Temporal Dynamics of Behavioural Change in Crisis Negotiation: An Empirical Exploration of the Revised Behavioural Influence Stairway Model

Nick van der Klok, BSc

Psychology of Conflict, Risk, and Safety, University of Twente

Supervisor: Dr. M.S.D. Oostinga

2nd Supervisor: Dr. S. J. Watson

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Abstract

The purpose of this study was to empirically explore the functioning of the revised Behavioural Influence Stairway Model (revised BISM), a widely taught negotiation method for suicide crises. The primary objective was to examine the temporal proposition of the revised BISM, which emphasises the significance of first establishing an empathetic, rapport-based, and trusting relationship, before eliciting behavioural compliance from a person in crisis (PiC). To achieve this, an online simulated crisis negotiation experiment was conducted, comparing levels of empathy, rapport, trust, influence, and behavioural compliance between two groups. The first group involved a crisis negotiator attempting to achieve behavioural compliance right at the start of the negotiation. In contrast, the second group followed the revised BISM stages (empathy, rapport, trust, and influence) to establish a relationship before aiming for behavioural compliance. The findings revealed that, in most cases, the revised BISM stages were crucial for achieving behavioural compliance. However, it was also observed that in approximately one-third of the encounters, behavioural change could be accelerated during the initial contact. These results contribute to a deeper understanding of the temporal dynamics involved in crisis negotiation and shed light on the importance of relationship-building. Further research is needed to examine potential negative consequences of early behavioural change attempts, cross-cultural generalisability, and a comparison with face-to-face negotiations.

Introduction

Suicide is a global problem. According to the World Health Organization (2021), more than 700,000 people perform suicide annually. This number does not even include the many cases of failed suicide attempts and unreported deaths. The global suicide rate in 2019 surpassed the death rate of many other common causes, such as starvation and natural disasters (*Global Burden of Disease Study*, 2019), with the highest suicide rates found in South-East Asia and Europe. Across all age groups, suicide is most common among people aged 15 to 29 (*World Health Organization, 2021*). Considering that suicide is such a common cause of death, especially for young individuals, knowledge on how to combat suicide has become imperative in modern-day society.

Law enforcement agencies typically utilise tactical and negotiation approaches to intervene in situations in which a person in crisis (PiC) is considering or attempting suicide. The tactical approach involves deploying a specialised unit, such as Special Weapons and Tactics (SWAT), to physically obstruct the ability to self-harm (Vecchi et al., 2005). This method is used when dealing with non-compliant individuals who refuse to engage with crisis negotiators and are determined to end their own lives (i.e., "suicidals"; Vecchi et al., 2019). In these situations, crisis negotiators can serve as a distraction for the PiC, aiming to delay suicide until the tactical team is in position to intervene. However, in most cases, the police are dealing with PiCs who have initiated a suicide attempt as a plea for help due to unbearable relational, health, or work-related circumstances (i.e., "subjects with other motivations"; Vecchi et al., 2019). The indecisiveness of these individuals creates a window of opportunity in which crisis negotiators can attempt to persuade them to choose for life and voluntarily follow suggestions towards a safe resolution.

In the past 50 years, crisis negotiation researchers have empathised the importance of building a positive relationship with PiCs to influence their behaviour (Grubb, 2010; Ireland

& Vecchi, 2009; Vecchi et al., 2005; Vecchi et al., 2019; Wells et al., 2013). Accordingly, several relationship-building theories have been developed, including the widely taught negotiation model related to suicide crises known as the "revised Behavioural Influence Stairway Model" (revised BISM; Vecchi et al., 2019). This model constitutes a roadmap for building a relationship with the PiC. Its underlying theory is based on the axiom that behavioural compliance occurs when the PiC is in a rational state of mind and when the crisis negotiator is perceived as credible. This state can, theoretically, be achieved by sequentially building the stages of empathy, rapport, trust, and influence. The theory is premised on the temporal proposition that "behavioural change will only occur if the previous four stages have been successfully completed" (Vecchi et al., 2019, p. 236). Although this intervention method has merit in providing law enforcement officers with a wide range of communicative techniques to build positive relationships with PiCs, no empirical evidence has been published to verify the efficacy of the model. This raises the question of whether the temporal nature of the theory is true.

The aim of the current study was, therefore, to discover whether there is empirical validity for the temporal proposition of the revised BISM by comparing it with an alternative, accelerated version for behavioural change. In other words, within an experimental setting, we assessed whether the four proposed stages (empathy, rapport, trust, and influence) were indeed prerequisites for behavioural compliance, or whether, in some cases, the crisis negotiator could accelerate a form of behavioural compliance.

This study is both academically and practically relevant. It provides a scientific assessment of the revised BISM's temporal premise, as well as highlights implications for future revisions. Moreover, the findings provide practitioners with a broader understanding of the effectiveness of current negotiation practices in the context of suicide crisis situations.

This, consequently, contributes to optimised training and decision-making and, thus, potentially increases the possibility of safely resolving suicide crises.

The forthcoming section comprises an overview of the developmental background behind the revised BISM and an explanation of how the model works. Thereafter, the research questions and experimental design are presented.

The Revised Behavioural Influence Stairway Model

Developmental Background

In 2005, a collaboration between the FBI crisis negotiation unit and academia led to a published crisis negotiation theory called the "Behavioural Change Stairway Model" (BCSM; Vecchi et al., 2005). The purpose of this model was to provide a guideline for law enforcement agencies when dealing with hostage situations. This model consisted of five stages crisis negotiators had to go through with the hostage-taker in order to achieve the desired outcome: active listening, empathy, rapport, influence, and behavioural change. Essentially, the aim of this model was to identify the subject's problem, recognise the subject's motivations, and enter into a problem-solving dialogue in which the crisis negotiator eliminates unacceptable solutions and works towards an acceptable alternative.

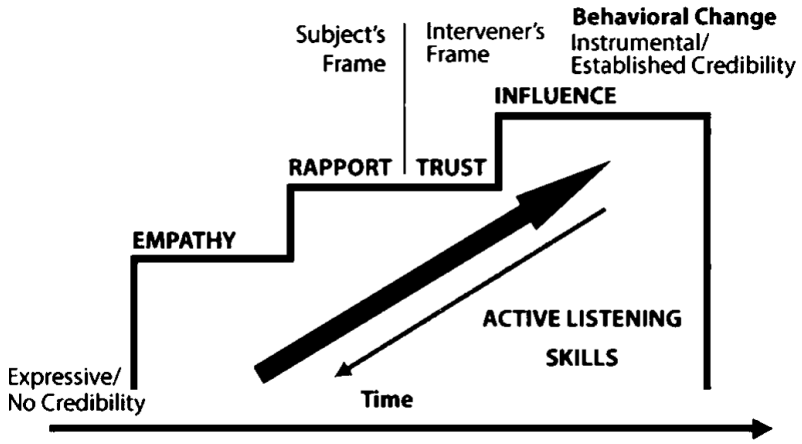
In 2009, the BCSM was revised and became the "Behavioural Influence Stairway Model" (BISM; Ireland & Vecchi, 2009). In this revision, the researchers took into account terrorist personality traits "characterised by a pattern of high emotionality, affective instability, and dependency on others, with the potential for marked impulsivity" (Ireland & Vecchi, 2009, p. 210). Additionally, significant changes were made to the orientation and structure of the model. The orientation shifted from a problem-solving orientation to a relationship-building orientation, whereby the crisis negotiator tries to build a positive and trustworthy relationship with the perpetrator, to eventually end the crisis peacefully. In terms of changes in the structure: active listening skills was not a single, isolated stage anymore,

but was now applicable in each stage. Additionally, behavioural change was removed as a single integrated stage and rather viewed as the outcome of the model. The final stages constituted: empathy, rapport, and influence.

In 2019, Vecchi et al. published the "revised Behavioural Influence Stairway Model" (revised BISM), the focus of which shifted from hostage and terrorism situations to suicide crisis situations. Vecchi et al. (2019) attributed the existence of suicide crisis situations to a combination of two causes: failing social support and the failing coping mechanisms of the individual. Consequently, they argued that crisis negotiators could temporarily take on the role of social support and, thus, help the PiC to manage their overwhelming emotions. The aim of the revised BISM is to facilitate the PiC's transition from an irrational, high-emotional, and expressive state, to a rational, low-emotional, and instrumental state. In addition, a vital aspect of the model is to increase the credibility of the crisis negotiator. The premise of the revised BISM is that the presence of rationality and credibility will make the PiC more likely to be influenced and accept the crisis negotiator's behavioural suggestions. Furthermore, compared to the original BISM (Ireland & Vecchi, 2009), the revised BISM includes an additional stage after rapport, namely trust (see Figure 1).

Figure 1

Revised Behavioural Influence Stairway Model (revised BISM)



Note. Reprinted from "Negotiating in the skies of Hong Kong: The efficacy of the Behavioural Influence Stairway Model (BISM) in suicidal crisis situations", by Vecchi et al., 2019, Aggression and Violent Behaviour, 48, 233. Copyright 2019 by Elsevier Ltd.

Mechanisms of the Model

Empathy. According to the revised BISM, the crisis negotiator should start the negotiation by building empathy with the PiC. Vecchi et al. (2019) consider empathy to be the "identification with and understanding of another's situation, feelings, and motives" (Vecchi et al., 2019, p. 234), and the expression of this understanding to the PiC. This expression of empathy is communicated by means of active listening skills (ALS) – a set of conversational techniques originally developed as information-gathering tools for therapy (Royce, 2005, 2012; Vecchi et al., 2005), such as, mirroring, paraphrasing, and emotional labelling. Thus, empathy is considered to be a "natural by-product of effective active listening" (Vecchi et al., 2019, p. 234), setting the foundation for rapport and trust.

Rapport. Once a sufficient level of empathy is achieved, the crisis negotiator can move to the rapport stage, where he or she establishes a smooth, positive, and harmonious connection with the PiC (Vecchi et al., 2019). This connection can be built through mutual affinity (relatedness) by means of personal disclosure, proper pacing (deliberately syncing emotional expression, rate of speech, and tonality), and by letting the PiC talk about their own values, feelings, and thoughts – remaining in the PiC's frame of reference. The crisis negotiator's choice between talking about the PiC versus talking about oneself depends on whether the negotiation is in the rapport or trust stage. In the rapport stage, the crisis negotiator is advised to avoid self-focused statements, including pronouns such as "I" or "my" (except when using self-disclosure techniques).

Trust. The establishment of rapport can (simultaneously) lead to a state of trust (Vecchi et al., 2019). Here, the PiC will perceive the crisis negotiator as honest, sincere, and capable of delivering on promises. Vecchi et al. (2019) view trust as a prerequisite for successfully resolving a crisis, since it is presumed to break down the initial resistance of the PiC. This "subject resistance" is attributed to unfamiliarity (a lack of prior contact),

preconceived negative impressions about the crisis negotiator, and the feeling that the crisis negotiator has not "earned the right" to request a specific behavioural change on the part of the PiC. Thus, Vecchi et al. (2019) indicate that once trust is established, the likelihood that the PiC will comply with the behavioural suggestion made by the crisis negotiator increases compared to situations in which trust is absent.

Influence. Trust opens the gateway to influence. Vecchi et al. (2019) define influence as "the act or power of producing an effect without apparent force or direct authority" (Vecchi et al., 2019, p. 234). In this stage, crisis negotiators use an armament of persuasive tactics (Cialdini, 2001; Kamphuis et al., 2006) to affect the PiC's state of mind. For example, using positive affirmations (e.g., "Bob, it seems that you really love your kids and that makes you a good man"; Vecchi et al., 2019, p. 234) is considered to signal respect and create a positive affect, pulling the PiC out of the depressed negative state. At this point in the revised BISM sequence, it is assumed that the PiC has a rational state of mind and perceives the crisis negotiator as credible. Vecchi et al. (2019) explicitly state that "it is only at this point that the subject will do as the negotiator suggests" (Vecchi et al., 2019, p. 236). Crisis negotiators commonly use suggestions to encourage PiCs to cooperate. One type of suggestion is a "safety suggestion", which is used to get PiCs to voluntarily change their behaviour to a more risk-averse context, thereby reducing the risk of accidental harm. For example, the negotiator might ask the PiC to put down a lethal weapon or move away from the edge of a roof. The crisis negotiator can then gradually move towards a position in which the PiC completely cooperates, resulting in a safe resolution of the crisis.

The Current Study

As previously mentioned, the revised BISM rests on the fundamental assumption that empathy, rapport, trust, and influence are necessary preconditions for behavioural change (Vecchi et al., 2019). To empirically test this temporal aspect of the revised BISM, we looked

at whether there was a difference in behavioural compliance between posing an *early safety suggestion* (at the start of the negotiation) and *late safety suggestion* (after building a relationship based on empathy, rapport, trust, and influence). To investigate the idea that an empathetic, rapport-based, and trustworthy relationship is conditional for persuading the PiC into compliance (Vecchi et al., 2019), we formulated the following research question (Q_1): Does a late safety suggestion increase the likelihood of behavioural compliance compared to an early safety suggestion?

Moreover, we wanted to test whether posing an early safety suggestion had a diminishing effect on the ability to build empathy, rapport, trust, and influence in the succeeding negotiation, in comparison to posing a late safety suggestion. Vecchi et al. (2019) posit the idea that once credibility is established (i.e., by means of empathy, rapport, trust, and influence) the crisis negotiator has "earned the right to suggest a course of action" (Vecchi et al., 2019, p. 235). Based on this premise, the expectation was that "prematurely" suggesting a course of action (i.e., before credibility is built) would have an adverse effect on the relationship-building process in terms of a decrease in empathy, rapport, trust and influence, compared to the "appropriate" time of delivery (i.e., after credibility is built). To examine the validity of this expectation, the following research question was formulated (Q_2): Does a late safety suggestion lead to higher levels of empathy, rapport, trust, and influence compared to an early safety suggestion?

Method

Design

Participants were asked to take part in an online simulated crisis negotiation experiment, adopting the role of a PiC with suicidal considerations at the edge of a bridge. They were randomly assigned to either the control or the experimental group. In the control group, participants were approached by a crisis negotiator (via pre-programmed text messages) according to the revised BISM sequence. Here, the crisis negotiator tried to first

build empathy, rapport, trust, and influence, and afterwards attempted to change the participants' behaviour. In the experimental group, the crisis negotiator partially reversed the sequence by attempting to change the participant's behaviour at the beginning of the negotiation, and subsequently trying to build empathy, rapport, trust, and influence. This reversal of relationship-building components made the experiment a true test of temporality.

The independent variable was the negotiator's attempt for achieving behavioural change, which was manipulated in terms of its time of placement in the negotiation process (early versus late). The dependent variables were empathy, rapport, trust, influence, and behavioural compliance.

Participants

The network of the first author and the University of Twente credit system (SONA), were used to collect participants for the experiment. Altogether, 94 people participated in the study, of whom 54 people were female (57.4%), 38 were male (40.4%), one was non-binary (1.1%), and one preferred not to share their gender (M_{age} = 22 years, range = 18–31 years, *SD* = 2.81 years). The sample consisted of 20 different nationalities. The majority of attendees were Dutch (44.7%), with German (35.1%) being the second most represented nationality. The highest obtained degree of most of the participants was a high school degree (57.4%), professional degree (MBO/HBO; 17%), or a university bachelor's degree (17%).

The inclusion criteria were: (1) having an age between 18 and 35 years, since the experiment was tailored to students, (2) being able to read and write in English, and (3) not experiencing, or having experienced, suicidal inclinations. No participants were excluded from the study, since all participants met the inclusion criteria.

Measures

Empathy

Since the experiment was oriented around the participant's experience, there was no need to measure the extent to which the negotiator could internally empathise with the participants. Only the level of expressed empathy that participants perceived of the crisis negotiator was measured. This is also referred to as "perceived empathy", which is conceptualised as a state in which the "receiver" feels and thinks that the other person feels and understands their problems and needs (Plank et al., 1996). The level of perceived empathy was measured by means of an adapted version of Plank et al.'s (1996) empathy measure; a questionnaire originally consisting of eight items. Since the original questionnaire of Plank et al. (1996) was aimed at measuring how participants perceived empathy of a salesperson, the items were adjusted to the crisis negotiation context. Additionally, all items that were stated in the present tense were modified to past tense to measure the level of empathy that was perceived during the negotiation, rather than how empathetic the crisis negotiator would be in general terms. For example: "This salesperson does not understand the way I think" was transformed to "The crisis negotiator did not understand my way of thinking". One of the eight items was removed since it did not fit the crisis negotiation context, namely: "This salesperson understands me and my role in this organisation". The final seven items used for measuring perceived empathy can be found in Appendix A. Participants were asked to rate each item on a five-point Likert scale, reaching from one (strongly disagree) to five (strongly agree). Finally, an empathy score was created by averaging the total score of the seven items. The higher the final score, the higher the participant's level of perceived empathy of the crisis negotiator.

Rapport

The level of rapport was measured by means of Drolet and Morris' (2000) rapport measure; a five-item questionnaire. This questionnaire was based on Tickle-Degnen and Rosenthal's (1990) conceptualisation of rapport, which closely aligned with the manner in which rapport is described in the revised BISM (Vecchi et al., 2019). Namely, Tickle-Degnen and Rosenthal (1990) defined rapport as a state of mutual attentiveness, positivity, and coordination between two individuals. The items of Drolet and Morris' (2000) rapport measure were adjusted to the crisis negotiation context by replacing "the other" with "the crisis negotiator". For example, "Did you feel "in sync" or on the same wavelength with the other?" was modified to "Did you feel "in sync" or on the same wavelength with the crisis negotiator?". The final five items used for measuring rapport can be found in Appendix A. Participants scored each item on a five-point Likert scale, ranging from one (strongly disagree) to five (strongly agree). A rapport score was created by averaging the total score of the five items. The higher the final score, the higher the participant's level of rapport with the crisis negotiator.

Trust

The level of trust was measured by means of a modified version of Mayer and Davis' (1999) trust measure. Mayer and Davis (1999) conceptualised trust as consisting of three factors (ability, benevolence, and integrity) that closely match the components of trust as described in the revised BISM (capable of delivering on promises, sincere, and honest; Vecchi et al., 2019). Ability is established when the trustor believes the trustee has the capability to deliver on his or her promises due to a position of authority or relevant skills. Benevolence is established when the trustor believes the trustee is caring and has good intentions towards the trustor. Integrity is established when the trustor believes the trustee has mutual shared values, and is consistent in acting in accordance with these values (Mayer &

Davis, 1999). All three variables combined constituted the total level of trust. The trust measure of Mayer and Davis (1999) originally consisted of 17 questions, six for measuring ability, five for measuring benevolence, and six for measuring integrity. Since the original questionnaire was aimed at trust towards top level management, the items were transformed to the crisis negotiation context. Besides, all items were changed from present tense to past tense to measure the level of ability, benevolence, and integrity perceived during the negotiation, rather than the level of trustworthiness of the crisis negotiator in general terms. For example: “Top management is very capable of performing its job” was converted to “The crisis negotiator was very capable in performing his or her job”. One of the items was removed from the original list of items, namely: “Top management has specialised capabilities that can increase our performance”. This item was not applicable to the crisis negotiation context. The 16 definitive items used for measuring trust can be found in Appendix A. Participants were asked to rate each item on a five-point Likert scale, ranging from one (strongly disagree) to five (strongly agree). A trust score was created by averaging the scores on all sixteen items. The higher the final score, the higher the participant's level of trust with the crisis negotiator.

Influence

The level of influence was measured by looking at the participants’ willingness to cooperate with the crisis negotiator. This measurement was conducted by means of two scales. The first scale, measured before the experiment, looked at the participants’ initial willingness to cooperate (pre-influence score). The item used was: “To what extent are you willing to cooperate with the negotiator in the upcoming interaction?”. Participants could score this item on a scale from 1 (not at all willing to cooperate) to 10 (completely willing to cooperate). The second scale, measured after the experiment, looked at how willing participants were in cooperating at the moment the crisis negotiator tried to change their

behaviour (post-influence score). The item used was: “When the crisis negotiator asked you to climb back over the fence, to what extent were you willing to cooperate?”. Participants could score this item on a scale from 1 (not at all willing to cooperate) to 10 (completely willing to cooperate).

In addition to this pre- and post-scale measurement, an open question was used to gather more context behind the participant’s willingness to cooperate. After the crisis negotiation, the following instruction was given: “Please write down the reason why you were or were not willing to work with the crisis negotiator”. Participants could answer this question by writing their response in a textbox with an unlimited amount of writing space.

Behavioural Compliance

Behavioural compliance was measured directly during the experiment by asking whether the participants would act out the behaviour requested by the crisis negotiator. The item provided was: “Do you climb over the fence?”, with the option to respond yes or no.

Level of Participation

To control for biased results due to a lack of engagement, a quality control questionnaire was administered, measuring: (1) the degree of immersion in the role and scenario, (2) the extent to which the video, materials, and questionnaires were watched and read, and (3) any potential distractions (e.g., receiving a text message, being interrupted by another person, or performing other tasks during the experiment).

The participant’s level of immersion in the role of the PiC and scenario was measured by using two items. The first item measured the extent to which participants were able to imagine themselves in the role of the PiC: “I was able to fully imagine myself in the role of the suicidal person in crisis”. The second item measured the extent to which the participants were able to imagine themselves in the scenario: “I was able to fully imagine myself in the crisis scenario at the bridge”. Participants could score both items on a five-point Likert scale,

ranging from 1 (strongly disagree) to 5 (strongly agree). An immersion score was created by averaging the scores on both items.

Three items were used to measure the extent to which the video, materials, and questionnaires were watched and read. First, participants were asked if they had watched the video of the scenario, to which they could answer yes or no. Second, the item used to measure participants' attention level while reading the scale items was: “How thoroughly did you read the questions of the questionnaires?”. Participants could answer this question on a scale of 1 (not thoroughly at all) to 10 (very thoroughly). Third, the item used to measure the degree of energy put into imagining the scenario was: “How much energy did you put into imagining yourself in the scenario?”. Participants could answer this question on a scale of 1 (no energy at all) to 10 (extreme amount of energy).

To measure distraction, participants answered a multiple-choice question that included: (1) reading email, (2) visiting a social media app or website, (3) checking or replying to a message on your phone, (3) having the TV on in the background, (4) having music on in the background, (5) being interrupted by another person, and (6) an open text box to fill in other distractions than those listed.

Procedure

Before gathering participants, the experiment was tested via a pilot study. Five participants underwent the experiment and participated in a brainstorming session afterwards to look for possible improvements. After the pilot study, three significant changes were made: (1) to ensure full participation the survey items were changed to forced response, (2) to better align the negotiator’s script to the PiC’s background story, the PiC left a suicide note instead of telling his or her mother about the suicide plan, and (3) the name of the crisis negotiator was changed from “Merlin” to “Sam”, as the latter name was considered the most

gender-neutral. Therefore, the participants were not steered into assuming the crisis negotiator was either a man or a woman; which allowed for a more controlled setting.

Once optimised, participants were asked to participate in the experiment on the Qualtrics platform, via an online link. As the sample was expected to be multinational, the entire study was conducted in English. Before starting the experiment, participants were informed via a briefing (Appendix B) containing the: (1) introduction, (2) estimated duration, (3) anonymous data handling, (4) option of voluntary withdrawal at any time, (5) risk of participation (i.e., potential feelings of distress), (6) warning about participation if the participant (had) experienced suicidal inclinations, and (7) directions to the suicide helplines in The Netherlands and Germany. In the introduction, a cover story was added to prevent participants from becoming biased by recognising the manipulation beforehand. The cover story stated that the aim of the experiment was to compare the degree of immersion between text-based and face-to-face crisis negotiation experiments. After the participants read the briefing and agreed to the informed consent form (Appendix C), the experiment started.

In the preparation phase, the participants were asked to imagine they were a PiC with suicidal contemplations. First, the background story of the PiC was explained, followed by the scenario in the forthcoming experiment (Appendix D). The background story contained various (psycho)social and economic variables associated with an increased risk of suicide, namely: losing a partner (by means of a break-up), financial debt, depression, and long-term unemployment (*Suicide & Self-harm Monitoring*, 2023; Yip et al., 2007). The accumulation of these described events led the person in crisis (i.e., the participant) to become overwhelmed, walking to the edge of a bridge, considering suicide by jumping off the bridge. Accompanied with this description, the participants were asked to watch a 29-second video (in first-person perspective) of a person walking on the pedestrian lane of the John Frost Bridge (Arnhem, Netherlands), climbing over the fence, looking down at the Rhine river.

This video was intended to enhance participants' immersion into the situation; a method previously used in a multitude of studies (Chirico et al., 2016; Rottenberg et al., 2007; Sherman & Craig, 2018).

After watching the video and scoring the initial willingness to cooperate, the participants proceeded to the experiment. During this phase, they received pre-programmed text messages on the Qualtrics platform, from crisis negotiator "Sam". This text messaging process was automated (Appendix E) to maintain consistency, and to ensure that any differences in the results would not be due to variations in the crisis negotiator's messages. Each message, sent by the crisis negotiator, was followed by a selection of predetermined response options from which participants could choose (Appendix E). For example, when the crisis negotiator asked: "Are you thinking of ending your life?", the participants could choose to respond with either: (a) "Yes, I am thinking about ending it" or (b) "Maybe, I am not sure yet". The script of this negotiation was developed with, and approved by, an active crisis negotiator from the UK, who has been working in the crisis negotiation field for almost 20 years.

In the control group, the pre-programmed crisis negotiator followed the revised BISM stages, accomplished by using an array of active listening skills and negotiation tactics (Vecchi et al., 2005; Vecchi et al., 2019). In the empathy stage, the crisis negotiator asked an open-ended question ("What makes you consider ending your life?") as an attempt to understand the problem of the PiC. Subsequently, the empathy stage transitioned to the rapport stage by paraphrasing the addressed problems of the PiC, and building mutual affinity through self-disclosure ("I have also faced unemployment for a while"). In the trust stage, the crisis negotiator built trust by showing care, good intentions, and conveying experience through the statement: "I am here for you and will do all that I can to support you. It may feel like you were alone in this before we started talking, to reassure you I do have experience

supporting people in similar situations in finding a way forward". In the influence stage, the state of mind of the PiC was affected by means of a non-patronising positive affirmation: "From what I've heard you say earlier, it sounds like you have invested a lot in yourself and worked so hard on your education, I think that says something about how strong you are as a person". At the end of the four revised BISM stages, the crisis negotiator attempted to change the participants' behaviour by using a safety suggestion: "I can see you from a distance and I get really frightened when I see you at the other side of the fence, because I think you might fall by accident before you are ready. Why don't you come to the other side of the fence, so we can continue this conversation in a safer manner?". This safety suggestion included multiple persuasive elements, such as: (1) expressing care for the wellbeing of the PiC by being frightened the person might fall by accident, (2) appealing to the self-interest of the person in crisis by stating that the person might fall before "being ready", and (3) giving the person in crisis a sense of autonomy by asking a question instead of demanding or instructing the person to get to a safer position.

In the experimental group, the crisis negotiator started the negotiation with the aforementioned safety suggestion, proceeded by the exact same revised BISM sequence as in the control group. In both the control and experimental group, the negotiation was ended by making the participants believe their network connection to the chat environment had been disconnected ("Your network connection with the chat has been lost"). This way, the experiment ended the same for everyone, instead of having different endings (e.g., a safe resolution or death); which otherwise could have affected participants' responses to the questionnaires. After the experiment, the participants were asked to fill in a list of questionnaires measuring the dependent variables (empathy, rapport, trust, influence, behavioural compliance), sociodemographic variables (sex, age, nationality, educational level), and level of participation.

Finally, the participants were debriefed (Appendix F). They were informed about the true manipulation, and it was emphasised that the scenario was fictional. In addition, the contact information for the Dutch and German suicide helplines were provided again, in case any of the participants felt the need to discuss any suicidal feelings or thoughts. Because the participants were provided with new information (i.e., the true manipulation), they were given the opportunity to withdraw their data from the study, however, none of the participants withdrew their data after participation in the study. After the debriefing, the collected data was safely stored on a cloud server linked to the University of Twente for further analysis. Besides, participants recruited through the University of Twente credit system (SONA) received their credits.

Data Analysis

Qualitative Analysis

Inductive content analysis was utilised to analyse the qualitative data collected on participants' willingness to cooperate with the crisis negotiator. The inductive approach was chosen based on the exploratory nature of the current study, with the aim of uncovering reasons for adherence and resistance that were not predetermined by any existing theoretical framework. Moreover, this method was applied to examine to what extent the inductively derived codes mapped on the revised BISM stages. Specifically, whether the participants' reasoning behind their willingness to cooperate was primarily related to the relational components of the revised BISM (empathy, rapport, and trust), or whether they completely deviated from this aspect.

Data Preparation. In the preparation phase, the units of analysis (UoA) were selected and coded in ATLAS.ti. A UoA can be considered as a meaningful part within the participant's answer to the qualitative assignment: "Please write down the reason why you were or were not willing to work with the crisis negotiator". In other words, the UoA were

phrases that expressed an effect on the participant's willingness to cooperate. An example of a UoA is: “I felt like my worries/feelings of hopelessness were being acknowledged”. Participant’s answers could include multiple UoA’s, but only when there was a clear separation between both units. For example, if a participant talked about the crisis negotiator being a stranger and not believing his or her intentions were sincere, then the parts about “being a stranger” and “sincerity” were separated as two individual UoA and independently coded. An example of the coding process is assigning the UoA: “He gave some perspective and hope” to the code “hope”. Each UoA associated with hope or hopelessness was then assigned the code “hope”. Only one code was allotted per UoA. After further examination, 12 responses were considered too ambiguous to interpret. An example of an ambiguous answer is, “I guess it would work”. The code “miscellaneous” was given to all ambiguous responses. Furthermore, several reasons needed to be merged into one “reason” since they were too similar. For example, the reasons “friendly” and “kind attitude” were combined into the reason “likeability”. Only reasons that could be clearly distinguished from one another, such as "feeling estranged" and "feeling rushed," were kept separate. Of the 94 participants, 91 participants provided an answer to the question why they were or were not willing to cooperate. From these 91 answers a total of 111 UoA were identified.

Data Organisation. In the data organisation phase, 55 initial reasons for (not) being willing to cooperate were extracted from the 111 UoA. Subsequently, these initial reasons were assigned, through free association, to five groups, including the miscellaneous group. An example of a group of reasons is: “credible, caring, sincere, and likeable”, all relating to the PiC’s view of the crisis negotiator’s character traits. Each group was then labelled with a code that represented the overarching theme for all reasons within that group; a process referred to as abstraction (Elo & Kyngäs, 2008). For example, the previously mentioned four

reasons were assigned to the code “character traits”. A coding scheme was created to outline the final five codes, code variations, and code frequencies (see Appendix G).

Results

Preliminary Analyses

Scale Correlations and Reliability

To assess the relationship between the variables empathy, rapport, trust, ability, benevolence, and integrity, Pearson correlation coefficients were computed. There were positive moderate to strong correlations between empathy, rapport, trust, ability, benevolence, and integrity (see Table 1). In other words, if a participant scored high on empathy, they were also likely to score high on rapport, trust, ability, benevolence, and integrity. Additionally, both the pre-influence and post-influence variable significantly correlated with each other, as well as with all other variables (see Table 1). Overall, there was a slight increase in influence (M_{pre} = 5.34, M_{post} = 5.98). In other words, participants were slightly more willing to cooperate once they had interacted with the crisis negotiator.

Moreover, the Cronbach's alpha coefficients for the empathy, rapport, and trust scale were all above .80, indicating a good internal consistency among the items within each of those scales (Pallant, 2016).

In terms of the participant’s participation level, all participants reported watching the video of the scenario. On average, a high level of attention was spent on reading the scale items (M = 8.11, SD = 1.39) and a moderate level of energy was expended on imagining the scenario (M = 6.86, SD = 1.39). Overall, participants reported moderate levels of immersion in the PiC’s role and scenario at the bridge (M = 3.56, SD = 0.93). Empathy, ability, and influence were found to be weakly negatively correlated with immersion (see Table 1). Of the 94 participants, 43 participants reported being mildly distracted during the experiment, with

the most frequently occurred distractions being interruption by another person (34.9%) and having music (20.9%) or the TV (16.3%) on in the background.

Table 1

Cronbach's Alpha, Pearson's Correlations Between Variables, and Descriptive Statistics

Variables	***M***	***SD***	***α***	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1. Empathy	3.13	0.74	.87								
2. Rapport	3.29	0.78	.83	***.85***							
3. Trust	3.61	0.48	.86	***.78***	***.74***						
4. Ability	3.49	0.69	.86	***.76***	***.77***	***.85***					
5. Benevolence	3.79	0.63	.72	***.68***	***.58***	***.85***	***.57***				
6. Integrity	3.56	0.45	.62	***.49***	***.47***	***.80***	***.49***	***.56***			
7. Pre-influence*	5.34	2.08		***.48***	***.41***	***.46***	***.53***	***.35***	***.24***		
8. Post-influence**	5.98	2.16		***.56***	***.52***	***.49***	***.54***	***.41***	***.23***	***.47***	
9. Immersion***	3.56	0.93		**-.26**	-.20	-.19	**-.22**	-.16	-.07	-.10	**-.22**

Note. **Bold** = $p < .05$ (2-tailed). ***Bold Italics*** = $p < .001$ (2-tailed).
*. Pre-influence is the willingness to cooperate (scale 1-10) measured before the negotiation.
**. Post-influence is the willingness to cooperate (scale 1-10) measured after the negotiation.
***. Immersion is the extent to which the participants could relate to the role / scenario (2-items; scale 1-5)

Answering the Research Questions

Our first research question was aimed at investigating whether a late safety suggestion would increase the likelihood of behavioural compliance compared to an early safety suggestion. A contingency table analysis was performed to assess the relationship between the timing of a safety suggestion in a crisis negotiation and behavioural compliance. The Pearson Chi-Square result showed a significant relationship between the two variables $X^2(1, N = 94) = 5.23$, $p = .02$. Cramer's V ($V = .34$) showed a low to medium level effect. The participants that were given the late safety suggestion (55.3%) cooperated almost twice as often as the participants who were given the early safety suggestion (31.9%).

As for the second research question, we wanted to know whether a late safety suggestion led to higher levels of empathy, rapport, trust, and influence compared to an early safety suggestion. A two samples *t*-test was performed to compare the scores of empathy, rapport, and trust between the participants who were given the early and late safety suggestion. There were no significant differences between both groups on empathy, $t(92) = 0.72$, $p = .24$, rapport, $t(92) = 0.61$, $p = .27$, trust, $t(92) = -0.04$, $p = .48$, ability, $t(92) = -0.45$, $p = .33$, benevolence, $t(92) = -0.49$, $p = .31$, and integrity, $t(92) = 1.26$, $p = .11$. Moreover, to account for baseline differences in the participants' willingness to cooperate (pre-influence scores), a one-way analysis of covariance (ANCOVA) was performed to test for differences in influence (post-influence scores) between the groups with an early and late safety suggestion. The result showed no significant difference between the two groups in terms of the extent to which participants had been influenced, after controlling for pre-influence scores, $F(1, 91) = 0.05$, $p = .82$. Overall, in both the control group ($M_{range} = 3.07–3.82$) and experimental group ($M_{range} = 3.17–3.75$) the total mean scores for empathy, rapport, trust, ability, benevolence, and integrity were all moderate to highly scored (see Table 2). In terms of influence, participants scored, on average, moderately in both the control group ($M = 6.17$, $SD = 2.15$) and experimental group ($M = 5.79$, $SD = 2.17$). In other words, an early safety suggestion did not lead to significant differences in empathy, rapport, trust, and influence compared to a late safety suggestion. Besides, in both cases, participants ended up, on average, with moderate to high levels of empathy, rapport and trust; and were moderately influenced by the crisis negotiator.

Table 2

Means, Standard Deviations, and T-Test Scores for the Control and Experimental Group

	Control Group (N = 47)		Experimental Group (N = 47)		
Variables	***M***	***SD***	***M***	***SD***	***t*-test**
Empathy	3.06	0.77	3.18	0.71	0.72
Rapport	3.24	0.74	3.34	0.82	0.27
Trust	3.61	0.42	3.61	0.55	-0.04
Ability	3.52	0.63	3.46	0.75	-0.45
Benevolence	3.82	0.57	3.75	0.68	-0.49
Integrity	3.50	0.39	3.62	0.51	1.26
Pre-influence*	5.64	2.16	5.04	1.98	
Post-influence*	6.17	2.15	5.79	2.17	

*. The pre-influence and post-influence variables have no *t*-test score in this table since the post-score differences between both groups were tested via an ANCOVA, controlling for the pre-scores.

Qualitative Analysis

The qualitative analysis provided the reasons behind the participants' willingness to cooperate with the crisis negotiator. Four main reasons for (non)cooperation were extracted, namely the state of mind of the PiC, observed character traits of the crisis negotiator, the level of affinity with the crisis negotiator, and text-based obstacles (see Appendix G). In this section each reason will be explained through definitions, variations and examples.

State of Mind of the PiC

The state of mind code (frequency = 35) can be viewed as an emotional or cognitive affect (potentially created by the crisis negotiator) that participants deemed as important in explaining their willingness to (not) cooperate. The relationship between a change in the state of mind of the PiC and their willingness to cooperate can be explained by: (1) the extent to which one has hope for a better future, (2) the extent to which one feels anticipatory regret

when thinking about jumping in the river, (3) the extent to which one is aware of the impulsive act of standing at the edge of the bridge, and (4) the extent to which one is determined in carrying out their plan. Of these variations, the UoA mostly pointed towards either cooperating due to having a different (hopeful) perspective of the future or resisting due to being determined in performing suicide. An example of an UoA referring to hope is: "He gave me some perspective and hope". An example of an UoA referring to the decisiveness of one's plan for suicide is: "If I would want to jump of a bridge and I'm over the edge, I would be very committed to killing myself".

Observed Character Traits of the Crisis Negotiator

The character traits code (frequency = 28) can be described as a negative or positive character judgement the participant made of the crisis negotiator. The relationship between the observed character traits of the crisis negotiator and the PiC's willingness to cooperate can be explained by the extent to which the crisis negotiator was deemed (1) credible, (2) caring, (3) sincere, and (4) likeable. Of these variations, most of the UoA were directed towards whether the crisis negotiator cared about the PiC, was sincere in his or her intentions, or experienced in his or her work. An example of an UoA referring to caring is: "It seemed like the negotiator was trying to help, so that is why I was willing to work with the negotiator.". An example of an UoA referring to credibility is: "I felt that I could be helped by someone who is experienced in this matter".

Affinity With the Crisis Negotiator

The affinity code (frequency = 25) can be described as the extent to which the participant felt a sense of closeness and familiarity with the crisis negotiator. The relationship between affinity with the crisis negotiator and willingness to cooperate can be explained by the extent to which a PiC felt understood and acknowledged compared to a feeling of estrangement from, and being rushed by, the crisis negotiator. An example of a UoA referring

to a feeling of acknowledgement is: “I felt like someone appreciated me in a way which made it worth it to climb over the fence”. An example of a UoA referring to the extent to which one felt estranged is: “I did not see any reason to start a conversation with someone who does not even know me or my background”.

Text-based Obstacles

The text-based obstacle code (frequency = 11) can be viewed as a communication-based hinderance that affected the willingness to cooperate. The relationship between a text-based obstacle and the willingness to cooperate can be explained by the (1) preference of some participants to talk in person versus text, (2) the unnatural feeling of texting at the edge of a bridge, and (3) perceiving a lack of personalisation; i.e., thinking the crisis negotiator is merely using a predetermined script. An example of an UoA that illustrates why a PiC rather talks in person is: “I was not completely convinced to go back over the fence, the texting did not feel personal enough to build enough rapport. I think hearing someone, or someone being physically there could give that support. But, the texting gave a good start of making a connection with the negotiator”.

Additional Analysis

In answering the first research question, we observed differences in compliance between participants in the control and experimental group. Participants were more likely to cooperate when the negotiator went through the revised BISM stages compared to immediately posing the safety suggestion. With this information, we wanted to explore whether there were individual differences in empathy, rapport, trust, and influence between participants who did and did not comply. This could aid in understanding the individual differences in compliance.

A two sample *t*-test was performed to compare means of empathy, rapport, and trust between the people who accepted and declined the safety suggestion, within each group (control and experimental).

In the control group, there were significant differences between compliant and non-compliant people on scores of empathy, $t(45) = -3.38$, $p = .002$, $d = -0.99$ (95% CI [-1.60, -0.38]), rapport, $t(45) = -2.34$, $p = .02$, $d = -0.69$ (95% CI [-1.28, -0.09]), trust, $t(45) = -2.69$, $p = .01$, $d = -0.79$ (95% CI [-1.38, -0.19]), ability, $t(45) = -3.27$, $p = .002$, $d = -0.96$ (95% CI [-1.56, -0.35]), and benevolence, $t(45) = -3.09$, $p = .003$, $d = -0.91$ (95% CI [-1.51, -0.30]). Table 3 presents the total mean scores and standard deviations of all variables across groups, showing that the people who accepted the late safety suggestion reported significantly higher total mean scores on empathy, rapport, trust, ability, and benevolence compared to the people who declined. An ANCOVA revealed a significant difference in influence between the people who declined and accepted the late safety suggestion, after controlling for pre-influence scores, $F(1, 44) = 13.87$, $p = <.001$. Table 3 shows that the people who accepted the late safety suggestion reported significantly higher scores of influence ($M = 7.35$, $SD = 1.50$) compared to people who declined the late safety suggestion ($M = 4.71$, $SD = 1.95$).

In the experimental group, there was a significant difference between compliant and non-compliant people on integrity $t(45) = -2.39$, $p = .02$, $d = -0.75$ (95% CI [-1.38, -0.11]). Table 3 shows that participants who accepted the early safety suggestion reported a significantly higher level of perceived integrity of the crisis negotiator compared to the participants who declined the early safety suggestion. An ANCOVA revealed a significant difference in influence between the people who declined and accepted the early safety suggestion, after controlling for pre-influence scores, $F(1, 44) = 5.32$, $p = 0.3$. Table 3 shows that the people who accepted the late safety suggestion reported a significantly higher scores

of influence (M = 7.07, SD = 2.12) compared to people who declined the late safety suggestion (M = 5.19, SD = 1.94).

Table 3

Means and Standard Deviations of the Control and Experimental Group Between Participants Who Declined and Accepted the Safety Suggestion

	Control Group				**Experimental Group**			
	Declined (N = 21)		**Accepted** (N = 26)		**Declined** (N = 32)		**Accepted** (N = 15)	
Variables	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***
Empathy	**2.69**	0.79	**3.38**	0.62	3.04	0.69	3.47	0.69
Rapport	**2.97**	0.88	**3.45**	0.52	3.26	0.78	3.51	0.90
Trust	**3.44**	0.39	**3.75**	0.39	3.53	0.53	3.81	0.55
Ability	**3.22**	0.61	**3.77**	0.54	3.38	0.75	3.63	0.73
Benevolence	**3.55**	0.55	**4.03**	0.51	3.68	0.67	3.92	0.68
Integrity	3.52	0.35	3.49	0.43	**3.51**	0.48	**3.87**	0.48
Pre-influence	**4.57**	2.01	**6.50**	1.90	**4.59**	1.85	**6.00**	1.96
Post-influence	***4.71***	1.95	***7.35***	1.50	**5.19**	1.94	**7.07**	2.12

Note. **Bold** = $p < .05$ (2-tailed). ***Bold Italics*** = $p < .001$ (2-tailed).

Explorative Analysis

A previous study conducted by Giebels et al. (2017) found that Hofstede's cultural dimension of uncertainty avoidance (UA; Hofstede, 2001) influenced communication alignment in cross-cultural (Dutch-German) police-citizen crisis negotiations. This study argued that Dutch and German citizens are similar in all cultural aspects except for UA; which can be described as one's (in)tolerance for uncertain circumstances. Higher levels of UA were found among German citizens compared to Dutch citizens. This difference was reflected in German citizens' attunement to formal and legitimising messages; communication in which authority over laws and rules are the central components. In the

current experiment, the crisis negotiator's approach was rather informal, absent of legitimising, rules, laws and authority claims. Since formal language moderates communication alignment (i.e. Dutch participants are more attuned to informal language, and German participants to formal language; Giebels et al., 2017), there might have been a difference between the two nationalities in orientation towards the crisis negotiator in the current study. Therefore, we investigated whether there were differences in empathy, rapport, trust, influence and behavioural compliance between the Dutch and German participants within each group (control, experimental). The sample was largely represented by Dutch (44.7%) and German (35.1%) participants, which were roughly equally divided across the control group (N_{Dutch} = 22, N_{German} = 18) and experimental group (N_{Dutch} = 20, N_{German} = 15).

Within the control group, the independent samples *t*-test revealed statistically significant differences between the Dutch and German on integrity, $t(38) = 2.18$, $p = .04$, $d = 0.69$ (95% CI [0.47, 1.33]). Table 4 reveals that the Dutch participants ($M = 3.64$, $SD = 0.29$) reported higher levels of perceived integrity of the crisis negotiator compared to German participants ($M = 3.40$, $SD = 0.40$). An ANCOVA revealed no significant difference in influence between the Dutch and German participants, after controlling for pre-influence scores, $F(1, 37) = 0.53$, $p = .47$. In addition, a contingency table analysis, for testing the difference in behavioural compliance between the Dutch and German participants, did not show a significant difference $X^2(1, N = 40) = .75$, $p = .39$. Overall, 63.6% of the Dutch participants complied with the crisis negotiator compared to 50.0% of the German participants.

Table 4

Means and Standard Deviations of the Control and Experimental Group Between Dutch and German Participants

	Control Group				**Experimental Group**			
	Dutch ($N = 22$)		**German** ($N = 18$)		**Dutch** ($N = 20$)		**German** ($N = 15$)	
Variables	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***
Empathy	3.19	0.64	3.17	0.70	3.31	0.69	2.90	0.69
Rapport	3.24	0.62	3.41	0.70	3.46	0.84	3.13	0.83
Trust	3.71	0.31	3.63	0.40	3.75	0.51	3.42	0.44
Ability	3.53	0.54	3.66	0.56	3.56	0.78	3.27	0.64
Benevolence	3.98	0.47	3.87	0.54	3.92	0.54	3.62	0.68
Integrity	**3.64**	0.29	**3.40**	0.40	**3.77**	0.48	**3.38**	0.42
Pre-influence	5.50	2.24	6.39	1.61	6.15	2.60	5.40	2.06
Post-influence	6.45	1.99	6.39	1.79	6.15	2.60	5.40	2.06

Note. **Bold** = $p < .05$ (2-tailed).

Within the experimental group, the independent samples *t*-test revealed a statistically significant difference between the Dutch and German participants on integrity $t(33) = 2.52$, $p = .02$, $d = 0.86$ (95% CI [0.16, 1.56]). Table 4 reveals that the Dutch participants ($M = 3.77$, $SD = 0.48$) reported higher levels of perceived integrity of the crisis negotiator when compared to German participants ($M = 3.38$, $SD = 0.42$). An ANCOVA revealed no significant difference in influence between the Dutch and German participants, after controlling for pre-influence scores, $F(1, 32) = 0.08$, $p = 0.78$. In addition, a contingency table analysis for testing a difference in behavioural compliance between the Dutch and German participants did not show a significant difference $X^2(1, N = 34) = .88$, $p = .35$. In total, 42.1% of the Dutch participants complied with the crisis negotiator compared to 26.7% of the German participants.

Discussion

The purpose of the current study was to empirically assess the temporal proposition of the suicide crisis negotiation intervention model called the revised BISM (Vecchi et al., 2019). The main findings support the notion that taking the time to build an empathetic, rapport-based, and trustworthy relationship does contribute to a greater likelihood of behavioural compliance. The PiCs in the experiment were almost twice as likely to comply with the crisis negotiator's late safety suggestion (posed after the revised BISM stages were applied) compared to an early safety suggestion (given at first contact). Moreover, the group that complied with the late safety suggestion reported significantly higher levels of empathy, rapport, trust, and influence, compared with those who rejected the request. Thus, it seems that the PiCs with whom the crisis negotiator could successfully establish a positive relationship were also those who accepted the late safety suggestion. The importance of the relational components in the crisis negotiations was also reflected in the qualitative data. Interestingly, the inductively derived reasons for being willing to cooperate aligned with these revised BISM stages: empathy, rapport, and trust. The affinity code seemed to address both empathy and rapport, since it included a sense of closeness and familiarity (rapport; Tickle-Degnen & Rosenthal, 1990; Vecchi et al., 2019), and feeling understood and acknowledged (empathy; Plank et al., 1996; Vecchi et al., 2019). The character traits code included variations that mapped on the trust factors (Mayer & Davis, 1999; Vecchi et al., 2019), namely: credibility (ability), caring (benevolence), and sincerity (integrity). Hence, both the quantitative and qualitative data indicated that empathy, rapport, and trust were quite important components for influencing behaviour. These findings are consistent with previous literature on crisis negotiation, stressing the importance of building a positive relationship for reaching behavioural change (Grubb, 2010; Ireland & Vecchi, 2009; Vecchi et al., 2005; Vecchi et al., 2019; Wells et al., 2013).

However, almost one third of the PiCs who were given an early safety suggestion instantly complied with the crisis negotiator and agreed to climb back over the fence of the bridge. This group of compliant people subsequently continued the crisis negotiation in a safer place with a lower risk of accidentally slipping and falling off the bridge. Apparently, there was a group of PiCs willing to cooperate with the negotiator before a relationship was established. Thus, applying the revised BISM was not a prerequisite for behavioural change. This raises the question of what distinguishes these people from the rest. If these types of rapidly compliant people can be identified, it may help negotiators in their decision-making on when to suggest a course of action.

Furthermore, the expectation was that even if early behavioural change could be established, the "premature" act of recommending a course of action would hinder the relationship building capabilities in the succeeding negotiation in the form of decreased levels of empathy, rapport, trust, and influence (Vecchi et al., 2019). The results revealed that there were no significant differences between the groups for which early and late safety suggestions were made. The reported total mean scores of empathy, rapport, trust, and influence were neutral to positive in both groups at the end of the negotiations. Suprisingly, the participants who at first declined the early safety suggestion still reported neutral to high levels of empathy, rapport, trust, and influence at the end of the negotiation. Thus, posing an early safety suggestion did not seem to have a negative impact on the relationship-building process in the succeeding negotiation, even after the PiC refused early cooperation with the crisis negotiator.

The explorative analysis showed that the Dutch participants viewed the crisis negotiator as having significantly more integrity than the German participants did. However, there was no difference in behavioural compliance and other relational components (empathy, rapport, trust, and influence) between the two nationalities. Because the study of Giebels et

al. (2017) showed that German citizens were more attuned to formal police-citizen interactions, the informal approach of the crisis negotiator in the current study might have impacted their perception of the crisis negotiator's integrity. Nevertheless, the outcomes in terms of accepting or rejecting early and late safety suggestions seemed to be unaffected by the cultural difference.

Limitations and Avenues for Future Research

Although the current study has provided a broader scientific understanding of the dynamics of timing safety suggestions in suicide crisis negotiations, there are five limitations that need to be addressed. Corresponding recommendations for future studies are also provided.

First, the participants were in a low-emotional state. We tried to enhance the participants' immersion in both their suicidal role and presence at the bridge by using a realistic script and video of the location. On average, the participants reported moderate levels of immersion, however, it is unlikely that participants were in an emotional state similar to people actually standing at the edge of a bridge contemplating suicide. Because the experiment was conducted online, via chat instead of face-to-face, the participants were not physically present at the bridge. Moreover, due to ethical considerations, we explicitly excluded participants with (previous) suicidal tendencies. Thus, we do not know whether the results would overlap with participants in high-emotional states. It is challenging to test this because bringing a suicidal crisis negotiation experiment closer to reality would raise ethical concerns. Placing a participant in an unsafe situation (e.g., on the edge of a bridge) or arousing a highly negative emotional state could lead to increased distress and discomfort. However, there might be a way to circumvent these issues: virtual reality. Research in virtual reality is a growing field and has shown promising results in terms of increased presence – a psychological state of being situated in a given location (Van Gelder et al., 2017). This

combined with biometric measures of stress (heart rate and heart rate variability; Kim et al., 2018) to control for participants' emotional states could lead to results that overlap more closely with reality.

Second, the sample consisted mainly of individuals from a Western, individualistic cultural background. Research suggests that there are significant differences between low context (Western) and high context (Eastern) cultures in terms of their response to crisis negotiation, including their orientation towards authority, vulnerability to persuasion, and type of communication preferences (Gelfand et al., 2011; Giebels & Taylor, 2009; Hall & Hall, 1990; Ostermann, 2002). Specifically, people in high-context cultures rely more on non-verbal communication and relationship-building, while those in low-context cultures are more likely to use direct verbal communication and tend to lean more on problem-solving dialogues. Moreover, people from high-context cultures are more inclined to have respect for authority, whereas those from low-context cultures have a higher tendency to challenge authority. In future studies, it would be interesting to explore cultural differences in compliance between people with Western and Eastern backgrounds. Future researchers could consider using a mixed-culture sample with an equal distribution of people from Western and Eastern cultures or conducting a similar study with only participants from Eastern backgrounds to compare the results.

Third, the experiment did not include an exit option, whereby the PiC could leave the negotiation, either in terms of cutting off contact or (hypothetically) jumping off the bridge. If an exit option had been implemented in the study, it could have provided insight into whether the early safety suggestion would have led to an increase in PiCs exiting the conversation versus continuing the negotiation. In addition to giving participants an option to accept or reject the early safety proposal, we could have introduced an additional option to break contact with the crisis negotiator, either by jumping or leaving the chat, or we could

have given participants some space to express why they did not want to cooperate (e.g., having the crisis negotiator ask the reason behind the PIC's refusal). Future researchers could incorporate an exit option, but should take into account the ethical issues because offering participants the (fictitious) option of suicide by jumping off a bridge could lead to adverse consequences such as increased feelings of distress during and after the experiment. Moreover, when the crisis negotiator made the early safety suggestion and it was denied by the PiC, the crisis negotiator just continued the conversation by introducing themselves. In future studies, it would be interesting to explore whether rejecting an early safety suggestion immediately leads to a reduction in empathy, rapport, trust, and influence. Apparently, the participants who rejected the early safety suggestion still, on average, ended up with decent levels of empathy, rapport, trust, and influence. Perhaps, the stages had a restorative effect. It would be interesting to see if there was, in fact, a decline in empathy, rapport, trust, and influence. If that is the case, perhaps communicative error management tactics (Oostinga et al., 2020), such as apologising for "rushing" the PiC, could accelerate the restorative effect of empathy, rapport, trust, and influence. Research by Oostinga et al. (2020) showed that after a crisis negotiator made an error and apologised, the level of rapport and affective trust increased compared to situations where the crisis negotiator did not apologise. Therefore, apologising might have the equivalent restorative effect when conducted in situations where the PiC felt rushed by the crisis negotiator and declined the early safety suggestion. In future research, measuring the potential decline in empathy, rapport, trust, and influence after the early safety suggestion is rejected, might break the flow of the succeeding negotiation. Thus, it is recommended to perform this as a single treatment that ends after the rejection.

Fourth, the current researchers used a safety suggestion at the beginning of the conversation that already contained persuasive elements, such as expressing concern for the PiC's well-being, appealing to the PiC's self-interest, and giving the PiC a sense of

autonomy. It could be argued that this kind of safety suggestion already contained relationship-building components and might be in itself an accelerated form of relationship building. A cold type of approach at the beginning of the negotiation might have led to higher resistance and less behavioural compliance on the part of the participants. However, the inclusion of these persuasive elements in both the early and late safety suggestion did make this study a true test of temporality, solely looking at the impact of the time of delivery. A cold approach that entirely deviated from the revised BISM's interpersonal style would have added an extra layer to the experiment, since one group would have received a different treatment. Nonetheless, future researchers could investigate whether there are differences in behavioural compliance in response to "warm" and "cold" types of safety suggestions. For example, one could compare the safety suggestion of the current study with a mere request, without persuasive elements: "Could you please climb over the fence?", or even a command: "Climb back over the fence, right now".

Fifth, in the current study, the crisis negotiator was pre-programmed and communicated via text-messages. The benefit of the pre-programmed text-based approach was consistency in delivering the exact same treatment for all participants, which is difficult in a face-to-face conversation due to variability in the crisis negotiator's (subconscious) non-verbal expressions and unpredictable responses of participants. Conversely, crisis negotiation is commonly performed in real life; via face-to-face conversations. Here, non-verbal behaviours play a crucial role in the development of the revised BISM stages. For example, Vecchi et al. (2019) state that non-verbal encouragers (nodding, tilting the head, leaning forward, making eye contact, and mirroring behaviour) create a feeling that the negotiator is genuinely paying attention to what the PiC is expressing and experiencing. Furthermore, a study found that non-verbal behavioural cues (smiling, expressiveness, gestures, postural shifts, and synchrony) are essential in estimating the degree of presence of rapport with

another person (Grahe & Bernieri, 1999). Therefore, it would be valuable to conduct a similar study in a face-to-face setting to see how the results compare to text-based negotiation.

Conclusion

The current study has primarily shed light on the effectiveness of the revised BISM in negotiating suicide crises by examining its temporal proposition. Overall, the findings show that successively building a relationship based on empathy, rapport, trust, and influence significantly increases the probability of behavioural compliance, compared to accelerating behavioural change. Thus, this outcome supports the temporal premise of the revised BISM. However, we suggest that the revised BISM's theory could be slightly more nuanced in its description of when behavioural change can occur. The outcome of the current study shows that in one third of the cases behavioural change could be accelerated at first contact; hence, the four stages were not a prerequisite for behavioural change. The absolute statement: "behavioural change will occur only if the previous four stages have been successfully completed" (Vecchi et al., 2019, p. 236), can become problematic if practitioners take it too literately, which occasionally happens. In cases of time shortage or where the PiC is situated in a dangerous context (e.g., the edge of a bridge), it might be worthwhile to attempt to accelerate behavioural change via an early safety suggestion to reduce the risk of accidental self-harm (e.g., the PiC slipping and falling). Especially since, in the present study, the early safety suggestion did not seem affect the succeeding relationship-building capabilities. While this early evidence is promising, future research should prioritise ruling out possible adverse consequences of an early safety suggestion, such as the PiC performing a suicide attempt, or refusing to further engage with the crisis negotiator. On the whole, the study's findings reinforce the importance of the relationship-building process in improving the crisis negotiator's persuasiveness. It is hoped that these findings will encourage future research on

the topic of suicide crisis negotiation, improve crisis negotiator training and application, and ultimately, contribute to the mission of reducing global suicide rates.

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Appendix A

Scale Items of Empathy, Rapport, and Trust

Table 5

Items of the Adapted Version of Plank & Minton's (1996) Perceived Empathy Measure

Item
1. I had lousy feelings when dealing with the crisis negotiator. (reversed)
2. The crisis negotiator really understood my feelings about this situation.
3. I felt as if I was on the same wavelength as the crisis negotiator.
4. The crisis negotiator did not understand my way of thinking. (reversed)
5. The crisis negotiator had a lot of knowledge about how I needed to make decisions.
6. The crisis negotiator seemed to feel what I needed when we talked about my problem.
7. The crisis negotiator always understood my needs.

Table 6

Items of Drolet & Morris (2000) Rapport Measure

Item
1. Did you feel that you understood what the crisis negotiator was trying to say?
2. Did you feel that the crisis negotiator understood what you wanted to say?
3. Did you feel "in sync" or on the same wavelength with the crisis negotiator?
4. Did you get a harmonious feeling during the conversation?
5. Rapport = a state of mutual positivity and interest. To what extent was there 'rapport'?

Table 7

Items of the adapted version of Mayer and Davis' (1999) Trust Measure

Item	Trust Factor
1. The crisis negotiator was very capable in performing his or her job.	Ability
2. The crisis negotiator was known to be successful at the things he or she tries to do.	Ability
3. The crisis negotiator had much knowledge about the work that needs to be done.	Ability
4. I felt very confident about the crisis negotiator's skills.	Ability
5. The crisis negotiator was well qualified.	Ability
6. The crisis negotiator was very concerned about my welfare.	Benevolence
7. My needs and desires were very important to the crisis negotiator	Benevolence

8. The crisis negotiator would not knowingly do anything to hurt me.	Benevolence
9. The crisis negotiator really looked out for what was important to me.	Benevolence
10. The crisis negotiator would go out of his or her way to help me.	Benevolence
11. The crisis negotiator had a strong sense of justice.	Integrity
12. I never had to wonder whether the crisis negotiator will stick to his or her word.	Integrity
13. The crisis negotiator tried hard to be fair in dealings with others.	Integrity
14. The crisis negotiator's actions and behaviours were not very consistent. (reversed)	Integrity
15. I liked the crisis negotiator's values.	Integrity
16. Sound principles seemed to guide the crisis negotiator's behaviour.	Integrity

Appendix B

Briefing

Dear participant,

Great to hear that you want to participate in this study! Here, you will step into the role of a person standing on the edge of a bridge, having suicidal considerations. You will be approached by a police officer (crisis negotiator) and engage in a crisis negotiation. For this study, we examine whether there is a difference in the immersive experience between a face-to-face crisis negotiation experiment and a text-based crisis negotiation experiment. You have been placed in the latter condition, which means that you will soon be able to chat with a crisis negotiator.

The experiment should take no longer than 15 minutes to complete. First, a description of your role will be provided, followed by an explanation of the scenario. Then, you will be able to exchange messages with a crisis negotiator. After the negotiation, you will receive a series questionnaires.

Warning: If you have had suicidal inclinations in the past or present, we recommend you to not participate in this study and reach out for help. If you feel the need to talk about suicidal inclinations or to receive more information about suicide, please call the suicide prevention service. For people living in The Netherlands: call the number “113” or “0800 – 0113”, or go to the website: https://www.113.nl/english. For people living in Germany, contact information of different types of German helplines can be found at this website: https://www.therapyroute.com/article/suicide-hotlines-and-crisis-lines-in-germany.

Appendix C

Informed Consent Form

Your answers during the experiment are completely anonymous. The researchers will not be able to find out who completed the experiment. Your data will be stored anonymously on a secure server linked to the University of Twente. According to data storage guidelines, anonymised data will be kept for at least 10 years. Your participation is completely voluntary, and at any time during the experiment you can withdraw from the study without explanation or justification. If you choose to withdraw, your data will be completely erased.

The data will serve as the basis for a thesis and may be used in academic publications. Published results will never contain information about specific participants. This means that none of the results of the study can be linked to a specific individual.

This research is conducted by Nick Van der Klok from the Faculty of Behavioural, Management and Social Sciences at the University of Twente, as part of a MSc thesis. The supervisors of this thesis are Dr Miriam Oostinga (m.s.d.oostinga@utwente.nl) and Dr Steven Watson (s.j.watson@utwente.nl). For comments or questions, please contact me at: n.vanderklok@student.utwente.nl. For more information on ethics, please contact: ethicscommittee-cis@utwente.nl.

I have read this statement and agree to participate. I also consent to the processing of my anonymous data for academic purposes. If you have any complaints about this study, please contact the secretary of the Ethics Committee of the Faculty of Behavioural Sciences of the University of Twente, Ms. J. Rademaker (phone: 053-4894591; e-mail: j.rademaker@utwente.nl, PO Box 217, 7500 AE Enschede).

Risk of taking part: Immersing yourself in the role of a suicidal person in crisis may result in feelings of distress. If you experience this, you can withdraw at any time.

Do you agree with this statement and consent to the processing of your anonymous data for academic purposes?

- o Yes
- o No

Appendix D

Scenario

Imagine yourself in the following scenario:

Last year, you completed your education. For six years, you worked very hard to get a bachelor's and master's degree from a university, and you succeeded. However, during this study period, you have accumulated a significant debt; approximately €65,000, due to the lack of financial support from your parents and the need to take out loans to cover expenses like tuition, rent, and food. Despite your hopes of securing a good job to pay this back easily, you have struggled to find employment and have been unemployed for the past six months. This has left you feeling depressed and overwhelmed with stress.

In addition to the challenges you have faced with your education and employment, you recently experienced a painful breakup with a partner whom you loved deeply. After a 4-year relationship, the break-up was sudden and cold, leaving you heartbroken. You don't know why the breakup happened, it came out of nowhere.

The combination of these difficult events – the debt, the unemployment, and the breakup – caused a sombre and depressive future perspective, and led you to consider ending your life. You left a suicide note at home, walked to the edge of a bridge, and climbed over the fence.

You can see your situation at the bridge by watching the 29-second video below (from a first-person perspective). Please watch the video, take a minute, and try to fully imagine yourself in this role and situation, as if you were standing there right now.

[VIDEO]

Now that you are standing there (at the dangerous side of the fence), the police tries to call you. However, you declined the call because it was an unknown number. Therefore, the police will try to communicate with you by sending text-messages.

Appendix E

Text-Based Negotiation Script

Script 1 (Control Group)

CN = Crisis Negotiator

PiC = Person in Crisis

You will now be connected to the chat:

Introduction

(CN): `Hi, I am Sam from the police. I received a phone call from your mother, saying you are going to attempt suicide by jumping from a bridge. She gave us your phone number so we could reach out to you. Are you thinking of ending your life?`

Response options:

A. (PiC): Yes, I am thinking about ending it
B. (PiC): Maybe, I am not sure yet

Empathy Stage

[**Open-ended Question**] (CN): `What makes you consider ending your life?`

Response options:

A. (PiC): I feel hopeless. I worked so hard for six years to obtain my university degrees, but nobody wants to hire me and this huge study debt is weighing down on me! Also, my partner broke up with me and suddenly left me all alone.
B. (PiC): I feel sad. My partner suddenly broke up after a 4-year relationship. Besides that, life feels meaningless now that I'm in debt and unemployed for months. I worked so hard to get my university degrees, life is not fair to me!

Rapport Stage

[**Paraphrasing & Mutual Affinity**] (CN): I'm sorry to hear that. I have also faced unemployment for a while, but I can only imagine what it must be like to also have a debt hanging over your head combined with the sudden breakup, it must be terrible to have all these circumstances happen at once.

Response options:

A. (PiC): Yes, I'm struggling to see any way out of this
B. (PiC): Yes, It feels like there is no hope for the future

Trust Stage

[**Expressing benevolence, integrity, ability**] (CN): I am here for you and will do all that I can to support you. It may feel like you were alone in this before we started talking, to reassure you I do have experience supporting people in similar situations in finding a way forward.

Response options:

A. (PiC): That's good to know
B. (PiC): Thank you
C. (PiC): Okay
D. (PiC): That's nice to hear

Influence Stage

[Positive Affirmation] (CN): From what I've heard you say earlier, it sounds like you have invested a lot in yourself and worked so hard on your education, I think that says something about how strong you are as a person.

Response options:

A. (PiC): Thank you
B. (PiC): You're right. I hadn't looked at it that way
C. (PiC): If you say so
D. (PiC): Yes, I think so too

Behavioural Change

[**Safety Suggestion**] CN: I can see you from a distance and I get really frightened when I see you at the other side of the fence, because I think you might fall by accident before you are ready. Why don't you come to the other side of the fence, so we can continue this conversation in a safer manner?

Do you climb over the fence?

Yes [ ] No [ ]

Your network connection with the chat has been lost...

The first part of this study is completed.

Please continue to the questionnaires by pressing the button below.

Text-Based Negotiation Script 2 (Experimental Group)

CN = Crisis Negotiator

PiC = Person in Crisis

You will now be connected to the chat:

Behavioural Change

[**Safety Suggestion**] CN: Hi, I am Sam. I can see you from a distance and I get really frightened when I see you at the other side of the fence, because I think you might fall by accident before you are ready. Why don't you come to the other side of the fence, so we can continue this conversation in a safer manner?

Do you climb over the fence?

Yes [ ] No [ ]

Introduction

(CN): I received a phone call from your mother, saying you are going to attempt suicide by jumping from a bridge. She gave us your phone number so we could reach out to you. Are you thinking of ending your life?

Response options:

C. (PiC): Yes, I am thinking about ending it
D. (PiC): Maybe, I am not sure yet

Empathy Stage

[**Open-ended Question**] (CN): What makes you consider ending your life?

Response options:

C. (PiC): I feel hopeless. I worked so hard for six years to obtain my university degrees, but nobody wants to hire me and this huge study debt is weighing down on me! Also, my partner broke up with me and suddenly left me all alone.
D. (PiC): I feel sad. My partner suddenly broke up after a 4-year relationship. Besides that, life feels meaningless now that I'm in debt and unemployed for months. I worked so hard to get my university degrees, life is not fair to me!

Rapport Stage

[**Paraphrasing & Mutual Affinity**] (CN): I'm sorry to hear that. I have also faced unemployment for a while, but I can only imagine what it must be like to also have a debt hanging over your head combined with the sudden breakup, it must be terrible to have all these circumstances happen at once.

Response options:

C. (PiC): Yes, I'm struggling to see any way out of this
D. (PiC): Yes, It feels like there is no hope for the future

Trust Stage

[**Expressing benevolence, integrity, ability**] (CN): `I am here for you and will do all that I can to support you. It may feel like you were alone in this before we started talking, to reassure you I do have experience supporting people in similar situations in finding a way forward.`

Response options:

E. (PiC): That's good to know.
F. (PiC): Thank you.
G. (PiC): Okay.
H. (PiC): That's nice to hear.

Influence Stage

[Positive Affirmation] (CN): `From what I've heard you say earlier, it sounds like you have invested a lot in yourself and worked so hard on your education, I think that says something about how strong you are as a person.`

Response options:

E. (PiC): Thank you
F. (PiC): You're right. I hadn't looked at it that way
G. (PiC): If you say so
H. (PiC): Yes, I think so too

Your network connection with the chat has been lost...

The first part of this study is completed.

Please continue to the questionnaires by pressing the button below.

Appendix F

Debriefing

Thank you for participating in this study! Please note that the scenario you were presented with was fictional and the role you took on was not you. Actually, our aim was not to compare the level of immersion between text-based versus face-to-face negotiation experiments. Our real goal was to investigate whether your behaviour could be changed by the crisis negotiator, and to see if the negotiator could build empathy, rapport, trust, and influence during the negotiation.

As the data collection is still ongoing, we ask that you please keep the details of the experiment confidential until April 2023, when the study is expected to be completed.

If you feel the need to talk about suicidal inclinations or to receive more info concerning suicide, please call the suicide prevention service. For people living in The Netherlands: call the number “113” or “0800 – 0113”, or go to the website: https://www.113.nl/english. For people living in Germany, contact information to different types of German helplines can be found at this website: https://www.therapyroute.com/article/suicide-hotlines-and-crisis-lines-in-germany.

Because we have provided you new information about this study (i.e., that the main objective was actually to measure behavioural change rather than immersion), we would like to give you the opportunity to confirm or withdraw you initial consent without any negative consequences. If you withdraw, your data will be deleted from the dataset.

Do you agree with this statement and consent to the processing of your anonymous data for academic purposes?

- o Yes
- o No

Appendix G

Coding Scheme of Reasons Behind (Non-)Cooperation Willingness

Table 8

Coding scheme with Reasons for Why the Participant Was (Not) Willingness to Cooperate

No.	Code Label	Definition	Variation 1	Variation 2	Variation 3	Variation 4	Unit of Analysis	Freq.
1	**State of Mind**	*The (non-) evoked cognitive or emotional state that reportedly led the PiC to be more or less willing to cooperate.*	**Hope** (Feeling hopeful, 'everything is going to be okay', not ready to give up, reassurance, versus hopeless, despair, suffering)	**Anticipatory Regret** (Not wanting to fall by accident before being ready)	**Aware of Impulsivity** (Realisation of being in an impulsive state, not being in the right state of mind)	**Decisiveness** (The extent to which someone's mind is fixed at carrying out a plan for suicide, certain, doubtful, unwavering)	*'Because the crisis negotiator made clear that it is possible to find a solution, even it seems hard'*	35
2	**Character Traits**	*An attribute of the crisis negotiator that stood out during the crisis negotiation, and reportedly made the PiC more or less willing to cooperate.*	**Credible** (Ability to solve ones problems, professionality, experience with similar situations, level of certainty about talking to an actual crisis negotiator)	**Caring** (Willingness to help, level of effort, being frightened of the PiC hurting themselves, compassionate words, providing a feeling of not being alone in one's problems)	**Sincere** (No other motives such as merely getting paid or doing one's job, not lying, not casting someone aside once the negotiation is over, actions speak louder than words)	**Likeable** (The crisis negotiator was nice, friendly, had a kind attitude)	*'I felt that I could be helped by someone who is experienced in this matter'*	28
3	**Affinity**	*A feeling of closeness with the crisis negotiator due to a shared understanding of one another.*	**Feeling Understood** (The crisis negotiator listens, understands the problems, reflects on the situation)	**Feeling Acknowledged** (The crisis negotiator gives recognition for the difficult situation, not downplaying the situation, makes one feel worthy as a person)	**Feeling Estranged** (The feeling of not knowing this person, no previous contact, no knowledge, could be anyone)	**Feeling Rushed** (Being asked too early to do something, being asked too directly/firm)	*'Because I did not see any reason to start a conversation with someone who does not even know me or my background'*	25
4	**Text-based Obstacle**	*A hindrance that led the PiC to be less willing to cooperate with the crisis negotiator.*	**Lack of Personalisation** (Incongruency within the dialogue, feeling the answers are scripted, 'one-liners')	**Inability to Exchange Emotions** (Not able to vent emotions, not able to perceive emotions of the crisis negotiator)	**Unnatural Setting** (Texting not being the appropriate communication method on the edge of a bridge)		*'It feels unnatural to be standing at a bridge, very close to falling and having a whole text conversation with someone. Talking would definitely be better'*	11
5	**Miscellaneous**	*Ambiguous answers*					*'I wanted to do so'*	12