful situations. They are faced with the challenge to turn distrust into trust. Considering trust as being the most important factor related to negotiation success, it is crucial that crisis negotiators use advanced techniques to increase trust levels. A study conducted by Taylor and Thomas (2008) that successful negotiations are related to a higher linguistic style matching than unsuccessful negotiations. Using the same linguistic style increases affection and increases trust (Taylor, Thomas, 2008). This might contribute to an impression that the crisis negotiator and suspect share certain values and past experiences which increases trust according to the TCC model. Furthermore, crisis negotiation is not one-way communication. Trust can also be established by exchanging information with each other (Yu & Winslett 2003). This approach may not be feasible in certain crisis situations, but the crisis negotiator should volunteer nonessential information to increase trust levels.

In the TCC model of trust, errors are listed as negative (trust-destroying) events. '[Trust] is typically created rather slowly, but it can be destroyed in an instant – by a single mishap or mistake' (Slovic, 1993, p. 677). Other important factors apart from trust are performance and confidence according to the TCC model. This means that even if the suspect is fully trusting the crisis negotiator, he will not cooperate unless he expects the crisis negotiator to be competent enough to manage the situation and deliver upon his promises (Earle, Siegrist, & Gutscher, 2012).

Figure 1

TCC Model of Trust, Confidence, and Cooperation. Retrieved from Earle, T. C., Siegrist, M., & Gutscher, H. (2012). Trust, risk perception and the TCC model of cooperation. In *Trust in cooperative risk management* (pp. 19-68). Routledge.



Effect of accidental and purposeful errors on trust

It must be investigated how trust can be improved through various strategies. It may be in the interest of the crisis negotiators to avoid mistakes as it is often mentioned to have a negative influence on trust (Earle, Siegrist, & Gutscher, 2012). According to the attributional bias, people evaluate positive events that happen to them as a result of their own personality while attributing negative events towards the situation. However, this phenomenon is reversed when people evaluate other people's mistakes. Other's successes are often associated with the situational circumstances and the failures are caused by the personality (Costa, & Neves, 2017; Mezulis, Abramson, Hyde, & Hankin, 2004). This pattern would suggest that a mistake by the crisis negotiator would likely negatively influence how the suspect judges the personality of the crisis negotiator. If this theory is applicable to crisis negotiations, the trust after an error, regardless of its nature, should decrease. Moreover, this effect might be reinforced if the error is perceived as being made intentionally compared to being made by accident. People who detect a lie are less likely to trust the lying party again in the future (DePaulo, & Kashy, 1998). Hence, the trust in the negotiator might decrease

and it might eventually harm the negotiation process if the error is perceived as a deliberate lie instead of an accident. Consequently, the first hypothesis for this study emerges:

H I: Suspects who perceive the error as made on purpose have lower trust in the crisis negotiator compared to suspects who perceive the error as an accident, regardless of the response. The control condition, in which no error is made, shows the highest amount of trust in the crisis negotiator.

Responding to errors

There is evidence that based on the crisis negotiator's response, trust is affected differently (Oostinga, Giebels, & Taylor, 2018-b). Three of the most often used responses are apology, deflection, and denial. If a sincere apology is expressed after an accidental error is made, the trust in the crisis negotiator might not be significantly negatively influenced (Ferrin et al. 2007). On the contrary, it might even have a positive influence because the crisis negotiator is seen as more humane. Hypothetically, it could change the suspect's view of the crisis negotiator from a part of a powerful police force to a human being that makes mistakes like everybody else, which might increase trustworthiness. With the correct response, an accidental error might not be as hindering to the negotiation as the previously described models assume. Hence, a sincere apology might increase the overall trust towards the crisis negotiator compared to a situation in which no error is made.

Another possible way to react to an accidental error is to deny that the error happened. The effect of apology and denial on trust restoration was investigated by Kim, Ferrin, Cooper, & Dirks (2004). The study suggests that denial results in a lower trust rating than an apology for competence errors. However, denial resulted in more trust when the error was an integrity matter. The accidental error that is simulated in this study will consist of an accidental wrong allegation of the suspect by the crisis negotiator. Since the accidental error used in this scenario is of a competence nature, the expectation is that denial will result in a low trust rating.

The third response that might occur during a crisis negotiation is a deflection. The deflection of blame could hypothetically shift the blame away from the crisis negotiator after an

accidental error is made. The negative effect of the accidental error on trust ratings might be mitigated by the deflection if the suspect thinks the crisis negotiator is not to blame for the accidental error. However, it is hypothesized that deflection after an accidental error is not as effective as a sincere apology. Hence the second and third hypotheses are:

H II: After an accidental error is made, denial as a response will be associated with the lowest trust in the crisis negotiator compared to the other response categories: apology and deflection.

H III: After an accidental error is made, an apology will lead to more trust in the crisis negotiator compared to a situation in which no error was made.

Trust in an individual vs trust in an organization

Trust is often not further specified in the strategies and models. Yet, trust ratings can be applied to individuals and organizations separately (Schoorman, Mayer, & Davis, 2007). According to Zaheer, McEvily and Perrone (1998), interpersonal trust and trust in organizations are separate constructs, while still being related. While the crisis negotiator is still seen as a part of the police force, different response options may affect the trust in the negotiator and the overall police force differently. And while the trust in the crisis negotiator and the police may be correlated, they may influence the suspect's behaviour differently.

The idea to use deflection as a response mechanism arises from the concept that if someone else is to blame for a mistake it will negatively affect the others instead of the crisis negotiator. It might be desirable to shift the blame to a more abstract concept such as the overall police instead of shifting the blame to a single individual, in this case, the crisis negotiator. Rousseau, Sitkin, Burt, & Camerer (1998) argue that trust must be built. And in contrast to the crisis negotiator, which the suspect has never met before, the trust does not need to be built from the beginning. Moreover, the misbehaviour of a single individual as part of a larger group will reflect negatively on the whole team, but it might absorb the trust violation better due to the pre-existing concept of the police with all its individual members. As long as the whole police force is not deemed untrustworthy by the suspect from the beginning, it is hypothesised that deflection will decrease

overall trust towards the police but not as strong as it may have been for an individual. It is hypothesized that a deflection does not reduce the overall trust violation. It only shifts the trust violation form the crisis negotiator to the overall police force. During a crisis situation, the crisis negotiator functions as the connection between the police and the suspect. The crisis negotiators are communicating constantly with the suspect and a trust violation might have a more severe impact on the crisis negotiation if the negotiator is to blame instead of the police. If it is possible to shift the blame from the crisis negotiator to the overall police force through a deflection it could be used to conceal the error to a certain degree and lead to more trust in the crisis negotiator. The distrust is deflected and shifted to the police and therefore may not negatively affect the trust towards the crisis negotiator. The following hypotheses emerge:

H IV: After an accidental error is made, the deflection will decrease the overall trust towards the police compared to the situation where no error was made.

H V: After an accidental error is made, the deflection will not decrease the overall trust towards the crisis negotiator compared to the situation where no error was made.

Methods

Participants

The participant-set for this study included 134 students who participated for course credit or voluntarily. The sample consisted of 35 students from the University of Twente as well as 99 students from other Universities. The participants were divided into six conditions and one control group. A rule-of-thumb estimate of 25 to 30 participants per condition was evaluated as sufficient. After the data collection was completed, it was investigated if the error was noticed by the participants. Whether a participant noticed the error or not was collectively determined by the four researchers working on this project, based on the answers that the participant gave to the questions of the crisis negotiator. 54 participants did not finish the questionnaire. 14 participants did not notice the error and 2 participants did not fill out the questionnaire correctly and were therefore removed from the study. In the end, 64 participants remained. The number of participants in each condition can be found in Table 1. The remaining participant-set consisted of 4 Dutch students, 56 German students and 4 students from other countries. Furthermore, 23 of the students were male and 40 were female. The mean age was 22,2 (*SD*=1.89) years.

Table 1. *Number and percentages of participants for each of the seven condition after the removal of participants. N = 64*

Condition	Frequency	Percentages
On purpose/ Apology	10	15,6%
On purpose/ Denial	8	12,5%
On purpose/ Deflection	10	15,6%
Accidental/ Apology	7	10,9%
Accidental/ Denial	9	14,1%
Accidental/ Deflection	8	12,5%
Control/ No Error	12	18,8%

Measures

The measured variable trust was divided into trust in an individual and trust in an organization. After the crisis negotiation, the effect of the different conditions on trust was measured.

Trust in the crisis negotiator. There are no existing scientific scales to measure trust in crisis negotiations specifically. The trust measurement scale that was used in this study was derived from the scale of Kelly, Njuki, Lane, & McKinley (2005). This scale was used for reference because it was designed specifically for emergency room doctors. The emotional involvement in crisis negotiators is comparable with experiences of emergency room doctors and both need to work together with the subject to resolve the situation in the best possible way. The original 18-item, 5-point Likert Scale was reduced to 5 items, 5-point Likert Scale. A score of 1 indicates the lowest trust while a score of 5 resembles the highest trust. First, items that were only applicable to doctors but not crisis negotiators like: "I would be willing to be seen again in this ED in the future" were removed. From the remaining items, 5 were selected that cover different areas of trust to ensure high validity. According to Mayer and Davis (1999), the areas: integrity, trust, benevolence, and propensity are important to the overall measure of trust. Additionally, Mayer et al. argue that ability is also an important part of trust and it was not included in Kelly et al.'s original scale. Therefore, a sixth item was added to include the aspect of ability. The 6th item was checked for validity. The factor analysis showed an eigenvalue of .56. Therefore, the item was retained. The average mean was computed from the individual trust ratings of the items. Item 4 is reverse coded. The complete item list with corresponding areas can be found in Appendix A.

Trust in the police. The trust-scale was duplicated to measure trust in an individual and trust in an organization separately while also ensuring comparability. The name of the crisis negotiator, "Anne", was replaced by "the police", while the rest of the scale remained unchanged. Factor analysis showed an eigenvalue of .93 for the added sixth item.

Procedure

Participants were recruited through Sona Systems, which is the test subject pool of the University of Twente. Additionally, students were recruited through distribution by the four researchers working on this project and asked to share it themselves, which resulted in snowball

sampling. All participants used their own laptop, computer, or smartphone to access the link. The participants were asked to fill out informed consent and the Behavioural, Management and Social sciences ethics committee of the University of Twente approved the study from an ethical standpoint. In this study, the participants were asked to imagine that they encountered several personal issues, work overload, and highly stressful deadlines that resulted in the intention to kill themselves. In the scenario, the participants were presented with a short, first-person video that shows how they barricaded themselves in a room at the University. Additionally, they also saw a gun in their backpack. The video, as well as a student scenario, were used to increase identification with the scenario. After the video, the police were approaching the participant through a Laptop that was located nearby. The interaction was pre-programmed. A pre-programmed online interaction was chosen to ensure that all participants are presented with the same conditions. The communication through an online device is comparable with face to face communication. Furthermore, online scenarios are used in crisis negotiation training (Vecchi, Hasselt, & Romano, 2005).

During the interaction, the crisis negotiator Anne communicates with the participants that were asked to imagine that they barricaded themselves. The participants receive messages from the crisis negotiator and can fill in their response in a textbox. The complete scenario description, as well as the crisis communication script, can be found in Appendix B. The use of the online scenario ensured comparable data and the following questionnaires were answered under the same circumstances by every participant. Furthermore, the online scenario made it possible to make no error/ an accidental error and an error on purpose and measure the effects accurately.

After the crisis negotiation was completed, the participants were asked to fill out the questionnaires. The effect that the error manipulation and corresponding response had on trust was measured separately. For this study, a between-subjects design was used.

Error manipulation

The three error conditions that were used in this study were no error, error on purpose and accidental error. The error on purpose was simulated by adding the sentence “Say something incorrect on purpose, the suspect might react to that” before the interaction. In the accidental error condition, the error was not preceded by this statement, thus appeared to be made accidentally. The control group did not experience an error at all. The error itself was simulated by the statement:

“Ok. So you barricaded yourself because you lost your part-time job.” which was not mentioned in the initial problem description. Therefore, it was a false accusation.

Response manipulation

For the conditions error on purpose and accidental error, 3 separate response options each were simulated. The first response option apology was represented by the phrase: “I got it wrong, I am sorry.” Next, denial was depicted by the phrase: “I didn’t get it wrong. Lastly, the response condition deflection was described by the phrase: “My colleague gave me the wrong information”.

Results

Scale reliability

The inter-correlations between the variables age, gender, nationality and mean trust scores of the crisis negotiator and the police can be found in Table 2. As can be expected the trust in the crisis negotiator and the trust in the police correlate positively. Additionally, the analysis of the data showed the overall mean trust levels of the crisis negotiator and the police seem to be similar across the different conditions. It appears that age correlates negatively to trust in the crisis negotiator and positively to trust in the police. However, the p values are also fluctuating between $p = .05$ and $p = .61$ which questions the significance of the findings. Likewise, the correlations with gender are not significant as well. The internal consistency of the scale is appropriate between the individual items for the crisis negotiator ($\alpha = .80$) and the police ($\alpha = .71$).

Table 2. *Correlational table with gender, age, mean trust of the crisis negotiator and mean trust of the police for N = 64*

Variables	*M*	*SD*	*α*	Gender	Age	Trust in the crisis negotiator	Trust Police
Age	22.22	1.90	-	-	1		
Trust in the crisis negotiator	2.88	0.75	.80	.176	-.249*	1	
Trust Police	2.76	0.58	.71	.203	.065	.602*	1

Note. The variable gender is coded 0 for female participants and 1 for male participants. Significant correlations with $p = < .05$ are marked with an *.

Hypothesis Testing

To test the first hypothesis: "Suspects who perceive the error as made on purpose have lower trust in the crisis negotiator compared to suspects who perceive the error as an accident, regardless of the response. The control condition, in which no error is made, shows the highest amount of trust in the crisis negotiator." a one-way ANOVA was conducted with the error conditions as the independent variable and the mean measurement of trust in the crisis negotiator as the dependent variable. There was no significant effect of an error made on purpose on trust compared to an accidental error and no error, [F (2, 61) = 0.112, p = .89]. The scores can be seen in table 3 and seem to decrease slightly after an accidental error was made and appear to further decrease when the error was made on purpose. The null hypothesis for hypothesis one cannot be rejected.

Table 3. *Means and standard deviations of trust ratings in the error conditions*

Error Condition	N	Mean	Standard deviation
On purpose	28	2.85	.65
Accidental	24	2.87	.89
Control	12	2.97	.70

The second hypothesis poses that after an accidental error is made, denial as a response will be associated with the lowest trust in the negotiator compared to the other response categories: apology and deflection. To investigate this, a one-way ANOVA was run with the response options in the accidental error condition as the independent variable and the mean trust of the crisis negotiator as the dependent variable. The analysis revealed that there appears to be a slightly lower trust rating in the denial condition compared to the others, as can be seen in Table 4. An Apology after an accidental error appeared to result in the highest trust rating. However, the results are not significant [F (2,21) = 1.438, p = .26]. The null hypothesis for the second hypothesis cannot be rejected.

Table 4. *Means and standard deviations of trust ratings of the crisis negotiator in the accidental error condition and the response options*

Error Condition	N	Mean	Standard deviation
Accidental/ Apology	7	3.29	0.91
Accidental/ Denial	9	2.53	0.99
Accidental/ Deflection	8	2.88	0.69

The third hypothesis "After an accidental error is made, an apology will lead to more trust in the crisis negotiator compared to a situation in which no error was made" was analysed with an independent-sample T-test. The independent, grouping variable is the accidental error condition with an apology and the control group and the dependent variable is the mean trust score of the crisis negotiator. The trust level of the accidental error condition combined with an apology (M = 3.29, SD = 0.91) appeared to be slightly higher than in the no error condition (M = 2.97, SD = 0.69). However, this effect is non-significant; $t(17) = -0.85$ $p = .41$. For the third hypothesis, the null hypothesis cannot be rejected.

The fourth hypothesis: "After an accidental error is made, the deflection will decrease the overall trust towards the police compared to the situation where no error was made" was analysed with an independent sample T-test with a deflection in the accidental error condition and no error as independent, grouping variables and trust in the police as the dependent variable. The analysis revealed that the trust ratings towards the police seems to stay the same after the deflection (M = 2.75, SD = 0.42) compared to the control condition (M = 2.76, SD = 0.53). However, this effect was not significant; $t(18) = 0.06$ $p = .58$. The null hypothesis for hypothesis four cannot be rejected.

The fifth hypothesis: "After an accidental error is made, the deflection will not decrease the overall trust towards the crisis negotiator compared to the situation where no error was made." was also analysed with an independent sample T-test with a deflection in the accidental error condition and no error as independent, grouping variables and trust in the crisis negotiator as the dependent

variable. The analysis showed that deflection seems to slightly decrease the trust rating towards the crisis negotiator (M = 2.87, SD = 0.69) compared to the control condition (M = 2.97, SD = 0.70). There is no significant difference between the two groups; $t(18) = 0.30$ $p = .64$. There is no statistical evidence against the hypothesis of no difference for the fifth hypothesis.

Discussion

The focus of this study was to investigate if purposefully posing errors in crisis negotiations could be used as an alternative strategy to increase trust ratings. Furthermore, it was researched whether different responses after an error is made influence the trustworthiness differently. The statistical analysis of the results led to the rejection of four out of five hypotheses.

Altogether, it can be said that the first three hypotheses concerning the error manipulation and response options showed signs that the individual hypothesis may remain feasible. The direction of the effects appeared to go in the hypothesized direction in all three cases. And while the p-value indicated a very low significance of the results, the fact that all the first three hypotheses resulted in a small but insignificant outcome makes it less likely that it is due to pure chance. Moreover, previous research obtained similar results regarding the response after an error was made in crisis negotiations (Oostinga, Giebels, & Taylor, 2018-b). The first results of the first hypothesis seemed to indicate that purposeful errors produce lower trust ratings than accidental errors. An alternative explanation for this phenomenon could be related to the online nature of this study. People might have a higher tolerance for errors in an online scenario and especially in an academic setting compared to a real face to face crisis negotiation. This possible higher tolerance would not be applicable if the suspect is aware of the fact that the error is made on purpose. Therefore, the results of the first hypothesis could also partially be explained by the error tolerance for online studies by the participants.

The result of the third hypothesis may seem counterintuitive at first because it seems to show an increase in the trustworthiness after an accidental error occurred and the crisis negotiator apologized compared to the no error condition. However, the results seem to be in line with the hypothesis and the work of previous studies (Ferrin et al., 2007; Oostinga, Giebels, & Taylor, 2018-b). This phenomenon should be analysed in detail and with a larger sample size in future studies.

The fourth and fifth hypotheses focused on the response deflection after an accidental error was made. The fourth hypothesis was rejected by the statistical analysis and for the fifth hypothesis, there was no evidence against the hypothesis of no difference. However, the fifth hypothesis predicted that there would be no difference between the control group and the trust towards the crisis negotiator after an accidental error was followed by a deflection. Since there was no significant difference between all the groups, this result may not be conclusive. In addition, the

trust appears to slightly decrease, which is the opposite of what was hypothesized. While this apparent slight decrease is not a significant result, it still questions the reliability of the analysis. If the results are considered as a whole, the findings of the fifth hypothesis should be critically evaluated.

The previous literature review pointed out that trust in an individual and trust in an organization can be viewed as different constructs, while they still are related. Certain events will have different consequences on the two types (Zaheer, McEvily and Perrone, 1998). In this study, it was hypothesised that if the crisis negotiator shifts the blame towards the colleagues, it would reflect negatively on them while not affecting the crisis negotiator. However, there is no indication in the results that this may be the case. On the contrary, the analysis of the data showed that the deflection appeared to result in a decreased trust towards crisis negotiator but did show no signs of affecting the trust towards the police. Possible reasons for this observation might be that the suspects never had direct contact with anyone except for the crisis negotiator. The only contact person was the crisis negotiator. Therefore, it may be doubtful whether the colleague indeed made a mistake or if it was just an excuse. If this action is perceived as an excuse one would expect to see the same change of trustworthiness as in the denial condition. Nonetheless, there is a degree of uncertainty that may mitigate this negative influence and leads to the results that were present in the analysis of the second hypothesis. Future studies about deflection could include the colleague that made a mistake in the initial scenario description to circumvent this problem. Deflection seemed to achieve slightly better results than denial but was still not deemed as trustworthy as an apology after an accidental error was made by the participants.

In line with this finding, Driedger, Mazur, & Mistry (2014) found that assigning blame shifted from being directed towards a large group, in this case, the government, towards more specific targets and individuals as new information became available. This might imply that deflection is not the desirable response strategy or should be combined with an apology. Future research should consider investigating the effects of deflection of separate members that were involved in the negotiation and how the combination of response strategies affects the perceived trustworthiness.

Limitations and direction for future research

None of the hypotheses showed significant results. Implications and directions for further research are based on the directions that were observed in the data. The unsatisfactory significance values of this study can partly be attributed to the lack of participants. The rule of thumb estimate determined that 25-30 participants per condition were needed to get a representative sample. Unfortunately, the number of participants in this study met only one-third of the estimated requirement. Therefore, it was not possible to achieve significant results. During the data gathering, it was foreseeable that the required number of participants would not be accomplished. The possibility to increase the possible set of participants by loosening the requirements, for example by removing the need to be a student to be a suitable candidate, was not considered feasible. Despite low participant numbers, the four researchers working on this project decided to keep the requirements to ensure reliable data. Participants were already asked to imagine themselves in highly stressful situations and to experience unusual circumstances. The scenario was specifically designed for students and the inclusion of non-students may have compromised the data. The final decision was to stick to the original set of requirements to ensure that the selected participants produced accurate results. A larger sample size would probably increase the significance of the results because it would provide means that are more accurate. The margin of error, as well as the effect if individual outliers would be reduced by a larger sample size. This might improve the significance values of the results and increase the meaningfulness of the inferences. However, it also has to be considered, that partly the means of the trust measurements were close together, especially for hypothesis one and four, and may not show improved significance scores with a larger sample size.

Another limitation of the study might include the nature of the online study. In rare cases, the pre-scripted response was not what the participant was expecting and caused confusion. In some cases, this led to the participant missing the error. In the end, this resulted in the removal from the data set. On the other side, the online nature of this study could be considered a strength due to the ensured comparability of data. It is difficult to model extremely stressful situations that people usually have not encountered in their lives in a scientific setting. It would be unethical to test the effect of errors in real crisis negotiations and the academic design will always differ from the real setting to a certain degree due to the lower emotional involvement. There were only a few participants that did not perceive the error as intended and for the remainder of the participant set

it meant that everyone was presented with the same conditions. In future studies, the authenticity could be increased by implementing a real conversation with a trained crisis negotiator instead of using a preprogramed scenario.

A further limitation might be that the scenario was specifically designed for students. This scenario was used because it increased the identification with an otherwise unfamiliar situation. However, it restricted the participant pool. Students are not the only people that might encounter a crisis situation. Other groups might react differently to the error and response manipulation and were not included in our sample. The same phenomenon applies to different nationalities. Our study included mostly German and Dutch participants. Results might differ if a more diverse participant set is selected. Alternative strategies might be implemented for different groups. As was mentioned in the TCC-model, higher linguistic style matching resulted in more trust in the crisis negotiator (Taylor, Thomas, 2008). This scenario was specifically designed for students. If it would be applied to other groups, it might decrease identification and the linguistic style matching and therefore result in an overall lower baseline of trust scores. Future studies should investigate if different groups react differently to this scenario.

Lastly, the participants had to imagine that they committed exam fraud. It could be questioned whether the participants felt guilt for the imagined crime. It was not further evaluated in this study, however, the amount of guilt that the participants felt might influence the results. The implications of the study might not be applicable to real crisis negotiations because they might involve the feeling of genuine guilt. Future studies might instruct the participants to actually steal the exam documents in an academic setting to increase the feeling of guilt.

Conclusion

The main essence of the results is that while the results are not significant, they suggest that firstly, in terms of trust perceptions errors should not be made on purpose. Secondly, when an accidental error occurs, the best strategy to repair trust may be to offer a sincere apology. And lastly, that an accidental error seems to reflect upon the crisis negotiator and not the police. If applied, these rules may be beneficial in crisis negotiations and ultimately save the lives of involved suspects, police officers, and hostages. Moreover, the implications of the results of this study may

be applicable to areas beyond crisis negotiations. If during regular negotiation or communication trust is violated, the results might still be applicable. Wherever a trust violation occurs as a result of an error or mistake, the results of this study may indicate that it is advisable to avoid purposefully making mistakes and sincerely apologizing whenever an error is made accidentally. Blaming the error on someone else might not impact trustworthiness as negatively as actively denying is but it appears to be still worse than apologizing.

To conclude it can be said that the research should be repeated with a larger participant set. Still, the implications of the apparent findings may be helpful to crisis negotiation teams. Making mistakes is human and they cannot be avoided. However, errors should be addressed to increase trust during a crisis negotiation. Therefore, it should be part of the training of crisis negotiators to deal with errors in an appropriate way. This study in a rather academic setting opens a way for more in-depth research to identify the exact effects of different response strategies. Any strategy that can help to prevent further escalation, and to ensure that disasters such as the hostage situation of Waco in 1993 do not repeat itself, need to be studied and applied as fast as possible ("Waco Siege", 2018).

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Appendix A

Scale items for trust measurement in Anne and the Police with the corresponding areas Mayer et al. identified in their "Integrative Model of Organizational Trust"

1. I was treated like an individual, not a case number by Anne/ the police. (Trust)

2. Anne/ The police took me seriously. (Integrity)

3. Anne/ The police was/ were honest in dealing with me. (Integrity)

4. Anne/ The police appeared willing to help. (Benevolence)

5. Anne/ The police should have shown more respect. (Reverse Coded) (Propensity)

6. I feel very confident about Anne's/ the police's skills (Ability)

Appendix B

Scenario Description + Script

Scenario

The participants were asked to imagine the following situation:

You are a 2nd-year student. Since you lack the motivation to study for exams and do the assignments, you always start to work just before the exam or the deadline. This has caused you trouble in the past semesters but still, you always managed to pass. Last semester, you did not pass one component and have to do two resits while you also have to work for the current semester. Now, you have to study for two resits, one theory exam and you have to work on your research project. You feel more and more drained by the stress.

In addition to that, your family circumstances are difficult. Your father is violent and your mother is addicted to alcohol. This morning you found a gun in your mother's bedside cabinet. Because you are afraid that she wants to commit suicide, you put the gun into your backpack and drive to the university to meet your best friend, to talk and study together.

After having a small conversation about the current situation your friend tells you that you are annoying and that you always talk about your family and university problems but never do anything against it. You are sad about this, because you expected your best friend to support you instead of blaming you. You get into an argument and you lose your temper. You run into a room and lock the door.

Afterwards this description is portrayed:

Many people heard the argument between you and your friend and now they are standing in front of the room. You think about the gun in your backpack and shout at the people in front of the room that you have a gun and that you will shoot if somebody tries to break into the room. In a

short amount of time, all people went outside, and the police were engaged. The police is trying to contact you via the computer which is in the room.

Next, the participants are divided into 7 groups (2(Error: purposeful, accidental) x 3(Response: apology, denial, deflection) + control group)

<u>For the condition “intentional error”, the following message was displayed:</u>
You hear the police talking in front of the door. You can hear that they are talking about you. They say “Say something incorrect on purpose, the suspect might react to that”.

<u>For the condition “accidental error”, the following message was displayed:</u>
You hear the police talking in front of the door. You can hear that they are talking about you. They say “The suspect studies at this university”.

The Questions:

To ensure the anonymity of the participants’ everyone is getting a number.
Your number is 150.
It can take some minutes until the police respond.

Unfortunately, we were unable to make video contact with the police officer. That is why you are only able to talk over chat. Anne sends you the following message:

Anne: Hello, I am Anne from the police. Who am I talking to?

Answer

Anne: I was told that you barricaded yourself in a room?

Answer

Anne: Can you tell me a bit more about what is going on and why you have barricaded yourself in a room?

Answer

For the condition “no error”, the following message was displayed:

Anne: Ok. So you barricaded yourself and you are a student here.

For the condition “error”, the following message was displayed:

Anne: Ok. So you barricaded yourself because you lost your part-time job.

Answer

RESPONSE (for the conditions “error „and “error on purpose):

Apology: I got it wrong, I am sorry.

Denial: Anne: I did not get it wrong. You misunderstood me.

Deflect: Anne: My colleague gave me the wrong information.

Control: I have written it all down.

Answer

Are you alone in the room?

Answer

What is your exact plan?

Answer

The connection interrupts

This is the end of the scenario. Afterwards, the participants were asked to fill out the questionnaires.