Communication Error Management in Law Enforcement Interactions: A Sender's Perspective

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Authors' Note

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Biographical Sketches

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Miriam Oostinga is a Criminologist, Investigative Psychologist and doctor in Social Psychology. This work was part of her PhD project that focused on communication error management in suspect interviews and crisis negotiations at the department of Psychology of Conflict, Risk and Safety of the University of Twente, NL. She currently works as a consultant in the safety domain at Twynstra Gudde in which she translates knowledge on behavior to practice and policy.

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Prof. Dr. Ellen Giebels is full professor Social Psychology of Conflict, Risk and Safety and head of the department Psychology of Conflict, Risk and Safety of the University of Twente, NL. Her work focuses on a better understanding of high-stakes, real-world conflicts and how they might be resolved peacefully. Since 1996, she works with Dutch, other European and North American police forces, justice departments and the military on topics related to how to promote behavioral change, on intelligence gathering and deception detection, and on the psychology of victimization and conduct after capture. In 2012, she received the Rubin Theory-to-practice-award, co-sponsored by the International Association for Conflict Management (IACM) and the Harvard Program on Negotiation.

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Abstract

We examined the psychological and behavioral consequences of making a communication error in expressive crisis negotiations and instrumental suspect interviews. During crisis negotiation (N=133) or suspect interview (N=68) training, Dutch police and probation officers received preparation material that led them to make either a factual, judgment, or no error. Across both studies, errors increased officers' negative affect, with errors leading to more stress in crisis negotiations and more distraction in suspect interviews. When comparing factual to judgment errors, factual errors led to more distraction in crisis negotiations and more negative affect in suspect interviews. Analysis of the transcribed dialogues identified four categories of response: apologize, exploration, deflect, and no-alignment. Of these, negotiators used all four regularly, while interviewers predominantly used exploration and deflect. Our findings revealed the potentially negative effects of errors on officers and offered insights into how they could best focus to induce an appropriate response.

Keywords: Communication errors, response strategies, error management, suspect interview, crisis negotiation.

Communication Error Management in Law Enforcement Interactions: A Sender's Perspective

Errors can have important consequences for those working in safety-critical interactions such as crisis negotiations and suspect interviews. However, most studies of these interactions have focused on positive behaviors and their role in fostering rapport (Alison, Alison, Noone, Eltnib, & Christiansen, 2013; Donohue & Roberto, 1993) and cooperation (Giebels & Taylor, 2009; Richardson, Taylor, Snook, Conchie, & Bennell, 2014). Fewer studies have considered negative behaviors and, in particular, what happens when an officer makes a mistake. An exception is Oostinga, Giebels, and Taylor's (2018a; 2018b) demonstrations that communication errors occur often and have effects on trust, the relationship, and information provision. However, their work did not consider the psychological effects errors have on the error maker (i.e., sender). If we better understand officers' internal state after recognizing their error, then we can develop evidence-based training and prepare them for when this situation occurs.

In this paper, we investigated the effect of factual errors (use of a wrong name or date) and judgment errors (misrepresentation of feelings of a receiver) on the interactions that occur as part of an expressive crisis negotiation (Study 1) and an instrumental oriented suspect interview (Study 2). Both types of interactions are time sensitive, high-pressure interactions with large amount of unverified information, making erring inevitable. Yet, crisis negotiators are seeking information to provide care and help, while suspect interviewers have a more instrumental goal of gathering information (Beune, Giebels, & Taylor, 2010; Vecchi, Van Hasselt, & Romano, 2005). These different foci may impact the error sender's psychological and behavioral reactions.

Following Oostinga et al. (2018a), we defined communication error management as a four-stage process: (1) the law enforcement officer utters a message; (2) the suspect judges the message to contain an error; (3) the suspect (in)directly addresses the error; and, (4) the law

enforcement officer realizes the error and responds. To investigate this process and the effects on the error sender, we developed and implemented a prototypical communication training exercise in which we let law enforcement officers unwittingly make a mistake and examined their cognition, affect and behavior. At the cognitive level, we explored the extent to which officers perceive stress or distraction after the making an error, since research shows that errors can influence focus (Dimitrova, van Dyck, van Hooft, & Groenewegen, 2014). At an affective level, we examined the extent to which officers felt negative affect (i.e., self-oriented anger, shame and guilt) after making an error, since research suggests errors can trigger negative emotions (Rybowiak, Garst, Frese, & Batinic, 1999). At a behavioral level, we analyzed the type of responses officers used following the error, since research suggests that cognitive and affective states may interfere with a sender's communicative flexibility (Benoit, 2013; Keith & Frese, 2005).

Crisis Negotiations and Suspect Interviews in the Netherlands

Every police region in the Netherlands uses trained crisis negotiators to respond to reported suicide, kidnap, or hostage situations. Being a crisis negotiator is a part-time role that officers combine with other responsibilities, which can range from police detective to manager. Moreover, there are general police officers that have received extra training of how to respond when a crisis arises, and they are first at the scene. The same is broadly true for prison negotiators. Every state prison has specialized-trained personnel that respond when a crisis occurs in the prison itself. In both contexts, the goal of the officers is to achieve behavioral change of the suspect with the lowest physical threat possible. They are trained to achieve this by using open questions and active listening to acquire information (Giebels & Noelanders, 2004).

Every police region in the Netherlands uses trained police interviewers to elicit information from suspects. The focus on eliciting information, rather than seeking confessions, is

core to the Dutch approach, which is very much driven by the investigative interviewing model (Vrij, 2010). Officers training discourages the use of pressure tactics and focuses on communication skills that build trust and rapport to gather information.

Errors in Law Enforcement Interactions

The effectiveness of building a trusting relationship to gather information in law enforcement interactions is well documented (Donohue & Roberto, 1993; Walsh & Bull, 2012). Far less research focuses on what law enforcement officers do when something goes wrong in this process. However, in this and other domains, such as corporate brand crisis and leadership studies, research has suggested the importance of developing our knowledge of errors. For example, Thoroughgood, Sawyer, and Hunter (2013) have shown that leader errors may undermine a trusting relationship with (perceptions of leader task and relationship competence) and cooperation of (desire to work for the leader) their subordinates.

In interviews with experienced crisis negotiators, Oostinga et al. (2018a) found that errors may usefully be distinguished into three forms: factual, judgment and contextual error. A factual error occurs when negotiators convey the wrong information, such as using the wrong name. A judgment error occurs when the social or ethical issues surrounding the message are not appropriate, such as when the negotiator makes an inappropriate joke. A contextual error occurs when something goes wrong in the police practices, such as when equipment malfunctions and inhibits communication. The first two types of errors focus on the negotiation's actors rather than the procedure, and so they have been the focus of most research (and our focus here).

According to studies of organizational error making, one consequence of errors is that they lead to distraction and negative emotions (Rybowiak et al., 1999). This is true even when the consequences of the error are routine and far from the threat to life experienced in hostage crises. For example, in their study of 1155 observed errors by clerical employees, Brodbeck et al. (1993)

showed that the amount of time spent on errors is positively related to emotional strain. Of the available organizational research, none distinguishes between factual or judgment errors nor does it consider whether these affect an error sender differently. Yet, there is good reason to anticipate differences. Oostinga et al. (2018b) showed that errors in suspect interviews have a detrimental effect on the trust (i.e., a cognitive effect) and rapport (i.e., an affective effect) experienced by the suspect. From a law enforcement officer's perspective, communication errors may have a negative influence on the sender because they jeopardize his or her goal of building a trusting relationship with the suspect to provide care and help. Furthermore, Oostinga et al. (2018b) found that judgment errors have a more negative effect on suspect's cognitive and affective experience when compared to factual errors. This may be the result of a judgment error being seen as an ego threat by the suspect, as they perceive that they are not being taken seriously (Ren & Gray, 2009). We therefore predicted that, from a sender's perspective, judgment errors will be perceived as being more problematic than factual errors as they put more at stake:

H1a: Officers who make a judgment or factual error experience more stress, distraction, and negative affect, compared to those making no error.

H1b: Officers making of a judgment error will experience more stress, distraction, and negative affect than those making a factual error.

Response Strategies in Law Enforcement Interactions

People differ in their responses to errors (Benoit, 2013). Recently, Oostinga et al. (2018b) assessed how responses influence the cognition (affective trust), affect (rapport and hostility) and behavior (willingness to provide information) of recipients. They compared three strategies self-identified by negotiators: contradict (denying responsibility), apologize (taking responsibility), and accept (taking responsibility and assuring prevention). They found that contradict decreases rapport from the perspective of the receiver, while accept reconciles it to the level of no error

made. Apologize seems more effective for affective trust and rapport in crisis negotiation, while accept seems more effective for the willingness to provide information in a suspect interview.

What this and other research shows is that, to respond in a way that reconciles the relationship with the other party, officers should address what did not align with the suspect (Benoit, 2013). Yet, when someone is distracted, they often have no cognitive capacity to recognize the consequences of their behavior, affecting their capacity to respond appropriately (Weiner, 1985). Their focus may be on the self and who is responsible, leading to a response that aligns more with the sender's focus and feelings and an evasion of responsibility. Moreover, in their study of self-regulation in error management training, Keith and Frese (2005) showed that training in cognitive-attentional focus or emotion control, led trainees to show more flexibility when presented with new problems compared to trainees who received error avoidance training. Thus, law enforcement officers should be more flexible in responding to the communication error they have made and provide a solution to the problem, rather than seek to avoid it at all costs. Consequently, we hypothesized that:

H2a: A decrease in the law enforcement officer's experienced stress, distraction, and negative affect leads to the use of an apologize or accept over a contradict response.

H2b: An increase in the law enforcement officer's experienced stress, distraction, and negative affect leads to the use of a contradict over an apologize or accept response.

Study 1

Study 1 assessed the effect of errors on a law enforcement officer's cognition and affect and how this influences their error response, in an expressive interaction. Because we were interested in the effect of errors on officer's psychological and behavioral responses, we decided to take an experimental approach with professional crisis negotiators and mock suspects. This enabled us to focus on the relationship between the psychological impact and behavioral

responses of the law enforcement officer, while controlling for external influences. Negotiators were asked to prepare a negotiation and their preparation material led them to make one of two errors: factual (actor was instructed that the character had a different name) or judgment (actor was instructed that the character did not want to be addressed by the first name). We compared their data with a control condition in which no error was made.

Study 1

Method

Participants. Participants were 64 (42.1%) crisis negotiators from correctional institutions (e.g., State prisons), 38 (25.0%) police trainee crisis negotiators, and 50 (32.9%) police officers taking a training course taught in Dutch. The correctional negotiators receive a 1-day course every six months at their training institute, in which negotiating skills are learned and refreshed. The police officers undertake a specialized course lasting 3 weeks, which is provided by the police academy and includes a test for proficiency. The police officer's crisis communication course is voluntary training provided by the police academy in which police officers learn how to best react as a first responder to a crisis incident. Because our definition of communication error management required the error sender (the negotiator) to (in)correctly use the name of the suspect, 18 negotiators (1 control, 6 factual, and 11 judgment) who did not use the name were excluded from further analysis. One other negotiator was excluded because he failed to fill out the post-experiment questionnaire. Of the remaining 133 negotiators, 106 were male (79.9%), their mean age was 39.9 years (*SD* = 8.5), and they had worked as a crisis negotiator in a correctional institution or with the police for 11.8 years on average (*SD* = 7.7, Range: 1 month - 36 years).

Measures. The original design also included a pre-negotiation 9-item questionnaire adapted from Rybowiak et al. (1999) to determine participants' orientation toward error

management vs. error prevention. Participants completed this questionnaire at least 1 day before the training and they were unaware of its connection with the training. However, analysis showed high scores on error management and low scores on error prevention, and no significant effects on stress, distraction or negative affect. A possible explanation for this result is that negotiators sought to demonstrate on the questionnaire the job skills that they had mastered. Therefore, reporting that you are good in managing errors could have been a tactical decision of the negotiators. Consequently, we decided to remove these factors from further analysis.

Negotiator's cognition and affect. A post-experiment questionnaire required negotiators to self-report several different aspects of their experience. They were first asked for open responses to three questions: 'How did you experience the conversation?', 'What did you perceive to be positive?', and 'What did you perceive to be negative?' They were then asked to respond on a scale from 1 (Not at all) to 5 (Very much) to five items, each measuring a different construct: 'To what extent did you feel tension after using the wrong name?' (stress); 'To what extent did you get distracted from the job after using the wrong name?'(distraction); 'To what extent were you angry at yourself after using the wrong name?' (self-oriented anger); 'To what extent did you feel shame after using the wrong name?' (shame), and 'To what extent did you feel guilt after using the wrong name?' (guilt). We counter-balanced the order of asking to what extent they felt guilty and shameful, to overcome any order effects (Niedenthal, Tagney, & Gavanski, 1994). We used single item measures because of time constraints, recognizing that many constructs can be adequately captured with one item (Fuchs & Diamantopoulos, 2009).

Of the five items, three (anger, shame and guilt) ostensibly measured different aspects of negative affect. Pairwise correlations among these items were high (Range $r(131) = .55 - .68$, $p < .001$), and a Principle Components factor analysis on the three items revealing one underlying factor (based on Eigenvalues greater than 1) that explained 74.32% of the variance.

Consequently, we decided to create a negative affect scale by averaging the scores on these three items, which showed high internal consistency (Cronbach's $\alpha = .83$). A higher score on this scale means that the negotiator experienced more negative affect.

Procedure. Negotiators undertook a prototypical role-play exercise often used during training sessions (Van Hasselt, Romano, & Vecchi, 2008), using a scenario adapted from Giebels, Oostinga, Taylor, and Curtis (2017). We consulted training staff of the Dutch crisis negotiation course and the prison negotiators course to make the scenario as realistic as possible. None of the participants refused to participate, as the experiment was presented as being part of their training course. The police negotiators' task, which was to negotiate via telephone with the suspect, was described as follows (information for prison negotiators between brackets):

> *Jaap Verhoeven barricaded himself in a room at the police academy (visiting area of the prison) with a knife. Jaap has threatened to commit suicide. Jaap only wants to talk to a negotiator. So far, no further information is known. The second negotiator is on his/her way but is delayed. You will have to start on your own. Goal: make contact, stabilize the situation, build a relationship, and – if possible – gain information and provide solutions to end this situation.*

The instruction about a second negotiator was necessary because negotiations are often carried out in pairs (Noesner, 1999). The negotiators are, however, trained to start the negotiation once they arrive at the scene (even if the second negotiator is not present), as contact distracts the suspect from the reason why he/she was there in the first place and makes them focus on the negotiator. We decided to let the negotiators perform alone in this instance to enable an analysis of their error response without interference from a second negotiator.

Having read the information, the negotiator was asked to contact the suspect over the phone. The suspect was situated in another room, had received the same instructions as the negotiator, was instructed to behave as naturally as possible, and give standardized reactions. The instruction also included a background story that accounted for his presence at the scene. That is, he wanted to become a negotiator but was not allowed to take part, as he was not a police officer (prison guard) and was there to put the negotiators under pressure to let him enter the course. The people who played the role of suspect were highly experienced actors who are trained to play these types of roles. The negotiation was ended after 5 minutes. We decided to focus on the first 5 minutes because this time is important for creating a first impression and may set the scene for the remaining interaction (Wells, Taylor, & Giebels, 2013). It also ensured the interactions were comparable (i.e., level of the relationship, no interference of a second person). After the negotiation, the negotiator was told that the role-play was over and that we were interested in their reflective observations about the negotiation. They then completed the post-experiment questionnaire and were debriefed. This study was approved by the ethical committee of the Faculty of Behavioral, Management and Social Sciences of the University of Twente.

Error manipulation. Each negotiator was assigned to one of the three error conditions: factual, judgment or control. All negotiators received the same instruction, with the suspect's name being Jaap Verhoeven (see information above). By contrast, the instruction received by the suspect differed by condition and determined the type of error that the negotiator made. In the factual error condition, the suspect was told that his name was André rather than Jaap. Once the negotiator used the name Jaap, the suspect was instructed to respond with the sentence: 'No, you are not talking to Jaap!' In the judgment error condition, we instructed the suspect that his name was Jaap and that he did not want to be addressed by his first name, but by his surname Mr. Verhoeven. Once the negotiator used the name Jaap, he was instructed to respond with the

sentence: ‘How dare you call me Jaap!’ In the factual error condition, the negotiator used the inaccurate information that was provided and in the judgment error condition the negotiator took the wrong manner of addressing the suspect. As such, the negotiators made the mistake themselves and were not instructed to do so. In the control condition, we instructed the suspect that his name was Jaap and if the negotiator used the name to respond with the sentence: ‘Yes, my name is Jaap!’

We decided to use the suspect’s name for our error manipulation for three reasons. First, negotiators are trained to use the first name to contact a suspect. Thus, it was highly likely that the negotiators would use the name at some point. Second, it was possible to encourage negotiators to use the name by frequently using the name in the scenario instructions. Third, evidence from several domains highlights the importance of name to identity and behavior (Seeman, 1980), suggesting misnaming can be consequential.

Response coding. The first author and an independent coder read verbatim transcripts of each speaking turn after the pre-determined response of the suspect. The coders could not be held blind to the experimental condition but both coders were blind to the negotiator’s scores on the cognition and affect measures and the second coder was blind to the hypotheses. Since we had no prior expectation for the effects of the experimental condition (i.e., the type of errors) on the used response strategy this could not have led to confirmation bias. They independently identified four different forms of error response: apologize, exploration, deflect, and no alignment. In an initial coding, one coder had classified six types, but they could be re-classified in the four overarching types when was decided to only focus on the literal response and not on interpreting the meaning of the message. Apologize was an addressing response in which the negotiator took responsibility (e.g., ‘I want to apologize for that’). Exploration was an inquiring response in the form of a question or remark (e.g., ‘What is your name then?’). Deflect was an attributing response in the

form of a question or remark (e.g., 'Oh, they must have misinformed me'). No alignment was an unrelated response in which the negotiator said something completely off-topic (e.g., 'I am a crisis negotiator'). Note that our codes bear similarity to those used by Oostinga et al. (2018a, 2018b). The first author and a second independent coder who was instructed on the classification coded all the messages. Out of the 99 responses, 23 included a combination of responses. Specifically, the one's that used an apology combined this with deflect (n = 5), exploration (n = 7), no alignment (n = 7), and a combination of deflect and no alignment (n = 1). We also found a couple of exploration and no alignment combinations (n = 3). For the analysis, a response was assigned to the category that was most prevalent in the response. This resulted in excellent inter-rater agreement (Cohen's κ = .81). The few disagreements were resolved through discussion.

Results

Preliminary analysis. Table 1 presents the Means, SDs, and zero-order correlations among the study variables. As expected, Table 1 shows high correlations between the cognition measures of stress and distraction, and negative affect.

[TABLE 1 NEAR HERE]

Hypothesis testing. ***Error effects.*** Table 2 presents the negotiator's cognition and affect as a function of communication error. To test our predictions that the making of a judgment or factual error by a negotiator leads to more stress, distraction, and negative affect compared to the making of no errors (H1a) and this effect will be stronger for a judgment error than a factual error (H1b), we conducted a one-way MANOVA with communication errors as the Independent Variable and the three cognition and affect measures as the Dependent Variables. There was a significant multivariate effect of error type, $F(6, 258) = 5.66$, $p < .001$, with negotiators reporting significant differences in stress, $F(2, 132) = 7.30$, $p < .001$, $\eta^2 = .10$, distraction, $F(2, 132) = 5.31$, $p = .01$, $\eta^2 = .08$, and negative affect, $F(2, 132) = 13.64$, $p < .001$, $\eta^2 = .17$.

Since the sample sizes varied per condition, we have decided to take the Welch's *t*-test instead of the Students *t*-test throughout the paper (Delacre, Lakens, & Leys, 2017). In comparison to the control condition, the making of a factual error led to more stress, $t(79.74) = 3.36$, $p < .001$, $d = .74$, 95% CI [.29, 1.19], distraction, $t(66.80) = 2.95$, $p < .001$, $d = .65$, 95% CI [.20, 1.09], and negative affect, $t(83.82) = 5.66$, $p < .001$, $d = 1.25$, 95% CI [.77, 1.72]. A set of equivalent effects were found when comparing a judgment error to control, as it led to more stress, $t(75.23) = 3.82$, $p < .001$, $d = .74$, 95 %CI [.28, 1.19], and negative affect, $t(74.88) = 5.10$, $p < .001$, $d = 1.15$, 95% CI [.67, 1.62]. There was, however, no difference in the amount to which the negotiator got distracted, $t < 0.98$. Interestingly, the making of a factual error did lead to more distraction in comparison to a judgment error, $t(96.85) = 2.34$, $p = .02$, $d = .47$, 95% CI [.07, .87]. There were no significant differences in stress and negative affect, both *t*'s < 0.39.

[TABLE 2 NEAR HERE]

Enacted response strategies. Negotiators used the response strategy exploration the most frequent ($n = 42$), followed by apologize ($n = 28$), no alignment ($n = 16$), and deflect ($n = 13$). To test our predictions regarding the effects of negotiator's stress, distraction, and negative affect on response type (H2a and H2b), we computed binary logistic regressions in which stress, distraction, and negative affect were predictors for each of the four response strategies (coded as binary Dependent Variables, 0 = not used, 1 = used; one regression per response strategy). Table 3 presents the results of these regressions. As can be seen from Table 3, the full models for predicting apologize, exploration, and deflect were all significant, but the model for predicting no alignment was not. Consistent with H2a, both stress, Wald $\chi^2 = 4.11$, $p = .04$, and distraction, Wald $\chi^2 = 5.50$, $p = .02$, were significant predictors of negotiators' apologizing, with negotiators more likely to use an apologize response when they experienced more stress and less distraction. Similarly, stress was a predictor of exploration, Wald $\chi^2 = 4.96$, $p = .03$, with negotiators using an

exploration response more often when they experienced less stress. In partial support of H2b, negative affect was a significant negative predictor of deflect, Wald $\chi^2 = 6.68$, $p = .01$, with negotiators using more deflect responses when they experienced less negative affect.

[TABLE 3 NEAR HERE]

Additional analysis. Although we did not predict specific associations between type of error and type of response, it was interesting to explore whether such relationships were present. Consequently, we performed a chi-square test and a significant relationship could be found between error type (factual vs. judgment) and first response, X^2 (3, $n = 99$) = 10.36, $p = .02$. Follow-up analyses showed that this effect was mainly driven by the use of apologize and no alignment responses. That is, negotiators were more likely to use an apologize response after a judgment error than after a factual error ($U = 989.0$, $p = .04$, $r = .21$), while the reverse was true for the use of a no alignment response ($U = 1044.0$, $p = .05$, $r = .20$). No significant differences were found for the use of exploration or deflect.

Discussion

As predicted, our analyses demonstrated that making a communication error leads to more stress and negative affect, and that this influenced the kind of response used by a negotiator. Specifically, more stress and less distraction were associated with an apologize response, while less stress was associated with an exploration response. This separation of responses corroborates the notion that primitive forms of coping tend to occur when greater threat is perceived, while problem-focused coping arises when perceived threat is lower (Lazarus & Folkman, 1984).

What we did not assess in this study, however, is the effect of the other's party response on the enacted response. We would have expected that negative responses to the negotiator would strengthen the effects we observed. Moreover, we asked the negotiators to self-report on how the error affected their cognition and affect, but we did this after their behavior. We tried to

overcome this shortcoming by asking how they felt directly after the error, but it remains unclear what came first. It will be useful to invest effort in identifying a methodology that allows the causality to be disentangled, but, as with other areas of cognitive and affect research (Bagozzi, 1982), doing so is likely to prove a challenge.

One unexpected finding in our data was that factual errors were reported as more distracting than judgment errors. Our extra analysis provided some insight into this effect, since after a factual error, negotiators were more likely to use an explorative response. This suggests that negotiators put their specialized negotiator role aside and started to adopt a more evidence-gathering (i.e., interviewer) mode of interaction. By switching from a relational to evidence-orientated communicative frame (Taylor, 2002; Taylor & Donald, 2007), the error sender may try to understand what went wrong and provide viable solutions for why the error occurred in the first place. They also likely reduce the chance that the other party feels personally attacked (Giebels & Taylor, 2009). Those who did not engage in information gathering adopted a no alignment response – this response occurred more after a factual error compared to a judgment error – which showed the direct consequence of distraction. These findings are interesting when viewed in the context of Oostinga et al.'s (2018b) evidence that an error receiver's perceptions and subsequent behaviors are determined in part by how law enforcement officers respond to their error. If the negotiator perceives the impact of an error as more or less significant than experienced by the suspect him or herself, this may have a direct impact on whether the appropriate response is being used or not. It would, therefore, be interesting to further disentangle how the effects of errors on suspects are perceived by the negotiator and whether this estimation has a direct impact on how they respond to their errors.

The explanation offered up an interesting hypothesis about how the law enforcement officer's role influenced their error reactance. That is, if they focus on information gathering to

providing care and help, they may take a more relational approach, while if they focus on information gathering to detect crime, they may adhere to a more evidence-gathering format. It would be interesting to see whether the dispersion of the enacted response strategies is similar in an interaction that is focused solely on information gathering to detect crime. In the light of the previous findings, one would expect that in this context the use of an exploration response was more prevalent.

Study 2

Considering the possible contextual dynamics identified above, the goal of Study 2 was to replicate the findings of Study 1 and build upon it in four ways. First, we assessed an interaction in which the law enforcement officer has a different focus, to determine generalizability. Second, we sought to provide better insights into the psychological and behavioral effects of errors on the senders by asking them to imagine what the effect of their errors was on the other side. We expected them to perceive the consequences of judgment errors as more detrimental than factual errors, as that was the perception of the receiver (Oostinga et al., 2018b). We hypothesized:

H3a: *Officers making a judgment or factual error will report lower affective and cognitive trust perceptions, and rapport of the suspect, compared to those making no error.*

H3b: *The predicted impact of communication errors will be greater for a judgment error compared to a factual error.*

Third, we manipulated whether the suspect was cooperative or non-cooperative after receiving a response. In a suspect interview, the law enforcement officer wants to build a trusting relationship to make the suspect talk and provide information. We expected that when a suspect is non-cooperative after he/she has received an error with response strategy of the law enforcement officer, the negative effect of their error is more pronounced. We hypothesized:

H4: *The effect of an error on the officer's experienced stress, distraction, and negative affect will be stronger when a suspect is non-cooperative compared to cooperative.*

Fourth, following the critique of Study 1, we added an unobtrusive observation of the error sender's direct error reaction by measuring their electrodermal activity (EDA) during the interaction. Changes in EDA have been shown to correlate with changes in the activity of the sympathetic nervous system (SNS; Critchley, 2002), which is responsible for a person's fight or flight response. Consequently, EDA is used as an index of stress and cognitive load (Ströfer, Noordzij, Ufkes, & Giebels, 2015).

Method

Participants. Participants were 70 police officers from two police stations in the Netherlands who perform suspect interviews in their job. Two interviewers from the factual condition who did not make the intended error (i.e., they did not use any name) were excluded from analysis. Of the remaining 68 interviewers, 50 were male (73.5%), their mean age was 41.2yrs (*SD* = 11.0), they had an average interviewing experience of 13.4yrs (*SD* = 9.7, Range: 1 month - 42 years), and they reported interviewing approximately 3.16 hours per week (*SD* = 3.93, Range 1– 25 hours). One-third (32.4%) reported having received specialized interview training.

Measures. ***Negotiator's cognition and affect.*** We included the same post-experiment measures as in Study 1. Consistent with the findings of Study 1, we found significant correlations between our three negative affect items, *r's*(66) = 0.25 - 0.66, *p* = .04, and a principal components analysis (based on Eigenvalues greater than 1) revealed one underlying factor, explaining 62.62% of the variance. We thus again created a negative affect scale by averaging the scores on these three items (Cronbach's α = .70).

Electrodermal activity (EDA). We recorded exosomatic EDA with an alternating current using an Empatica E4 wristband on the non-dominant wrist of the interviewer. An EDA signal consists of two distinct levels: tonic and phasic EDA. Since the making of a communication error is a discriminative event in the interaction, we assessed the phasic response directly after the error (Setz et al., 2010). To extract the phasic from the tonic EDA signal, we executed a Continuous Decomposition Analysis using Ledalab (Benedek & Kaernbach, 2010). To control for individual variation in skin conductance, we subtracted the mean phasic EDA (2-12 seconds after they had received the response from the suspect on the error) from the mean phasic EDA during the baseline measurement (minutes 2-7). For two participants, we had to take the baseline after 30 seconds, as we did not have a baseline that was long enough otherwise. We found high fluctuations in the amplitude sum of our EDA measurement, Range: -0.54-7.49 μS (cf. Ströfer, Ufkes, Noordzij, & Giebels, 2016). Our analyses were thus performed on log-transformed data, but the reported statistics in Table 4 were based on raw data in μS.

Perceptions suspect. We added three items to the post-experiment questionnaire to measure the extent to which interviewers could imagine how the suspect experienced receiving the error. Specifically, they were asked to respond on a scale from 1 (Not at all) to 5 (Very much) to three items, each measuring a different construct: 'The suspect thought that I was good in empathizing when I used the wrong name' (affective trustworthiness); 'The suspect perceived me as being competent when I used the wrong name' (cognitive trustworthiness); and, 'The suspect judged our relationship to be positive when I used the wrong name' (rapport). A higher score on these items meant that the interviewer perceived the suspect to experience respectively more cognitive trust, affective trust, and rapport.

Procedure. Interviewers took part at work in a study from the University of Twente that "focused on the difference between interviewing alone and together." The participants were

recruited by a police officer contact and asked to take part the same day. Approximately half of the potential participants declined taking part due to the other work commitments. They were told the wristband "measured their feelings" in order to obscure precisely what was being measured. The experiment required interviewers to role-play a face-to-face interview with a suspect of a mock theft. The role-play scenario, which was based on the work of Beune, Giebels, and Sanders (2009), was provided to interviewers in a police report that was formatted in accordance with police guidelines. In the scenario, Jaap Verhoeven was suspected of stealing €200 from the University of Twente. During a study on food habits that took place at the police academy in which Jaap participated, the suspect had seen the opportunity to steal the money from the closet in the room of the researcher. The report included information on the available evidence, including the statement of a witness who had seen the suspect near the closet. It was the task of the interviewer to gather information and determine whether Jaap was guilty. The interviewer had 10 minutes to read the file information, while the Empatica E4 was already attached to establish the baseline of their EDA.

After the 10-minutes preparation time, the interviewer was asked to enter the interviewing room, which was a room used for actual suspect interviews in which the suspect (an experienced actor) was already sat. The actor was unaware of the study's goal, had received background information on the case, and was instructed to behave naturally and give standardized reactions. Moreover, the actor was instructed that the character had committed the theft but only wanted to confess if he felt the need to do so. Because of the nature of the error, the interviewer made the error at the beginning of the interaction, which means he or she had yet to familiarize themselves with the suspect's natural behavior. All interviews were audio recorded and ended by the experimenter after 5 minutes. After the interview, interviewers filled in the post-interview

questionnaire and were debriefed. This study was approved by the ethical committee of the Faculty of Behavioral, Management and Social Sciences of the University of Twente.

Error and stance manipulation. Each interviewer was assigned to one of the three error conditions: factual, judgment or control. The factual and control condition replicated Study 1. The judgment error related to formality in tone and received from the suspect the response 'How dare you address me formally!' We had decided to change the judgment error manipulation in the interviews from a formal to informal tone, as interviewers are trained to use the surname instead of the first name once contacting a suspect in their interviews. After the error was made, the interviewer would either receive a cooperative or non-cooperative response. In the former, the suspect replied with the sentence 'No problem, that also happens to me every now and then' and in the latter the suspect sighed and replied, 'I don't care about your interview.'

Response coding. Using verbatim transcripts of each interview, the first author read the responses and classified them using the same categories as Study 1 (i.e., apologize, exploration, deflect, and no alignment). The same independent coder as used in Study 1 also classified the four different forms of responses. The coders were blind to the interviewer's scores on the cognition and affect measures and the second coder was blind to the hypotheses. Out of the 49 responses, 2 included a combination of responses. Specifically, they both combined exploration and no alignment. We assigned each response to whatever category that was most prevalent within the response, and this resulted in an excellent level of inter-rater agreement (Cohen's κ = .80). All disagreements were resolved through discussion.

Results

Preliminary analysis. Table 4 presents the Means, SDs, Cronbach alphas, and zero-order correlations among the study variables. As expected, and in line with patterns found in Study 1, Table 4 shows high correlations between the cognition measures of stress and distraction, and

negative affect. In addition, there are negative correlations between the cognition and affect measures, and what interviewers anticipated as the suspect's perceptions of affective trust, cognitive trust, and rapport. Surprisingly, there was no significant correlation between EDA and the self-reported stress and distraction measures, but they were all positive.

[TABLE 4 NEAR HERE]

Hypothesis testing. ***Error effects.*** Table 2 presents the interviewer's cognition and affect as a function of communication error. To test our predictions that the making of a judgment or factual error by an interviewer leads to more stress, distraction, and negative affect compared to the making of no errors (H1a), and that this effect will be stronger for a judgment error than a factual error (H1b), we conducted a one-way MANOVA with communication errors as the Independent Variable and the three cognition and affect measures as the Dependent Variables. There was a significant multivariate effect of error type, $F(6, 128) = 4.48$, $p < .001$, with interviewers reporting significant differences in stress, $F(2, 67) = 4.30$, $p = .02$, $\eta^2 = .12$, distraction, $F(2, 67) = 10.19$, $p < .001$, $\eta^2 = .24$, and negative affect, $F(2, 67) = 11.27$, $p < .001$, $\eta^2 = .26$.

In comparison to the control condition, the making of a factual error led to more stress, $t(39.55) = 3.05$, $p < .001$, $d = .94$, 95% CI [.30, 1.57], distraction, $t(40.85) = 4.45$, $p < .001$, $d = 1.37$, 95% CI [.69, 2.03], and negative affect, $t(25.62) = 5.41$, $p < .001$, $d = 1.66$, 95% CI [.90, 2.40]. A set of equivalent effects with lesser magnitude were found when comparing a judgment error to control, as it led to more distraction, $t(41.13) = 3.74$, $p < .001$, $d = 1.14$, 95% CI [.49, 1.78], and negative affect, $t(28.32) = 3.58$, $p < .001$, $d = 1.09$, 95% CI [.42, 1.74], but there was no significant difference in stress, $t(40.86) = 1.80$, $p = .08$, $d = .55$, 95% CI [-.06, 1.15]. In comparison to a judgment error, the making of a factual error led to more negative affect, $t(44.19) = 2.04$, $p = .05$, $d = .58$, 95% CI [.01, 1.15], but there was no significant difference in stress and

distraction, $t < 1.22$. To test the outcomes of our EDA measurement, we conducted a one-way ANOVA with communication errors as the Independent Variable and by using EDA as the Dependent Variable. There was no significant difference in EDA, $F(2,67) = 0.55$, $p = .58$, $\eta^2 = .02$.

Enacted response strategies. Table 3 presents the regression coefficients of the enacted response strategies as a function of the interviewer's cognition and affect. In contrast to the previous study, the interviewers predominantly used the exploration ($n = 30$) and deflect ($n = 14$) response strategies (apologize, $n = 2$, and no alignment, $n = 3$). To test our predictions that interviewers' stress, distraction, and negative affect effected their choice of response (H2a and H2b), we computed binary logistic regressions in which stress, distraction, and negative affect were predictors for each of the four response strategies (coded as binary Dependent Variables, 0 = not used, 1 = used). We did this for the exploration and deflect, but not for the apologize and no alignment response strategies. That is, because the number of interviewers using that strategy were very low and no reliable estimations could be made. As can be seen from Table 3, the full models for predicting exploration and deflect were not significant. In contrast with H2a and H2b, stress, distraction and negative affect were not significant predictors for exploration and deflect. To test the outcomes of our EDA measurement, we performed binary logistic regressions with EDA as predictor and the two response strategies exploration and deflect as binary Dependent Variables (0 = not used, 1 = used). The full model of predicting exploration was non-significant, X^2 (1, $N = 49$) = 0.34, $p = .56$, and explained 0.9% (Nagelkerke R^2) of the variance. The full model of predicting deflect was also non-significant, X^2 (1, $N = 49$) = 0.12, $p = .73$, and explained 0.3% (Nagelkerke R^2) of the variance.

Error effects on other party. Table 5 presents interviewers' mean responses to the questions regarding the expected suspect perceptions, as a function of communication error. To

test our predictions that error type will affect perceptions of how the suspect will feel (H3a and H3b), we conducted a one-way MANOVA with communication errors as the Independent Variable and the three suspect perception measures as the Dependent Variables. There was a significant multivariate effect of error type, $F(6, 128) = 5.46$, $p < .001$, with interviewers reporting significant differences in affective trust, $F(2, 67) = 11.87$, $p < .001$, $\eta^2 = .27$, cognitive trust, $F(2, 67) = 6.75$, $p < .001$, $\eta^2 = .17$, and rapport, $F(2, 67) = 11.01$, $p < .001$, $\eta^2 = .25$. In comparison to the control condition, the making of a factual error led to less perceived affective trust, $t(34.95) = -4.13$, $p < .001$, $d = -1.27$, 95% CI [-1.93, -.59], cognitive trust, $t(39.56) = -4.84$, $p < .001$, $d = -1.49$, 95% CI [-2.16, -.79], and rapport, $t(38.06) = -4.85$, $p < .001$, $d = -1.49$, 95% CI [-2.17, -.79]. A set of equivalent effects with lesser magnitude were found when comparing a judgment error to control, as it led to less perceived affective trust, $t(38.15) = -2.12$, $p = .04$, $d = -0.65$, 95% CI [-1.26, -.03], and rapport, $t(40.99) = -3.32$, $p < .001$, $d = -1.01$, 95% CI [-1.64, -.37], but there was no significant difference in cognitive trust, $t < 1.32$. In comparison to a judgment error, the making of a factual error led to less cognitive trust, $t(46.91) = -3.49$, $p < .001$, $d = -1.00$, 95% CI [-1.59, -.40], but there was no significant difference in affective trust and rapport, both t's < 1.84.

[TABLE 5 NEAR HERE]

Error effects on and stance of other party. Table 6 presents interviewers' mean reported cognition and affect as a function of communication error and stance. To test whether our stance manipulation worked, we compared the stance across the expected suspect perceptions. In comparison to the cooperative suspect ($n = 25$), the non-cooperative suspect ($n = 24$) led to lower perceptions of affective trust ($M = 2.21$, $SD = 0.83$ vs. $M = 3.00$, $SD = 0.82$), $t(46.82) = -3.36$, $p < .001$, $d = -0.96$, 95% CI [-1.55, -.36], and rapport ($M = 1.88$, $SD = 0.68$ vs. $M = 2.60$, $SD = 0.87$),

$t(45.24) = -3.27$, $p < .001$, $d = -0.93$, 95% CI [-1.52, -.34], but there was no significant difference in cognitive trust ($M = 2.17$, $SD = 0.92$ vs. $M = 2.48$, $SD = 1.05$), $t < 1.12$.

To test our prediction that the impact of an error on interviewers' experienced stress, distraction, and negative affect, is stronger when the suspect is non-cooperative compared to cooperative (H5), we conducted a two-way MANOVA with communication errors and stance as the Independent Variables and the three cognition and affect measures as the Dependent Variables. We found no significant interaction effect for communication errors and stance, $F(3, 43) = 0.97$, $p = .41$. To test the outcomes of our EDA measurement, we conducted a two-way ANOVA with communication errors and stance as the Independent Variables and EDA as the Dependent Variable. We found no significant interaction effect for communication error and stance, $F(1,45) = 0.55$, $p = .46$.

[TABLE 6 NEAR HERE]

Additional analysis. Although we did not predict specific associations between type of error and type of response, it was interesting to explore whether such a relationship was present. Consequently, we performed a chi-square test and a significant relationship could be found between error type (factual vs. judgment) and first response, X^2 (3, $n = 49$) = 10.22, $p = .02$. Follow-up analyses showed that this effect was mainly driven by the use of exploration and deflect. That is, negotiators were more likely to use an exploration response after a factual error than after a judgment error ($U = 170.0$, $p < .01$, $r = .44$), while the reverse was true for the use of deflect ($U = 205.5$, $p = .02$, $r = .35$). No significant differences were found for the use of apology and no alignment.

General Discussion

This is the first empirical study of communication errors in law enforcement interactions from the perspective of the error sender. Our findings suggest that the negative effects of

communication errors occur irrespective of context. However, and contrary to what research on the receiver side suggests (Oostinga et al., 2018b), the effects of a factual error appeared more severe than those of a judgment error. A possible explanation for this finding may be sought in how officers perceive a factual mistake. Unlike a judgment error, they may perceive that their professional integrity is at stake, since they appear to have used the incorrect information. That the interviewers of Study 2 reported a perception that factual errors harm cognitive trust of the suspect supports this account. It suggests that it is not so much the impact of the error on the other party that is important, but rather the effect of making the error on the officer's perceived reputation. Another possible explanation is that errors of judgment are encountered more regularly by officers and that, through experience, they have learned what to 'let pass' and when to act (Williams, 1999). It would be interesting to test the impact of other forms of errors to see whether a reputation or experience-based account is driving the effects we observed (for examples of other errors, see Oostinga et al., 2018a). To further decipher this effect, it may be fruitful to include a measure that determines how the sender perceives the receiver after an error is being made. This may explain whether the sender sees the error as a threat to their reputation and experiences responsibility for it, or whether it takes the receiver to question and deflect responsibility to them. To further decipher the influence of such cognitive inferences, future research should also include a measure that determines how the sender perceives the receiver after an error is being made. That is, both the judgment and factual error may signal that the suspect is just being obstinate. In particular, a judgement error may also trigger inferences of the suspect's sensitivity to hierarchy/equality or the existence of identity issues. The relative importance of such attributions may explain why some officers primarily see the error as a threat to their reputation and experience responsibility for it, while others are more inclined to deflect responsibility to the suspect.

Our findings reveal interesting associations between response strategies and the cognition and affect of the negotiators. Specifically, the more stress and less distraction, the more negotiators apologized; the more stress, the more negotiators reacted with exploration; and the less negative affect the more negotiators used deflect (Study 1). Yet, we did not find these effects in the suspect interview setting (Study 2). A possible explanation can be sought in the different range of responses used across these settings. Negotiators used all four responses regularly, while interviewers predominantly used exploration and deflect. This may reflect the difference in role of officers in these two types of interaction. A crisis negotiator focuses on information gathering to provide care and help, while a suspect interviewer is predominantly focusing on information gathering to detect crime. The negotiator was talking to a suicidal person which may have led to a more submissive approach (e.g., use of apologize), while the suspect interviewer did not have to take this high risk into account and may therefore have taken a more dominant approach (e.g., use of deflect). This may also explain why we found a higher percentage of combined strategies in the crisis negotiation setting (approximately 25%), while we only found a few combinations of responses in the interview setting (approximately 4%). This finding appears to show that crisis negotiators use different options to make the other party feel at ease, while the interviewers take a certain approach and want to continue with the interview. Further research should examine whether role differences explain the contrasting responses.

In terms of the effectiveness of the response, the receiver studies from Oostinga et al. (2018b) suggest that accepting responsibility is important for error reconciliation in both type of interactions. That is, the apologize response reflects the taking of full responsibility for the error, while this is arguably less so for exploration, and not at all the case for the deflect and no alignment responses (Oostinga et al., 2018a). Apparently, taking responsibility was something

that law enforcement officers do not do automatically. Study 1 provided some insights into why this may occur. The findings suggest experiencing a negative internal state is necessary to drive a responsibility-taking response to communication errors. This again corroborated earlier findings of Oostinga et al. (2018a; 2018b) showing that, when law enforcement officers see errors solely as a form of feedback, this may lead to insensitivity.

Remarkably, we did not find a relationship between the self-reported stress, distraction (form of cognitive load) and EDA in our correlational analyses and no significant results for our EDA measurement of Study 2. A possible explanation for not finding these effects may be sought in the large fluctuations in our results. Although we controlled for individual differences by using a baseline measurement, the results within the conditions still varied immensely, which may have kept us from finding any effects. For future studies, it would be useful to use a within-subject paradigm in which people act appropriately and make errors within the same interaction.

Limitations and Suggestions for Future Research

The current studies are not without limitations, and we consider four below. First, we ended the conversations after 5 minutes and there was no second negotiator/interviewer present, which may raise some ecological validity concerns. That is, the impact of an error may be different once the interaction partners have established a stronger relationship and the impact of an error may be lowered if the law enforcement officer knows that someone else is present to intervene. Yet, assessing this time frame and the response of one law enforcement officer made the interactions comparable (i.e., level of the relationship, no interference of a second person) and consequently allowed us to assess the direct impact of the communication error on the error sender. A logical next step would be to assess the impact of errors on the error sender over time, and the extent to which a second law enforcement officer would moderate the effects we found.

Second, we used single-item scales and have found a relatively low alpha level for our negative affect scale in Study 2, which may have led to measurement error. The number of participants in our second study was also low, which increased the risk of low power being responsible for the absence of a significant result for H4. Nonetheless, our results did provide an interesting first exploration on communication error management by law enforcement officers. Critically, the reason for the participant numbers in our second study was that some did not have the time to participate. This reinforces the delicate balance we needed to strike between methodologically sound research and participation of practitioners. The larger number of participants in Study 1 shows, however, that performing experiments within a training setting can be a fruitful approach.

Third, our coding took the most prevalent response strategy in the first speaking turn after the pre-determined response, but officers did sometimes combine responses and they may include additional response strategies in subsequent speaking turns. Arguably, the fact that multiple coders achieved excellent coding reliability suggests that most responses did have a dominant strategy as a first response. But, given evidence that the effects of a response can be altered at a word-by-word (Borkin & Reinhart, 1978) and component level (Kirchoff, Wagner, & Strack, 2012), it would be interesting to further disentangle the facets of a response and test whether or not officers change strategies 'mid-flow' if they are perceiving them as ineffective. This analysis might include examining multiple 'levels' of a type of error to test the extent to which an error's consequence increases in a linear way with error severity.

Fourth, we focused on law enforcement officers from the Netherlands. Yet, how people handle errors differs across countries. For example, German leaders tend to score higher on error prevention than Dutch leaders (Van Dyck et al., 2005). If we extrapolate from this finding to our law enforcement officers, it suggests the impact of a communication error may be more

pronounced for German officers than for Dutch officers, which may in turn effect the way they repair their error. It would be interesting, to test how these findings translate to people from other cultural backgrounds.

Conclusion

Law enforcement officers face the unexpected all the time, so preparing them for something unexpected is crucial. Our paradigm, which was designed as a prototypical exercise for training, provided useful input for such preparation. It showed that factual errors and judgment errors have differential impacts depending on context, and officer training may now prioritize its lessons toward the more disruptive type. Our results provide some first input on what recovery strategies to focus on when providing training in communication errors.

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Table 1

Means, Standard Deviations, and Inter-Correlations Among Study Variables in Study 1 (N = 133)

Variables[a]	M	*SD*	1	2	3	4	5
1. Gender[b]	1.20	0.40					
2. Age	39.92	8.47	-.21*				
3. Experience[c]	11.78	7.72	.01	.42*			
4. Stress	2.35	0.99	-.01	-.12	.03		
5. Distraction	1.89	0.92	.06	-.10	-.09	.36*	
6. Negative affect[d]	1.69	0.79	.03	-.01	.06	.63*	.26*

[a] The scales stress, distraction and negative affect, range from 1-5 and a higher score on these scales means that the negotiator experienced more stress, distraction and negative affect.

[b] 1 = Male, 2 = Female, [c] $n = 131$, * $p < .05$, [d] Cronbach's $\alpha = .83$

Table 2

Means and Standard Deviations for Law Enforcement Officer's Cognition and Affect as a Function of Communication Error in Study 1 (N = 133) and Study 2 (N = 68)

	Communication errors					
	Control (n = 34)		Factual (n = 52)		Judgment (n = 47)	
Study 1 Negotiator's cognition and affect[a]	*M*	*SD*	*M*	*SD*	*M*	*SD*
Stress	1.82	0.83	2.50[b]	1.02	2.57[b]	0.93
Distraction	1.59	0.96	2.19[b,c]	0.89	1.79[c]	0.83
Negative affect	1.13	0.49	1.86[b]	0.71	1.90[b]	0.87
Study 2 Interviewer's cognition and affect[a]	(n = 19)		(n = 24)		(n = 25)	
Stress	1.79	0.92	2.67[b]	0.96	2.32	1.03
Distraction	1.63	0.83	2.96[b]	1.12	2.64[b]	0.95
Negative affect	1.04	0.15	1.85[b,c]	0.72	1.47[b,c]	0.58

[a] The scales stress, distraction and negative affect, range from 1-5 and a higher score on these scales means that the law enforcement officer experienced more stress, distraction and negative affect.

[b] Differs significantly from control, $p < .05$.

[c] Differs significantly from the other communication error, $p < .05$.

Table 3

Regression, Standard Deviations, and Odds Ratios of Coefficients for the Enacted Response Strategy as a Function of Law Enforcement Officer's Cognition and Affect in Study 1 (n = 99) and Study 2 (n = 49)

	Response strategies											
	Apologize (n = 28)[a]			Exploration (n = 42)[b]			Deflect (n = 13)[c]			No alignment (n = 16)[d]		
Study 1 Crisis negotiator's cognition and affect[g]	*B*	*SE B*	Exp *b*	*B*	*SE B*	Exp *b*	*B*	*SE B*	Exp *b*	*B*	*SE B*	Exp *b*
Constant	-1.07	0.77		0.07	0.66		-0.27	1.10		-3.13*	0.97	
Stress	0.66*	0.33	1.94	-0.71*	0.32	0.49	0.44	0.43	1.56	-0.08	0.41	0.93
Distraction	-0.79*	0.34	0.46	0.11	0.27	1.11	0.19	0.39	1.21	0.65	0.34	1.91
Negative affect	-0.03	0.37	0.97	0.63	0.35	1.87	-1.92*	0.74	0.15	0.14	0.43	1.15
Study 2 Interviewer's cognition and affect[g]				(n = 30)[e]			(n = 14)[f]					
Constant				0.48	1.02		-0.27	1.10				
Stress				-0.18	0.35	0.83	0.14	0.37	1.15			
Distraction				-0.10	0.36	0.91	-0.03	0.38	0.97			
Negative affect				0.43	0.51	1.54	-0.57	0.57	0.57			

* $p < .05$. [a] X^2 (3, n = 99) = 8.28, p = .04, R^2 = 0.12, [b] X^2 (3, n = 99) = 5.98, p = .11, R^2 = 0.08, [c] X^2 (3, n = 99) = 10.36, p = .02, R^2 = 0.18, [d] X^2 (3, n = 99) = 4.64, p = .20, R^2 = 0.08, [e] X^2 (3, n = 49) = 0.99, p = .80, R^2 = 0.03, [f] X^2 (3, n = 49) = 1.24, p = .74, R^2 = 0.04 (Nagelkerke).

[g] The scales stress, distraction and negative affect, range from 1-5 and a higher score on these scales means that the law enforcement officer experienced more stress, distraction and negative affect.

Table 4
Means, Standard Deviations, and Inter-Correlations Among Study Variables in Study 2 (N = 68)

Variables[a]	M	*SD*	1	2	3	4	5	6	7	8	9
1. Gender[b]	1.26	0.44									
2. Age	41.18	11.04	-.19								
3. Experience[c]	13.41	9.71	-.12	.59*							
4. Stress	2.29	1.02	.02	.05	-.08						
5. Distraction	2.47	1.11	-.01	.04	-.21	.49*					
6. Negative affect[d]	1.48	0.64	-.07	.16	-.20	.36*	.53*				
7. Cognitive trust	2.54	1.00	.01	.07	.28*	-.25*	-.30*	-.43*			
8. Affective trust	2.79	0.86	-.01	-.03	-.02	-.20	-.24*	-.40*	.50*		
9. Rapport	2.53	0.95	-.02	.07	.12	-.24	-.27*	-.43*	.59*	.65*	
10. EDA	0.59	1.33	-.16	.04	-.05	.18	.04	-.02	-.21	.04	.08

[a] The scales stress, distraction, negative affect, cognitive trust and rapport, range from 1-5 and a higher score on these scales means that the suspect interviewer experienced more stress, distraction, negative affect and perceived the suspect to experience more cognitive trust, affective trust and rapport.

[b] 1 = Male, 2 = Female [c] $n = 65$, * $p < .05$, [d] Cronbach's $\alpha = .70$

Table 5

Means and Standard Deviations for Suspect Interviewer's Expected Suspect Perceptions as a Function of Communication Error in Study 2 (N = 68)

	Communication errors					
	Control (n = 19)		Factual (n = 24)		Judgment (n = 25)	
Interviewer's expected suspect perceptions[a]	*M*	*SD*	*M*	*SD*	*M*	*SD*
Affective trust	3.26	0.45	2.38[b]	0.92	2.84[b]	0.85
Cognitive trust	3.11	0.81	1.87[b,c]	0.85	2.76[c]	0.93
Rapport	3.26	0.81	2.08[b]	0.78	2.40[b]	0.91

[a] The scales affective trust, cognitive trust and rapport, range from 1-5 and a higher score on these scales means that the suspect interviewer perceived the suspect to experience more cognitive trust, affective trust and rapport.

[b] Differs significantly from control, $p < .05$.

[c] Differs significantly from the other communication error, $p < .05$.

Table 6

Means and Standard Deviations for Interviewer's Cognition and Affect as a Function of Communication Error and Stance in Study 2 (n = 49)

	Error Type - Stance							
	Factual-Cooperative (*n* = 12)		Factual-Non-cooperative (*n* = 12)		Judgment-Cooperative (*n* = 13)		Judgment-Non-cooperative (*n* = 12)	
Interviewer's cognition and affect[a]	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Stress	2.58	0.97	2.75	0.97	2.31	1.03	2.33	1.07
Distraction	3.25	1.14	2.67	1.07	2.54	1.05	2.75	0.87
Negative affect	1.92	0.78	1.78	0.67	1.46	0.66	1.47	0.50

[a] The stress, distraction and negative affect, range from 1-5 and a higher score on these scales means that suspect interviewer experiences more stress, distraction and negative affect.