The Dynamics of Online Mediation in Conflicts:

When Do Victims Perceive an Apology as Sincere and Accept It in the Context of

Online VOM?

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Abstract

Research shows that apologies that are perceived as sincere constitute a central element for victims within traditional victim-offender mediation (VOM). We examined apologies' effectiveness via a potentially valuable alternative to existing mediation forms. The present research examined the perceived sincerity and acceptance tendency of pre-recorded video apologies in the context of online VOM. We tested the hypotheses that victims perceive (online) apologies that either include *suffering and responsibility-taking* and/or an *offer to repair* as more sincere and acceptable (DV's) compared to apologies having those factors absent. Assumptions were tested by a 2 (suffering and responsibility-taking: present versus absent) x 2 (reparation offer: present versus absent) between-group design. The study involved 176 imaginary victims who randomly received one of four pre-recorded video apology messages for a fictitious crime from an offender (actor). Apologies were experimentally manipulated, and either included or omitted words for *suffering and responsibility-taking,* or *reparation offer*. However, participants did not perceive significant differences between apologies present or absent conditions of *suffering and responsibility-taking*, nor *reparation offer.* Therefore, manipulations failed. No causal evidence for hypotheses was found. Nevertheless, a regression analysis showed significant outcomes between individual's variables: the more participants perceived the offender expressing suffering, taking responsibility, or offering reparation, the more sincere the apology was perceived and got more accepted. Future research should include manipulations that differ in *suffering and responsibility-taking* and *reparation offer*. To find generalizable results for apologies perceived sincerity and acceptance tendency in online VOM, apologies should be manipulated through offenders' verbal and non-verbal behaviour.

Keywords: conflict resolution, online victim-offender mediation, apologies – perceived sincerity – acceptance, suffering, responsibility-taking, reparation offer

Apologies are a central element during victim-offender mediation (VOM), which is one of the most common forms of restorative justice (Bolívar, 2013; Umbreit et al., 2001). The overall aim of VOM is a peaceful and communicative conflict resolution of the crime for victim and offender (Dandurand et al., 2006; Kane, 2019; Umbreit et al., 2001; Umbreit et al., 2004). Instead of a court process, the offender and the victim discuss the impact of the crime and solve the dispute together (Hansen & Umbreit, 2018; Umbreit et al., 2001; Umbreit & Coates, 1992). Victims have the chance to speak directly with their offender, ask questions about why the crime happened, and tell them about the effects the wrongdoing had on their lives (Choi et al., 2010; Hansen & Umbreit, 2018; Umbreit & Armour, 2011). A neutral third party (mediator) guides the mediation in a structured environment, but involved parties must actively participate to find a collaborative dispute resolution (Kane, 2019; Rebai Maamri et al., 2010; Umbreit & Armour, 2011; Zehr, 2015). The difference of VOM compared to the retributive justice system becomes obvious; the former is a mutual dispute resolution process while the latter involves the legislature with a unilateral punishment (Wenzel et al., 2008).

During VOM, victims, and offenders can either meet directly face-to-face or indirectly, but both forms are voluntarily in participation (Umbreit et al., 2001; Umbreit et al., 2004). Direct mediation involves physical meetings of offender and victim in person. Indirect forms include either shuttle or letter mediations. In shuttle mediation, facilitators assist conflicting parties to reach an agreement without being present in the same room as messages are orally transmitted between them. In letter mediation, the mediator or conflict parties themselves exchange written messages (Dandurand et al., 2006; Hansen & Umbreit, 2018; Miers et al., 2001; Rebai Maamri et al., 2010; Shapland et al., 2008; Umbreit et al., 2001; Umbreit & Armour, 2011). Importantly, existing research expresses limitations for both indirect and face-to-face mediation. In indirect mediation, less emotional expression is possible (Goodman, 2003), and victims accept apologies less as they do not see their offender (Shapland et al., 2008). Besides, some victims perceive meeting the offender directly face-to-face as too confronting (Shapland et al., 2007). Overall, those limitations may lower victim's satisfaction about a mediation process (Bonensteffen et al., 2021; Shapland et al., 2007). As technology and internet use become more available through digitization, conflict parties can perhaps easier participate in alternative (Goodman, 2003) and less confrontational forms as traditional VOM, like online mediation, to those overcome limitations. Note, online (video) communication in mediation is yet neither a common practice nor widely researched, but it could provide a valuable alternative alongside current practices (Bonensteffen et al., 2021; Goodman, 2003). To test if video mediation is indeed a fruitful alternative for victims to receive an apology and to fill the gap in

available research, this study extends existing findings from traditional VOM about elements that make an apology effective and examines them in the context of online (video) mediation. For this sake, first online dispute resolution, namely video mediation forms, are described as alternative to traditional VOM. Subsequently, crucial elements that lead victims to perceive an apology as more sincere and more likely to accept it are explored. At its core, this research will answer the research question: *To what extent do video apologies in the context of online VOM that differ in completeness in terms of perceived suffering, responsibility-taking, and reparation offer influence the perceived sincerity and acceptance among victims?* This aim also guides the following introduction and leads to the hypotheses of this study.

Online Dispute Resolution

Online technologies, digital media, and Internet use increase all over the world. Especially in the time of the current Covid-19 pandemic, technology programs help to stay connected, even if physical distance must be kept. More, mediation in cyberspace provides a modern solution within existing methods of mediations to solve a conflict (Mania, 2015).

Following, it is referred to forms of 'Online Dispute Resolution' (ODR), including online and digital mediations which gained attention since the mid-1990s (Ebner & Zeleznikow, 2015). To begin with, ODR is an alternative dispute resolution to traditional mediation forms (Ebner & Zeleznikow, 2015; Frantz & Bennigson, 2005). ODR uses technological methods like email-exchange or online video conferences for the mediation process (Goodman, 2003; Mania, 2015). Importantly, alternative (online) forms have the advantage that perpetrators and victims who live far away do not have to travel to discuss the dispute, but can do this via technical means, which saves costs and time (Bonensteffen et al., 2021; Goodman, 2003). More specifically, video mediations might be perceived as a less provoking but highly informational way to resolve a conflict online. Thus, online video mediation provides a gain for participants who perceive face-to-face as too confrontational and are afraid to directly meet their perpetrator (Bonensteffen et al., 2021; Goodman, 2003), but would still like to receive a (visual) apology for the offense.

Video Mediation

Goodman (2003) indicates that video mediation is either conducted in private or joint sessions within the controlled environment. The mediation takes place in front of computer screens instead of physical meetings of victim and offender during face-to-face mediation (Goodman, 2003; Mania, 2015). Next, the online interaction may happen via live-video-

interaction or exchange of pre-recorded video messages (Mania, 2015). Parties that communicate with one another in real-time are interacting synchronously within the context of ODR (Mania, 2015). Video mediation comes closest to the more direct mediation forms (Mania, 2015), but strictly speaking, it is not face-to-face mediation. Importantly, offline face-to-face mediation is richer, and its effects are more beneficial in comparison to indirect forms, mainly due to detectable non-verbal cues and visual emotional expressions (Goodman, 2003; Shapland et al., 2007; Zebel, 2012). These findings are crucial to mention as video mediation is a more direct form of VOM (Mania, 2015). Related, in video mediation verbal, visual, and non-verbal cues that help to interpret other's emotions are also present (Goodman, 2003).

Research by Bonensteffen et al. (2021) about digital video VOM indicates advantages but also disadvantages. Starting with disadvantages, some participants of video-chat-based VOM perceive digital VOM to provide less information about the other party, making it harder to interpret and understand their emotions compared to direct forms. More, Bonensteffen et al. (2021) found that victims perceive privacy concerns towards video-chat mediation such as that someone else might be present during the video-chat.

Contrary, advantages of digital video VOM in comparison to traditional mediation are the emotional distance of victim and offender, and victims perceived environmental safety. Precisely, digital forms create a stronger feeling of distance for participants compared to physically meeting the offender (Bonensteffen et al., 2021). This increases the victim's emotional well-being during the mediation process due to a higher perceived environmental safety (Bonensteffen et al., 2021). Besides, within video mediation, victims can engage in less confrontational mediations because they can remain in a safe place instead of being exposed to a stressful environment (Bonensteffen et al., 2021; Goodman, 2003). Thus, victims may perceive digital communication as more secure than face-to-face mediation (Bonensteffen et al., 2021). Further, Bonensteffen et al. (2021) observed that participants of video mediated communication would welcome implementing video messages additionally to existing practices. Clearly, victims perceive digital mediation as a significant enhancement of mediation's quality (Bonensteffen et al., 2021). However, literature on traditional VOM states that an effective apology in VOM is crucial for victims (Dhami, 2012, 2016). Based on this, this study examines the effectiveness of apologies in online video mediation as a valuable alternative that has the advantage of allowing offenders to express non-verbal cues while victims are not bared to a stressful environment compared to traditional mediation forms.

Importance of Apologies

Apologies play a key and central aspect within the mediation process (Choi et al., 2010; Dhami, 2012). Schneider (2007, p.265) underlines this by "The act of apology represents one of the core reparative opportunities in damaged relations". In direct VOM, the most common outcome is an apology (Miers et al., 2001; Umbreit & Coates, 1992) and 90% of offenders in VOM apologise (Dhami, 2012, 2016). Besides, over 70% of victims who participated in VOM in England or the USA mentioned that receiving an apology was important to them (Dhami, 2016; Umbreit & Coates, 1992). In addition, victims who receive an apology from their offender perceive this as obliging, forthcoming, and as crucial element for their satisfaction regarding the mediation (Dhami, 2012, 2016; Shapland et al., 2007). Victims have the need to receive a sincere apology because this is important for their psychological well-being, may even have therapeutic effects and help them to recover better from the crime's psychological and emotional effects (Blecher, 2011; Choi & Severson, 2009). Resolutely, if victims perceive an apology as sincere, this then discriminates a successful mediation from an unsuccessful one (Choi & Severson, 2009; Shapland et al., 2007; van Dijk, 2016; Zebel, 2012).

Recipient's Responses to Apologies

Recipient's responses to apologies may vary. They can either fully, partially accept, or completely reject the given apology (Dhami, 2012). Most apologies get accepted (Dhami, 2016) whereas rejections are rare (Bennett & Dewberry, 1994). Right down the line, apology's acceptance is more likely if the apology is perceived as sincere (Hatcher, 2010). An explanation for a higher chance to accept an apology might be due to the presence of non-verbal cues (body language and facial expression) of the offender making the apology more effective (Choi & Severson, 2009). Notably, some victims accept apologies even if they do not perceive them as sincere, which mostly happens when they experience acceptance pressure (Choi & Severson, 2009; Hatcher, 2010; Risen & Gilovich, 2007). More, victim's internal motivation to see themselves as forgiving or to eliminate the conflict influences them to accept an, even insincere, apology (Hatcher, 2010). Nonetheless, it becomes clear that apologies sincerity and acceptance relate to another (Hatcher, 2010).

Perceived Sincerity of Apologies

Apologies depict a central element of the mediation process for victims. Previous researchers identified numerous important elements of an effective apology. However, this study focuses on the most prevalent ones. The importance of an apology for understanding its sincerity is largely influenced by what victims infer from an apology to consider it crucially

(Choi & Severson, 2009; Dhami, 2016; Kirchhoff et al., 2012; Miers et al., 2001). Thus, apologies may either be perceived partially full or complete (Choi & Severson, 2009; Dhami, 2012, 2016; Kirchhoff et al., 2012). Precisely, sincerity is associated with truth-telling, thus, statements should convey truthfulness (Schwartzman, 2008). Concerning the apology's important elements, an emotional apology is more often perceived as sincere than an unemotional apology (Imhoff et al., 2012). Apologies that involve emotional expressions of remorse, shame, and guilt are more sincerely and more effectively perceived (Imhoff et al., 2012; Kirchhoff et al., 2012; Scher & Darley, 1997). Contrary, less elaborate and short apologies which simply include being 'sorry' are rather perceived as insincere (Dhami, 2012; Kirchhoff et al., 2012; Schneider, 2007; Sporer & Schwandt, 2007). In addition, speech errors or stuttering of one's para-verbal behaviour (vocal cues and speed pitch) within a given statement lead to perceive a message as deceptive (Sporer & Schwandt, 2007). Victims who perceive an apology as insincere, feel disappointed regarding the whole mediation process (Choi et al., 2010). Smith (2008) and Kirchhoff et al. (2012) argue this is because a person also wants to hear for what exactly the apologiser is apologising for.

Resolutely, certain elements can contribute to the apology's perceived sincerity. Subsequently, victims accept perceived sincere apologies more (Hatcher, 2010). Especially, apologies strong in perceived *suffering* and *responsibility-taking* were found to be crucial when explaining why some apologies are better accepted than others (Zebel et al., 2020). Related, inferences of suffering and responsibility-taking positively predicted apologies perceived sincerity (Bonensteffen et al., 2020). Based on these indications, the elements of suffering, and responsibility-taking, but also their interrelation in apologies are analyzed.

Suffering

Starting with apologies that entail ingredients of *suffering*. Victims perceive an apology as more sincere and complete if they see the offender expresses to suffer (Tang & Gray, 2018). Existing research mentions that high levels of suffering relate to the offender's expression that he or she has a moral conscience (Abrams et al., 2006). Suffer expressions include showing deep levels of moral unjust or being emotionally affected by the wrong behaviour (Bonensteffen et al., 2020; Tang & Gray, 2018). Besides, current research indicates that suffering relates to emotional expression, here, emotions of regret but especially shame and guilt convey suffer (Imhoff et al., 2012; Lewicki et al., 2016; Rodogno, 2008). In turn, perceived suffering relates to a more remorseful and more sincere apology (Czerny, 2019; Kirchhoff et al., 2012; Imhoff et al., 2012). It becomes clear that suffering depicts a crucial aspect of a perceived sincere apology. However, emotions of shame and guilt both convey not only suffering, but likewise

relate to taking responsibility (Bonensteffen et al., 2020; Imhoff et al., 2012). In addition, victims are more satisfied with an apology if they do not only perceive the offender to suffer, but if responsibility for the crime is also acknowledged (Bonensteffen et al., 2020). This leads to another essential element of an effective and complete apology, namely *responsibility-taking*.

Responsibility-Taking

Various researchers examined the importance of responsibility-taking within apologies of VOM. For the apology's perceived sincerity, the offender's expression of responsibility is crucial (Dhami, 2016; Kirchhoff et al., 2012; Scher & Darley, 1997). In line, Lewicki et al. (2016) state that responsibility-taking is a key element making an apology effective. Clearly, the offender must accept, acknowledge, and take accountability for the caused impairment among others (Choi & Severson, 2009; Dhami, 2012, 2016, 2017; Miers et al., 2001; Umbreit & Armour, 2011). Particularly, an offender can communicate responsibility-taking through emotions of remorse or showing to be affected about the misconduct (Choi & Severson, 2009; Dhami, 2017; Schneider, 2007; Scher & Darley, 1997). Feelings of responsibility-taking are more positively related to expressions of guilt compared to regret (Imhoff et al., 2012). Both suffering and responsibility-taking can be communicated via emotions of remorse, and guilt and make an apology effective (Bonensteffen et al., 2020; Imhoff et al., 2012; Lewicki, et al., 2016; Tang & Gray, 2018). Apologies that are perceived as more sincere, since they convey suffering and responsibility-taking, are more likely to reduce negative emotions (Jonas-van Dijk & Zebel, 2021). Shortly, suffering and responsibility-taking have the consensus of favouring apologies to be perceived as sincere (e.g. Bonensteffen et al., 2020; Imhoff et al., 2012; Tang & Gray, 2018). However, those two factors do not tell if the offender is willing to repair for his actions, which is also an important ingredient of an effective apology (Choi & Severson, 2009; Kirchhoff et al., 2012). Related, Wohl et al. (2011) and Lewicki et al. (2016) specify that an apology is as sincerely perceived if an offer to repair for the caused harm is conveyed. Leading to another essential element of an effective apology; *offering reparation*.

Reparation Offering

Receiving an apology as act of symbolic reparation is very or even more important, than financial reparation for victims (Umbreit & Coates, 1992; Umbreit et al., 2001, as cited in Dhami, 2016). For instance, offenders may name a plea for the reparation offer (Schneider, 2007). Further, it incorporates making emotional but also financial amends for the wrongful acts or promising to not repeat the past behaviour (Choi & Gilbert, 2010; Dandurand et al., 2006; Schmitt et al., 2004; Wohl et al., 2011). Based on literature, apologies that include an offer to repair come across as more sincere and effective (Choi et al., 2010; Choi & Severson,

2009; Dhami, 2016; Kirchhoff et al., 2012; Lewicki et al., 2016; Scher & Darley 1997). Consequently, recipients of an apology including offer to repair may see this as important compensation for suffered harm (Choi & Severson, 2009). This is a sign of the importance of reparation offer in effective apologies. Note, apologies distinct content impacts how sincerely victims perceive it.

Summing up, the limited available research on online (video) mediation holds promising effects that could help to overcome limitation issues of prevalent VOM methods. Thus, it might offer victims a more fruitful and beneficial way to receive an apology. Grounded on available literature, we propose that the offender's expression of *responsibility-taking, suffering*, and *reparation offering* determines the perceived sincerity and acceptance tendency of online apologies. Based on overlapping aspects of s*uffering* and *responsibility-taking,* such as that both can be conveyed via emotions of remorse, shame, and guilt and favour apologies to be perceived as more sincere and acceptable (e.g. Bonensteffen et al., 2020; Lewicki et al., 2016; Imhoff et al., 2012; Zebel et al., 2020), we examine them simultaneously as a combined factor. It is expected that victims perceive an online apology that conveys *suffering and responsibility-taking* (including emotional expressions of shame and guilt) as more sincere and should accept this more than an apology that lacks it. We also hypothesize that the factor of an explicit *reparation offer* will make an apology more sincerely perceived and more likely to get accepted. The goals of the two research hypotheses is to find out and to compare which of the two factors makes a video apology more sincerely perceived and more likely to be accepted in the context of online mediation. The first hypothesis examines how important elements of *suffering and responsibility-taking* are in an online video apology:

> **H1**: *An online apology including elements of suffering and responsibility-taking leads to a higher perceived sincerity and more acceptance by victims than an apology lacking both elements.*

However, it might be that the reparation offer adds something to an apology where *suffering* and *responsibility-taking* are absent instead the offender indicates to *repair* wrong actions.

> **H2:** *An online apology including a reparation offer leads to a higher perceived sincerity and more acceptance by victims than an apology where a reparation offer is absent.*

Method

Participants

A convenient and snowball sampling method served to recruit friends and family members of the researcher's social environment via WhatsApp and Instagram for participation.

Participants took part in this study through the survey tool 'Qualtrics', which is the online research platform of the University of Twente. In total, 281 participants began taking part in this study. However, the data of 105 out of all participants had to be removed before analysis. Responses were excluded if participants did not fill in the study completely. Besides, two underage participants, younger than the minimum participation age (18 years), and one person who neither confirmed nor disconfirmed the consent form were excluded. However, in case participants responded to all relevant questions for analysis but, for instance, did not mention their nationality, resolutely those participants were left included in the data set.

As a consequence, 176 responses (63% of original sample of 281) were left for analysis who fitted the selection criteria (66% female, 33% male, 1% non-binary). Further, participant's age ranged from 18 to 80 years (M_{age} = 27.44, SD_{age} = 12.46). Regarding the represented nationalities, most of the participants had the nationality of German (73.3%, n = 129), followed by Italian (6.3%, n = 11), or the nationality of German in combination with a second nationality (2.84%, n = 5). As many participants with various national backgrounds took part in this study, those respondents can be summarised under other nationalities (11.36%, n = 20) and few respondents did not mention their nationality (6.3%, n = 11). Within the sample, the mother-tongue German had the highest percentage (80.1%, n = 141), followed by English (2.3%, n = 4), and 31 subjects (17.6%) indicated having another mother-tongue than German or English. Right done the line most participants (72.7%, n = 128) had either a high-school, (14.2%, n = 25), bachelor's, or master's degree (8.0%, n = 14). More, 8 participants (4.5%) obtained another educational degree and one participant did not fill in any information. Most participants were students (62.5%, n = 110), followed by unemployed participants (29.5%, n = 52), and some respondents (8.0%, n =14) mentioned different occupations like being retired, or that they do something else on their daily basis.

Participants VOM Related Background Information

Within this sample, the minority the participants (15.9%, n = 28) specified having been a victim of a serious crime compared to the majority (84.1%, n = 148) who answered 'no'. Besides, three participants (1.7%) responded with 'yes' to the question if they have been an offender of a serious crime in their life. Consequently, the majority indicated 'no' (98.3%, n = 173). Half of the sample, (48.3%, n = 85) knew someone from their direct social environment that has ever been a victim of a serious crime, the other half (51.7%, n = 91) denied this. Most participants (80.1%, n = 141) stated 'no' if they know an offender of a serious crime within their close social environment and almost 20.0% said 'yes' (19.9%, n = 35).

APOLOGIES PERCEIVED SINCERITY DURING ONLINE VOM

Research Design

A 2 (suffering and responsibility-taking: present versus absent) x 2 (reparation offer: present versus absent) between-group design was employed. The first manipulated independent variable of this research was the factor (a) *suffering and responsibility-taking* either being conveyed or not conveyed in the apology. The second manipulated independent variable was the factor (b) *reparation offer* either being present or absent within the distinct apology condition. Participants were randomly allocated across these conditions. The dependent measures of this research were the *perceived sincerity* and *acceptance tendency* of the apology. Precisely, research's apologies were manipulated by the two factors to examine if there were differences in participant's perception concerning the apology's perceived sincerity and acceptance tendency (DV's) based on the specific condition they were in.

Manipulation of Suffering and Responsibility-Taking and Offer to Repair

The basic apology framework was taken over from an apology which has been used within research of Bonensteffen et al. (2020). Concerning the manipulation of the research's set-up, before presenting participants with the manipulated apologies, first, a text about the fictitious robbery scenario informed participants about the study's framework. This scenario was adopted from an existing story of Kippers (2015) who researched victim's willingness to participate in restorative justice programs. Within this story it was described that there was a person robbed at an ATM machine, wanting to draw money while getting threatened and hit with a gun to hand over the money (see Appendix D). Then, participants were informed about the topic of VOM and that next to existing traditional practices, online VOM offers another possibility to engage in dispute resolution since the study used this form.

Within this research, the video apologies have been pre-recorded by an English-speaking actor of the researcher's environment. To ensure that the different videos were as similar as possible in terms of verbal, para-verbal, and non-verbal cues, the videos were edited out of one video. See Figure 1 below for an exemplarily picture about how the offender was presented to participants apologizing per pre-recorded video message on 'Qualtrics'.

APOLOGIES PERCEIVED SINCERITY DURING ONLINE VOM

Figure 1.

Picture of the Offender's Pre-Recorded Video Apology

Again, participants received one of the four apology conditions that were manipulated by the researcher concerning the degree of its completeness level regarding the two manipulated factors of s*uffering and responsibility-taking* and *offer to repair*. See Table 1 below this paragraph for the exact content of each apology condition (see also Appendix A). However, all apologies included that the offender at least said 'sorry'. The apology condition in which both factors *suffering and responsibility-taking* and *reparation offer* were present served as the complete apology. For the other apology conditions where crucial factors had to be absent, these distinct elements were cut out.

About the apology condition where the offender solely apologised by saying 'sorry', this was the manipulated absence condition of the factor (a) *suffering and responsibility-taking*, and factor (b) *reparation offer.* Thus, the condition can be considered as an incomplete apology and served as control condition. Here, 50 participants; 35 females (29.9%), 14 male (24.1%) and 1 non-binary person (100.0%) were included.

Concerning the first partially full apology condition, here the factor (a) *suffering and responsibility-taking* has been conveyed. Belonging to the present aspect of *suffering* were elements e.g. *feeling affected by showing moral conscience, feeling guilty, ashamed, and very bad* for the committed crime within the delivered apology. Related to the presence of *responsibility-taking* was, for instance, the indication of *shame, guilt, and acknowledging to have caused harm.* However, as only the factor of (a) *suffering and responsibility-taking* was present, thereby the factor (b) *offer to repair* was absent. Here, 39 participants; 21 females (17.9%) and 18 (31.0%) males were in the apology condition.

The second partially full apology condition included the present factor of (b) *offer to repair*. Specifically, the offender mentioned making emotional or financial amends for the

caused harm of the committed crime and verbally declared to *promise to change the behaviour in the future* or *to give the stolen money back.* This condition encompassed 43 participants; 28 females (23.9%) and 15 males (25.9%).

Lastly, the complete apology condition included both manipulated factors to be present and itemised (a) *suffering responsibility-taking* and an (b) *offer to repair*. Thus, the condition was considered as full and included 44 participants; namely 33 females (28.2%) and 11 males (19.0%). Generally, no significant difference in the distribution of participants as females, males, and non-binary between the four experimental groups was found, looking at Fisher's Exact Test Statistic value of 7.27 ($p = .218$). Importantly, Fisher`s Exact Test (2-sided) was investigated instead of the Chi-square value, as the analysis showed a warning that four cells have an expected count of less than 5%. This warning implied that Fisher's Exact Test provided a more accurate significance value than Pearson's Chi-Square value for testing associations between categorical variables.

Table 1

The Four Experimentally Manipulated Apology Conditions

Apology Condition	Apologies Elements
Control Apology	"Hello. I have written down what I want to say to you to make sure I use the right words as I am very nervous. First of all, thank you very much for your willingness to have contact with me, I have a lot of respect for that. I can imagine that you have had to be very scared about what I did in the past period. I am sorry and apologise hereby."
First partially full apology (Presence of suffering and responsibility-taking)	"Hello. I have written down what I want to say to you to make sure I use the right words as I am very nervous. First of all, thank you very much for your willingness to have contact with me, I have a lot of respect for that. I can imagine that you have had to be very scared about what I did in the past period. I feel very bad about my criminal behaviour in the past and what I have done with my robbery. I wanted to tell you that I feel guilty and ashamed of what I have done to you. I acknowledge I behaved injustice

and immorally. I realised that I misbehaved and have caused harm for you with my behaviour. I personally feel responsible for the fears and stress it has caused, and it was my own decision to rob you. I consider as important to tell you that I am sorry and apologise hereby."

Second partially full apology (Presence of offer to repair)	"Hello. I have written down what I want to say to you to make sure I use the right words as I am very nervous. First of all, thank you very much for your willingness to have contact with me, I have a lot of respect for that. I can imagine that you have had to be very scared about what I did in the past period. I am motivated to not engage my criminal behaviour again and promise to work on myself to change my future behaviour. Of course, you will get the stolen money back. I consider it as important to tell you that I am sorry and apologise hereby."
Complete/full apology	"Hello. I have written down what I want to say to you to make sure I use the right words as I am very nervous. First of all, thank you very much for your willingness to have contact with me, I have a lot of respect for that. I can imagine that you have had to be very scared about what I did in the past period. I feel very bad about my criminal behaviour in the past and what I have done with my robbery. I wanted to tell you that I feel guilty and ashamed of what I have done to you. I acknowledge I behaved injustice and immorally. I realised that I misbehaved and have caused harm for you with my behaviour. I personally feel responsible for the fears and stress it has caused, and it was my own decision to rob you which I want to make up for. I am motivated to not engage in criminal behaviour again and promise to work on myself to change my future behaviour. Of course, you will get the stolen money back. I consider it as important to tell you that I am sorry and apologise hereby."

Note. The basic content of the apologies was adopted from research of Bonensteffen et al. (2020) and adjusted to be in line with the present research.

Besides, out of the four experimental conditions, two independent variables were created, which either included the factor of (a) *suffering and responsibility-taking* (present or absent) and factor (b) *offer to repair* (present or absent). First, within the factor of *suffering and responsibility-taking* 47.2% of participants ($n = 83$) were in the present and 52.8% ($n = 93$) in the absent condition. Specifically, the present condition entailed 29 males (50.0%) and 54 females (46.2%). In contrast, the absent condition included 29 male (50.0%), 63 (53.8%) female participants and one non-binary person (1.1%). Again, gender was equally distributed among the present and absent condition of the manipulated factor of (a) *suffering and responsibility-taking* looking at the value of Fisher's Exact Test Statistic of 1.073 ($p = .807$). Second, the factor (b) *offer to repair,* encompassed 49.4% participants ($n = 87$) in the present and 50.6% ($n = 89$) in the absent condition. Next, the present condition consisted of 26 males (44.8%) and 61 (52.1%) females whereas the absent condition included 32 males (55.2%) and 56 females (47.9%), and one non-binary person (100%). Likewise, no significant gender differences across present and absent conditions of the factor of (b) *offer to repair* was observed as Fisher's Exact Test Statistic equalled 1.746 with a belonging value of $p = .380$.

Materials

The research included a consent form, a demographic questionnaire, the portrayed crime scenario by Kippers (2015), the four apology conditions, and a debriefing. For the flow of this paper, these materials will be described more extensively in the procedure section. Below, the research`s questionnaire to measure the IV's and subsequently, the DV's of this study will be described precisely. The questionnaire's content was based on existing scales from the research of Czerny (2019). Responses were measured with 7-point Likert Scales with serval items, ranging from zero ("Strongly disagree") to six ("Strongly agree"). All used questions can be found in Appendix E.

Manipulation Check and Independent Measures

The existing items from the original questionnaire of Czerny (2019) were adjusted to be in line with the current research design to examine participant's perceptions regarding the independent variables. To be clear, the survey used 12 items to account for participants perception of *suffering*, and *responsibility-taking,* and *reparation offering* within the apology. Precisely, four items asked for the perceived *suffering* of the apology e.g. by "*How much does this apology indicate that the offender suffers emotionally when thinking about the harm he caused among the victim?*". Regarding the validity, the executed factor analysis extracted two components that explained 84.7% of the variance for suffering. Both components had

eigenvalue higher than one ($\lambda_1 = 2.12$; $\lambda_2 = 1.26$). Precisely, suffering's item three *"In this statement, how much does the offender appear unconcerned about the harmful consequences of the offense?"* and item four *"To what extent does the offender seem unaffected when thinking about the harm the offense caused among you as the victim?"* were reversely coded and all factor loadings were above .62. A final sum score of suffering added all items on one scale. Moreover, the internal consistency measure for the sum scale of suffering implicated an acceptable reliability value of Cronbach's alpha ($\alpha = .70$).

Five items examined the *responsibility-taking* of the offender by e.g. *"How much does this statement show that the offender takes responsibility for the harmful consequences of the crime for you as the victim"*. The conducted factor analysis showed that a single factor with an eigenvalue above one ($\lambda = 3.49$) for responsibility-taking was extracted. This factor explained 69.85% of component's variances and all factor loadings were above .80. Additionally, Cronbach's alpha for the overall sum scale of responsibility-taking obtained $\alpha = .89$, implicating a good (almost excellent) internal consistency level.

Three items of the material's questionnaire investigated participant's responses towards the independent variable of *reparation offer* like *"Do you perceive the apology as offering a reparation or compensation for the harm done?"*. Factor analysis extracted one unilateral construct ($\lambda = .98$) which explained 65.87% of the component's variance. Furthermore, all factor loadings were above .77. Next, analysis of reliability showed an acceptable internal consistency measure for the sum scale of offering reparation ($\alpha = .74$).

Dependent measures. Within this research, the questionnaire measured *perceived sincerity* with five items such as "*Do you believe the offender to be sincere and genuine?"*. The factor analysis extracted one underlying factor with an eigenvalue of $\lambda = 3.12$ which explained component's variances of 62.35%. Precisely, Item 3 *"Based on the given apology, do you doubt his words?"* was reversely coded, and all factor loadings were above .56 for the sum scale of perceived sincerity. Cronbach's alpha for the *perceived sincerity*'s sum scale suggested a good reliability ($\alpha = .85$).

Next, the questionnaire included three items for measuring the apology's *acceptance tendency* like "*Based on what the offender stated here, would you accept his apology?"*. The outcome of the factor analysis suggested one factor for the three items. The eigenvalue was $\lambda = 2.36$, explaining 78.51% of items variance. Factor loadings were all above .86. Moreover, the reliability of the sum scale of the apology's acceptance tendency was good ($\alpha = .86$).

Procedure

The link to the online survey was sent to participants via social media like WhatsApp or Instagram. As the research was conducted through 'Qualtrics Survey Software', the participants needed a computer or a mobile device for participation. The study introduced participants via the consent form about the procedure and purpose of the present research (see Appendix B). Respondents were then asked if they were willing to voluntarily participate in this research including the simulated online video VOM procedure. Then, they had to declare the consent form. If they did not want to confirm they had to click on 'I do not agree'" and close the window. Note, if they clicked on the button 'I agree to participate', then the study has begun. If the participants clicked on the arrow to go to the next page, there was no chance to see the page before. Importantly, the current research and its consent form were approved by the BMS ethical committee / Domain Humanities & Social Sciences at the University of Twente before the start of the study (request nr. 210493).

In the following, subjects had to answer the research's demographic questionnaire asking participants for their age, gender, nationality, and level of education. More, the demographic questions inquired about participant's daily activity and VOM-related background information such as if someone of their social environment or themselves have been victimized by or committed a serious crime (see Appendix C).

Afterwards, the fictitious crime scenario was presented and participants were asked to imagine being the victim of the described robbery. The original text was written in you-writing form and Dutch, thus, the story was translated into English with the help of a Dutch-speaking person of the researcher's environment. Here, we informed subjects about the topic of VOM. Additionally, the information that the mediation will take place online and alternative (online) VOM forms were compiled to the original scenario to be consistent with present research. The story ended with a 5-point Likert Scales to assess participants willingness to engage in three different VOM procedures such as traditional, or online exchange of pre-recorded message exchange, or online live-vide-interaction. We further informed participants that we were interested in gathering their responses about how they would respond to an offender's pre-recorded video apology as the perpetrator has taken the initiative of wanting to have contact via this method (see Appendix D). This chosen form was independent of participant's own preference towards a specific type of VOM.

Then, the video apology statement followed (see Appendix A). Participants were randomly allocated to one of the four apology conditions. Importantly, participants were not informed until the debriefing about the existence of various conditions. This was done to ensure

validity for the study. Nevertheless, participants were instructed to watch the video carefully and it was stated that their computer sound should be working to ensure that they are able to hear the offender talking. There was no limitation about how often subjects could have watched the video, as they could click on the video's refresh button. Note, we did not include a record to check if participants watched the video apology at all, once or several times.

After having watched the apology, all participants filled in a questionnaire to gather their responses towards the seen apology. At this point, all participants got the identical questionnaire which was described within the material's part by the measurement scales (see Appendix E). Besides, it was clearly stated that there were no wrong or right answers and that respondents should click the item that best represents their agreement. Importantly, participants have been forced to give answers to all questions. In case they forgot to click on one item, they were reminded to do so because we noticed during data collection that some participants have forgotten to click on a few scales.

Afterward, participants got debriefed about the study's background information towards VOM and the random allocation to the four apology conditions (see Appendix F). However, respondents were not individually informed about the condition they were in. For the validity and sake of this experimental research, it was explicitly stated to not share given debriefing information with new participants. Subsequently, to finish the survey, participants were asked to click on the yellow arrow on the lower right side of the page. Then, subjects were thanked for their participation and informed that the study's end has been reached thereby.

Controlling for Participants VOM Related Background Information

To control for random differences concerning participants indicated background information about and for VOM, a Chi-Square test was performed. Notably, a statistically significant difference between experimental conditions for the distribution of past offenders was found (p<.05). The Chi-Square test showed a Fisher's Exact Test of 5.23 with a p-value of .039, indicating a significant difference in past offenders' allocation between groups. Precisely, all three past offenders were in the experimental apology condition which included both present factors of (a) *suffering and responsibility-taking*, and (b) *offering reparation*. Therefore, the variable "*Have you ever been an offender of a serious crime in your life*?" was treated as control variable within further manipulation and hypothesis analyses to increase the accuracy of results. Next, no significant difference was observed between experimental conditions for participants who reported having been a victim or not [X^2 (3, $N = 176$) = 1.50, $p = .700$]. Thus, previous (non-) victims were equally spread across conditions where both factors were either present or

absent. Furthermore, no statistically significant value has been found for supporting a difference in distribution of participants who either knew or did not know a victim in their social environment across conditions [X^2 (3, N = 176) = 3.93, p = .273]. Participants who either knew or did not know an offender in their social environment were equally spread across experimental groups [X^2 (3, N = 176) = 4.13, p = .255]. Besides, participant's preferences regarding the three possible VOM types were close to another; traditional (M = 3.28, SD = 1.21), online exchange of pre-recorded video messages (M = 3.20, SD = 1.28), and online live-video interaction (M = 3.31, SD = 1.19). An analysis of variance checked for eventually significant differences in group means for VOM types. No statistically significant difference between the experimental conditions in preferences for traditional VOM [F(1, 174) = 3.21, p = 0.8], or the online VOM type of live-video interaction [F(1, 174 = .00, p = .978] was originated. Nevertheless, a statistically significant difference between the experimental conditions for the preference of online pre-recorded video messages was found [F(1, 174) = 5.67, p = .018]. Specifically, the present condition of both manipulated factors had a higher mean (M = 4.02, SD = 1.01) for this preference of VOM forms compared to means of other groups (M = 3.14, SD = 1.43; M = 3.12, SD = 1.24; M = 3.27, SD = 1.14). Thus, a second control variable was identified for further analysis to account for noise.

Results

The online survey tool 'Qualtrics' had the option to export the collected data via a SPSS file. To analyse the data, the program IBM SPSS Statistics (Version 26) was used.

Overall Means and Pearson's Correlations of Independent and Dependent Variables

To give an overview of the data, descriptive statistics, means and standard deviation of independent and dependent variables were computed. Outcomes are summarized in Table 2.

Overall, all means ranged between "*Somehow disagree*" to "*Neither disagree nor agree*". To avoid confusion, SPSS coded items from '1' to '7' and 'Qualtrics' from '0' to '6'. Thus, in SPSS, the scale's mediocre level of *"Neither disagree nor agree"* was 4.00 in SPSS and 3.00 in 'Qualtrics'. Notably, the mean scale of responsibility-taking showed a value above the neutral level of 4.00 "*Neither disagree nor agree*" in comparison to other scales.

APOLOGIES PERCEIVED SINCERITY DURING ONLINE VOM

Table 2

Descriptives of and Pearson's Correlations between Independent and Dependent Variables

Measure	N	M (SD)	1.	2.	3.	4.	5.	6.	7.
1.Suffering	176	3.92 (1.09)	-	.50**	.44**	.60**	.53**	.08	-.10
2.Responsibility-taking	176	4.50 (1.33)		-	.62**	.57**	.58**	.05	.08
3.Offer to repair	176	3.71 (1.23)			-	.61**	.65**	.01	.14
4.Perceived Sincerity	176	3.76 (1.30)				-	.73**	.01	-.03
5.Acceptance tendency	176	3.63 (1.39)					-	.05	.06
6. IV1	176	-						-	.05
7. IV2	176	-							-

Note. IV1 = Suffering and Responsibility-taking condition; IV2 = Offer to repair condition. IV1 and IV2 are coded as 0 = absent and 1 = present.

**. Correlation is significant at the 0.01 level (2-tailed).

Besides, a test of Pearson's Partial Correlation was performed to measure the relationship's strengths between the individually measured (IV's) *suffering, responsibility-taking, and offer to repair* with the *perceived sincerity, acceptance tendency* (DV's) and both manipulated factors (*suffering and responsibility-taking and offer to repair*). The model controlled for both covariates of *"Have you ever been an offender of a serious crime in your life?"* and statistically differences between conditions regarding a priori preferences of exchange of pre-recorded video messages (VOM method). A positive correlation coefficient of .3 got interpreted as weak, between .3 and .7 as moderately and a coefficient greater than .7 as strong (Cohen, 1988). Specifically, the test presented statistically significant association between the three measured IV's and both DV's at the .01 significance level. Exactly, a moderately and positively statistically significant relationship between suffering and sincerity ($r = .60$, $N = 176$, $pr < .001$) was found. Accordingly, if participants perceived the offender to suffer more, they also perceived the apology as more sincere. Likewise, responsibility-taking and sincerity correlated moderately and positively ($r = .57$, $N = 176$, $pr < .001$). Therefore, the more participants perceived that the offender to take responsibility, the more they perceived the apology to be sincere. The same was found for the variable of offering reparation, the more participants perceived the perpetrator to offer reparation within the apology, the more the apology was perceived as sincere ($r = .61$, $N = 176$, $pr < .001$).

Next, a statistically significant association between suffering and apology's acceptance tendency ($r = .53$, $N = 173$, $pr < .001$) was observed. Clearly, participants who perceived the offender to suffer more, accepted the apology also more likely. Further, responsibility-taking and apology's acceptance tendency correlated positively and moderately with another ($r = .58$, $N = 176$, $pr < .001$). Hence, participants who perceived that the offender took responsibility, were also more willing to accept the apology. Moreover, a statistically significant relation between offer to repair and apology's acceptance tendency ($r = .65$, $N = 176$, $pr < .001$) was given. Respondents who perceived the offender to offer repair, subsequently accepted the apology more regularly. Overall, the apology's perceived sincerity and acceptance tendency correlated significantly and strongly with another ($r = .73$, $N = 176$, $pr < .001$). To be clear, participants who perceived the apology more sincerely, were also more willing to accept the apology. However, no significant correlation between suffering, nor responsibility-taking, or offer to repair and both manipulated factors of *suffering and responsibility-taking* or *offer to repair* was examined ($pr > .05$).

Manipulation Check of Suffering and Responsibility-Taking and Offer to Repair IV's

Before testing the hypotheses an overview of the variable's manipulation between the conditions is given. The manipulation check was done to find out if there was a significant difference between the means of crucial variables concerning (present or absent) conditions. Specifically, a 2 x 2 between-subjects Factorial ANCOVA was performed to explore the means of *suffering, responsibility-taking and offer to repair* (here as DV's) by the two manipulated independent variables, namely the factors *suffering and responsibility-taking* and of *offering reparation*. The identified covariates "*Have you ever been an offender of a serious crime in your life?*" and differences concerning the preference online VOM procedures of exchange of pre-recorded video messages between groups were included in the analysis of variance.

First, it was checked whether the mean of suffering was higher in the present condition of *suffering and responsibility-taking* compared to absent condition of this factor. The mean of the present condition of (a) *suffering and responsibility-taking* was equal to $M = 4.02$ ($SD = .12$) in comparison to the absent condition $M = 3.84$ ($SD = .11$). Against expectations, the variance analysis revealed no significant main effect of factor (a) *suffering and responsibility-taking* on suffering [$F(1, 170) = 1.36$, $p = .246$]. Notably, the manipulation did not work out as intended as means between conditions were not statistically different. As expected there was no significant effect of the second manipulated factor (b) of *offer of repair* on the dependent variable of suffering [$F(1, 170) = 2.06$, $p = .153$]. Also, no significant interaction effect between

both manipulated factors on the dependent variable of suffering was found [$F(1, 170) = .17$, $p = .677$].

Second, it was investigated if the mean of responsibility-taking was significantly different between conditions of (a) *suffering and responsibility-taking*. Here, the present condition ($M = 4.56$, $SD = .15$) was compared to the absent condition ($M = 4.45$, $SD = .14$). Against expectations no statistical main effect of (a) *suffering and responsibility-taking* on the dependent variable of responsibility-taking has been found [$F(1, 170) = .34$, $p = .559$]. Since means across conditions were alike, concludingly, the manipulation did not work out as intended. As awaited no main effect of the independent variable (b) of *offer to repair* on responsibility-taking was observed [$F(1, 170) = 1.06$, $p = .304$]. Further, no significant main effect of both manipulated factors on the dependent variable of responsibility-taking was given, $F(1, 170) = .33$, $p = .567$. As all significance p-values were greater than a significance level of .05, the analysis of variance revealed that mean differences were not significant.

Third, potential differences between the means of offer to repair and the second factor of (b) *offer to repair* have been studied. It was predicted to find a higher offer to repair mean in the present ($M = 3.86$, $SD = .13$) compared to the absent condition ($M = 3.57$, $SD = .13$). Counter to expectations no significant main effect of the factor (b) *offer to repair* on the dependent variable was found [$F(1, 170) = 2.45$, $p = .119$]. Thus, means were equal, and the manipulation did not work out as proposed. In line with expectations, the ANCOVA revealed that there was no significant main effect of (a) *suffering and responsibility-taking* on offer to repair [$F(1, 170) = .00$, $p = .92$]. More, there was also no significant main interaction effect of both manipulated factors on the mean of offer to repair [$F(1, 170 = .32$, $p = .573$].

Expected main effects of both manipulated factors on means of suffering, responsibility-taking or offer to repair were non-existing. Notably, respondents did not perceive differences between present and absent conditions concerning *suffering* and *responsibility-taking* or *reparation offer*. Thus, the experimental manipulations of factors of (a) *suffering and responsibility-taking* and the factor (b) of *offering reparation* were not successful.

Hypotheses Testing

The first hypothesis stated that an online apology including the factor of (a) *suffering and responsibility-taking* leads to a higher perceived sincerity and more acceptance by victims than an apology lacking this element. Next, the second hypothesis predicted that an online apology including the factor of (b) *reparation offer* leads to a higher perceived sincerity and more acceptance by victims than an apology where a reparation offer is absent. To test if there

are differences between conditions as expected, a 2 x 2 Factorial ANCOVA was chosen. In the ANCOVA it was accounted for the research's covariates of having been a past offender and a priori differences between groups for the preferences of exchange of pre-recorded video messages. The model included (a) *suffering and responsibility-taking* and (b) *offer to repair* as IV's whereas *perceived sincerity* and apology's *acceptance tendency* served as DV's. To be clear, H1 and H2 were tested simultaneously two times for both dependent variables. Overall, no significant difference between present and absent condition of both factors nor main effect as hypothesised was observed.

Examining first the outcome of the perceived sincerity (DV) being influenced by the two predicting variables more precisely. The analysis revealed very similar means of perceived sincerity between the present ($M = 3.77$, $SD = .13$) and absent ($M = 3.75$, $SD = .12$) condition of the factor (a) *suffering and responsibility-taking*. Importantly, against predictions, the analysis of variance failed to show a statistical main effect of this factor on perceived sincerity [$F(1, 170) = .03$, $p = .874$]. In other words, means between conditions were statistically not different. Thus, H1 had to be rejected for the aspect of sincerity. Next, looking at differences in sincerity's means by the factor of (b) *offer to repair*. The sincerity's mean in the present condition was equal to $M = 3.73$ ($SD = .13$) compared to the mean in the absent condition $M = 3.80$ ($SD = .13$). The analysis displayed no significant main effect of (b) *offer to repair* on the mean of sincerity [$F(1, 170) = .20$, $p = .652$]. This was not foreseen, therefore, H2 for sincerity must be rejected. Additionally, no statistically significant interaction effect of both manipulated factors on the mean of perceived sincerity between conditions was identified [$F(1, 170) = .00$, $p = .953$]. Summing up, both hypotheses stating that a higher mean of perceived sincerity occurs in present conditions of both independent variables had to be rejected. Instead, the sincerity's means across present and absent conditions were identical.

Subsequently, the second conducted analysis examined whether the independent manipulated variables had an effect on the mean of acceptance tendency (DV). Considering the acceptance tendency by the independent variable of the factor (a) *suffering and responsibility-taking* first. Within the present condition, the mean of the acceptance tendency was $M = 3.70$ ($SD = .15$) compared to the absent condition $M = 3.57$ ($SD = .15$). Contrary to predictions no statistical main effect of (a) *suffering and responsibility-taking* on acceptance tendency was found [$F(1, 170) = .36$, $p = .552$]. For that reason, H1 for acceptance was rejected. Turning to the mean of acceptance in the present condition ($M = 3.71$, $SD = .15$) compared to the mean of the absent condition ($M = 3.56$, $SD = .150$) of (b) *offer to repair*. The analysis suggested no significant main of the second independent variable on apology's acceptance tendency between

conditions [$F(1, 170) = .54$, $p = .462$]. Shortly, acceptance means were equally between conditions. This was against researcher's assumptions, consequently, H2 was not confirmed for apologies acceptance tendency. There was also no significant main effect by the interaction of both independent variables on the dependent variable of acceptance tendency [$F(1, 170) = .45$, $p = .502$]. Based on the given outcomes, both hypotheses concerning predicted differences between (present and absent) conditions of perceived sincerity and the acceptance tendency needed to be rejected. Conclusively, no support neither for H1 nor for H2 has been found.

Additional Analysis

Furthermore, an explorative analysis in form of a multiple linear regression was calculated to inspect the apology's outcome of *perceived sincerity* by the predictors of the measured *suffering, responsibility-taking and offer to repair*. Together the three predictors explained a significant portion of the variance in perceived sincerity, namely 52% [$F(3, 172) = 65.00$, $p < .001$]. The analysis showed that suffering ($B = .40$, $SE = .07$, $t = 5.90$, $p < .001$), responsibility-taking ($B = .16$, $SE = .06$, $t = 2.50$, $p < .05$), offer to repair inferences ($B = .32$, $SE = .07$, $t = 4.81$, $p < .001$) significantly predicted sincerity, of which suffering seemed to contribute the most to the variance in perceived sincerity. See Table 3 for more details.

Table 3

Regression Coefficients of Suffering, Responsibility-Taking, Offer to Repair as Predictors for Apology's Perceived Sincerity

Variables	*B*	*SE*	*Beta (β)*	*t*	*p*
Suffering	.40	.07	.37	5.90	.000
Responsibility-taking	.16	.06	.18	2.50	.013
Offer to repair	.32	.07	.33	4.81	.000

Note. Model was found to be statistically significant [$F(3, 172) = 65.00$, $p < .001$] with an adjusted R-squared of .52.[1]

The multiple linear regression analysis was executed once more with the same predicting variables, but with *acceptance tendency* as outcome variable. The three predictors

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[1] Model was still found to be statistically significant if background variables like age, gender, preferences for different VOM types, and past experiences of having been an offender or victim were considered [$F(10, 165) = 20.35$, $p < .001$].

explained a significant portion, precisely 52%, of the variance in the apology's acceptance tendency [$F(3, 172) = 65.60$, $p < .001$]. The analysis showed that the more victims perceived the offender to suffer ($B = .31$, $SE = .08$, $t = 3.97$, $p < .001$), taking responsibility ($B = .21$, $SE = .07$, $t = 2.78$, $p < .05$), or offer reparation ($B = .48$, $SE = .08$, $t = 6.16$, $p < .001$), the more willing they were to accept the apology. Offer to repair seemed to contribute the most to the variance of the apology's acceptance tendency but all positively predicted the dependent variable. See Table 4 for more details.

Summing up, we did find an effect of individual variables of suffering, responsibility-taking and offer to repair on the apology's perceived sincerity and its acceptance tendency via a regression analysis. In other words, the regression showed that a higher a score on suffering, responsibility-taking and offer to repair correlated positively with a greater score of perceived sincerity and apology's acceptance tendency.

Table 4

Regression Coefficients of Suffering, Responsibility-Taking, Offer to Repair as Predictors for the Apology's Acceptance Tendency

Variables	*B*	*SE*	*Beta (β)*	*t*	*p*
Suffering	.31	.08	.25	3.97	.000
Responsibility-taking	.21	.07	.20	2.78	.006
Offer to repair	.48	.08	.42	6.16	.000

Note. Model was found to be statistically significant [$F(3, 172) = 65.60$, $p < .001$] with an adjusted R-squared of .52.[2]

Discussion

Research shows that apologies depict a key element during the procedure of VOM, especially for victims (Choi & Severson, 2009; Dhami, 2012, 2016). This study aimed to understand why some apologies are more strongly perceived as sincere and are better accepted compared to other apologies. The present research investigated apologies' effectiveness in the context of an alternative (online) form to traditional (face-to-face) VOM and focused on the exchange of pre-recorded video messages. On the one hand, this method was chosen to close

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[2] Model was still found to be statistically significant if background variables like age, gender, preferences for different VOM types, and past experiences of having been an offender or victim were considered [$F(10, 165) = 20.79$, $p < .001$].

the lack of limited research about online (video) mediation. On the other hand, the modicum of available findings on alternative mediation forms indicated that online (video) mediation might be a potentially valuable alternative beyond traditional practices to overcome limitation issues (Bonensteffen et al., 2021; Goodman, 2003; Mania, 2015). Based on what is known from research on traditional VOM that makes apologies more effective, the present research predicted that participants judge an online apology including statements of *suffering and responsibility-taking* or *offer to repair* as more sincere and are more willing to accept it than an apology that omits those crucial elements (e.g. Choi & Severson, 2009; Dhami, 2016; Imhoff et al., 2012; Kirchhoff et al., 2012; Schneider, 2007; Tang & Gray, 2018). We combined suffering and responsibility-taking in one factor. This was done because of the overlapping findings that stress that both can be communicated through emotions of shame and guilt, make an apology more sincerely perceived, and favour apologies to get more regularly accepted (e.g. Bonensteffen et al., 2020; Lewicki et al., 2016; Imhoff et al., 2012). Also, a reparation offer makes an apology more effective (e.g. Choi et al., 2010; Kirchhoff et al., 2012; Scher & Darley 1997), thus, we wanted to see if an offer to repair adds something to (online) apologies' perceived sincerity or acceptance tendency when suffering and responsibility-taking were omitted.

Main Findings

The apologies manipulations were not strong enough. Participants did not perceive significant differences between the presence and absence of *suffering and responsibility-taking* and/or *offer to repair* in the various apology conditions. We also found that apologies manipulations did not affect the perceived sincerity and acceptance tendency. Thus, no causal evidence for both hypotheses was found. For that reason, we should improve manipulations to work. Resolutely, the discussion's focus is directed on evaluating *why* respondents did not recognize the manipulation of the factors of *suffering and taking responsibility* or *offering reparation* between the different apology conditions and *how* this could be improved for the future. Even though the manipulations did not work out, we still wanted to see if individual variances in perceived suffering, responsibility-taking and offer to repair were associated with individual differences in the apology's perceived sincerity and acceptance tendency. A correlational and regression analysis showed that there was indeed an association between and an effect of individual's variables of suffering, responsibility-taking, and offer to repair on the apology's perceived sincerity and acceptance tendency.

Main Findings in Terms of Observed Associations

Examining first the additional regression analysis since we did find indications for the expected associations between research's individual variables from an exploratory analysis. Perceived suffering was predicted to make an apology more sincere and more effective (Tang & Gray, 2018). In line with this, the more participants perceived the offender to suffer, the more sincerely perceived and more accepted the apology got. Additionally, we hypothesized that an expression of responsibility-taking (e.g. admitting having caused harm and acknowledge having induced impairment) leads to greater sincerity (e.g. Scher & Darley, 1997; Kirchhoff et al., 2012; Dhami, 2016; Lewicki et al., 2016). In agreement, the regression analysis showed that the more strongly participants perceived the offender taking-responsibility, the more sincere the apology was perceived and more likely to get accepted. Specifically, the current offender expressed suffering and responsibility-taking in form of emotions like sadness, shame, and guilt. Thus, our findings support existing research that an emotional apology is more often perceived as sincere compared to an unemotional apology (Imhoff et al., 2012). Besides, the regression analysis also showed that the stronger the offer to repair was observed, the more sincerely perceived and more likely the apology was accepted. This underscores existing research that an apology with an offer to repair is more effective (e.g. Choi & Severson, 2009: Dhami, 2016; Kirchhoff et al., 2012; Lewicki et al., 2016; Schneider, 2007; Scher & Darley 1997). The conducted correlational analysis showed that victims were more willing to accept an apology that is perceived as more sincere which converges with findings of Hatcher (2010). In other words, victims were less willing to accept an insincere apology. This is a clear counterargument to the findings that stress that victims sometimes accept an apology even though they do not perceive it as sincere as they feel acceptance pressure (Choi & Severson, 2009; Hatcher, 2010).

Nonetheless, despite findings of the correlational and regression analysis, participants did not perceive differences between the manipulated apology conditions that either conveyed or omitted *suffering and responsibility-taking* or the factor of *offer to repair*. Thus, the results of this research must be interpreted by considering some limitations. This brings us to evaluate *why* the manipulations did not work out and *how* this could be improved for future investigations.

Evaluating the Non-Successful Manipulations and Implications

To clarify, we solely manipulated the different apologies verbally and either included or omitted words. In doing so, we forgot that the non-verbal behaviour of the apologiser may

underline or influence the distinct verbal expression of crucial factors as well. In contrast, the apology's sincerity is often influenced by the apologiser's non-verbal behaviour (Choi & Severson, 2009; Risen & Gilovich, 2007). According to Marono et al. (2017), especially in a legal context, within the context of effective communication, it is important to correctly interpret the emotional intentions of the other party. Understanding another person correctly by grasping their facial expressions and non-verbal cues. Regarding the chosen online form of video VOM in this research, Bonensteffen et al. (2021) showed that about 78% of interviewees perceived digital VOM as less capable to provide enough contextual information to display the whole person including non-verbal cues such as gestures or body language and to correctly understand the statement (Bonensteffen et al., 2021). Overall, based on these findings, the offender's non-verbal behaviour might have led to unsuccessful manipulations. Thus, his non-verbal behaviour will be evaluated.

First, his non-verbal behaviour was very passive. He did not use (many) body movements to support his speaking, but only hold the written apology in his hands. This contrasts with Burgoon et al. (2014) who state that a greater diversity of movement is usually the case when telling the truth. Thus, participants might have gotten the impression that due to his non-verbal cues the apology was scripted and not genuine.

Second, re-watching the apologies showed that before starting to talk, the offender smiled. Facial expressions depict the intentions of a person (Adolphs, 2003). Thus, the offender's smile might have disqualified the whole apology to be sincere. Smiling could have confused participants who expected a serious or sad offender. In line with this, Ten Brinke and Adams (2015) argue that an apologizer is expected to express sadness. Within our apologies, the offender could have appeared to be happy as he shortly smiled. De Cremer & Schouten (2008) argue that happiness reduces the effectiveness of a provided message. Even more, happiness is diametrically opposed to sadness and shame (Ten Brinke & Adams, 2015). Related, existing research on the perception of suffering and responsibility-taking in an apology stressed the importance of guilt and shame expressions (e.g. Lewicki et al., 2016; Imhoff et al., 2012). The present participants did not perceive a difference between the present apology condition including verbal declarations for suffering and responsibility-taking (e.g. shame and guilt) compared to apologies where this was absent. The offender's first impression (smiling) might be a cause for this because he did not non-verbally express to be affected and sad. In the future, to construct successful manipulations it should meticulously be paid attention that also the offender's non-verbal behaviour and facial expressions convey cues of suffering and responsibility-taking, like remorse, shame, guilt, and sadness. This might be achieved if the

offender expresses sadness through facial expressions of up-warded eyebrows (Chen et al., 2015) or looking remorsefully down.

Third, within this research, the offender only verbally offered reparation, promised to change his behaviour and to give the stolen money back. Again, the offender missed to support his words with non-verbal behaviour which might have managed to find successful manipulations. Referring to Blecher (2011) who states that the willingness for reparation is limited to a clear gesture of signing a formal undertaking. To improve manipulations, the offender should also non-verbally convey an offer to repair, resolutely, giving the factor more value. For instance, the offender could sign a reparation offer paper for the victim.

Lastly, looking at the offender's para-verbal cues, all apology statements included some minor speaking errors, like that the offender mumbled or some slip of the tongue. Sporer and Schwandt (2007) state that speech errors like grammatical errors or stuttering cause messages to be deceptively perceived. The way how the offender transmitted the apology (including the slip of the tongue) may also be a potential cause for non-successful manipulations.

Overall, the perpetrator's smile at the beginning of the apology, and the lack of non-verbal gestures to support verbal utterances eventually caused participants to not perceive differences between the manipulated apologies as we hypothesized. Concludingly, there was no causal effect of the manipulated factors of *suffering and responsibility-taking* or *offer to repair* on the apology's perceived sincerity and acceptance tendency. To be clear, participants perceived all of the offender's apologies as insincere and rather not acceptable. Related, the apology's perceived sincerity and acceptance tendency on average ranged between 'Somehow disagree' and 'Neither agree nor disagree', which underlines before discussed findings.

Other Limitations of the Study and Implications

It is likely that other (external) factors besides the identified weaknesses of the apology influenced the outcome of not finding hypothesized effects of the manipulated factors on the research's outcome variables of apologies perceived sincerity and acceptance tendency. One limitation was that the VOM procedure was only a simulation via an artificial research setting. Therefore, participants may simply not have been able to imagine being a victim and that what was told happened to them. In the future, we should forethought-fully control this. Participants should, for instance, be asked during the survey if they are able to imagine having been in the victim's role and feel confident to judge the apology under this light. If feasible within the ethical scope of a bachelor's thesis and the COVID-19 pandemic, we could use virtual reality (VR) simulation to introduce the participants to the crime scenario. By using VR, participants

would not have to imagine what happened to them by just reading the story, but would experience the fictitious robbery scenario as a victim in a more lifelike way.

Another limitation was that the study was only offered in English. However, most of the participants were German-speaking (80%) since they were conveniently recruited from the researcher's environment. Eventually, subjects might not have comprehended the story and apology statement accurately based on their English skills. Upcoming research should at least ask if they understood the given information, or better, offer the study in German as well.

A further limitation was that even though we asked participants for their preferences for different types of VOM, they all received a video (pre-recorded) message in the context of online mediation. For instance, participants who would have preferred to participate in traditional VOM might have influenced the outcome of the study (due to their dissatisfaction with the given type) as they would have desired another communication form due to personal preferences. Future participants who do not want to participate in VOM via (online) exchange of pre-recorded video messages should be excluded to achieve more valid results.

Moreover, we do not know if participants watched the video apologies at all or stopped before the video before the statement was fully delivered. We did not include a record to see whether subjects watched it at all or more than once. Participants who did not watch the apology completely should be sorted out before data analysis for greater accuracy of results. To examine those, we must add control mechanisms on 'Qualtrics' like a time measurement about how long participants spent on each page of the questionnaire to compare this time with the length of the given manipulated video apology. Again, control questions in the survey could be used to analyse whether participants attentively listened to the apology statement.

Another limitation was that some of the questionnaire's items did not fit the provided answers options of the Likert-Scales which might have confused participants. We got that feedback from several respondents. An example for this is "*How much does this statement show that this offender acknowledges his role in the damage inflicted among you as the victim?*" with the belonging answer range of zero 'Strongly disagree' to six 'Strongly agree'. Specifically, 'Qualtrics' mobile view of the survey sometimes only displayed the answers in words and not in numbers. This might not have been suitable for some questions such as the one above. In addition, while we improved that some participants did not give all the answers by forcing them to do so, it could be that the participants who did not answer everything were the same as the ones who gave us feedback on the inappropriate answer choices. To enhance the used questionnaire of Czerny (2019), further research should pay close attention to whether questions and response options do fit and if not, consider adjusting the questionnaire's answer options.

Besides, all four videos were edited out of the complete apology, including the two present manipulated factors of suffering and responsibility-taking and offer to repair. Cutting out the videos resulted in four videos with different lengths based on the factors included. For instance, the apology of suffering and responsibility-taking was one-third longer than the one including an offer to repair. It could be that apologies various lengths had an impact on the apology's perceived sincerity and acceptance tendency. Related, less elaborate apologies are often less effectively and sincerely perceived e.g. because less non-verbal cues are included (e.g. Choi & Severson, 2009; Kirchhoff et al., 2012; Schneider, 2007; Sporer & Schwandt, 2007). Future's research design should manipulate the four video apologies to be equally length and approximately the same number of crucial factors to compare whether the length indeed affects apologies effectiveness.

Strengths of the Study

Despite research's depicted weaknesses, the study also came with strengths. The research's strengths were that the sample included various nationalities and a large age range. Not forgetting to mention that the research came with a valid and reliable measurement instrument. Even though the influence of suffering, responsibility-taking and reparation offer on apologies perceived sincerity and acceptance tendency were studied within traditional VOM by other researchers before (e.g. Choi et al., 2010; Czerny, 2019; Hatcher, 2010; Kirchhoff et al., 2012; Lewicki et al., 2016), this study focused on variables' associations in new communication context (online video mediation) which is not a largely examined. Further, the research's regression analysis did not only support and replicated previous findings about the effectiveness of apologies, but also expanded them to this new context. Our research contributed so to the discussion about alternative online (video) procedures of VOM beyond common practices. Besides, we found that some participants were more inclined to take part in the type of online VOM of exchange of pre-recorded video messages. This converges with the findings of Bonensteffen et al. (2021) who state that participants would appreciate digital and video VOM methods next to existing practices.

Conclusion

The final quote "Even the most heartfelt apology can easily misfire" (Blecher, 2011, p.95) can be used to summarize the conducted research. On the one hand, we verbally manipulated the apologies, as described in the existing research, to display the apologies as sincere and likely to be acceptable as possible. We presently stated verbal indications for

suffering, responsibility-taking and an offer to repair. On the other hand, we did not consider and directed attention on the offender's non-verbal behaviour and facial expressions. Again, facial expressions are a direct indication of one's emotions and intentions (Adolphs, 2003, as cited in Bonensteffen et al., 2020). Importantly, the influence of non-verbal cues on the apology's perceived sincerity and acceptance tendency was left behind. Resolutely, the present offender's smile might have disqualified the whole apology's perceived sincerity. However, we did find evidence for the expected association's (based on natural variations between individuals) between suffering, responsibility-taking, and offering reparation, and the apology's perceived sincerity and acceptance tendency. Thus, participants who perceived the offender to display more suffering, taking-responsibility, or an offer to repair also considered the apology as more sincere and were more willing to accept it. It follows, if apologies manipulations can be improved this might lead to an increase in outcomes' generalizability. Within further investigations, apologies should be manipulated in terms of the perpetrator's verbal and non-verbal behaviour to be able to establish a potential causal effect of *suffering and responsibility-taking* and/or *reparation offer* on perceived sincerity and acceptance tendency of the online apology. If this is successful, more insights could be gained into whether the distinct factor of *suffering and responsibility-taking* or *reparation offer* lead victims to perceive the offender's apology as more sincere and more likely to accepted it. In conclusion, such results would go beyond findings on the effectiveness of apologies in traditional VOM and could contribute so to the discussion of the potential fruitfulness of video mediation forms.

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APOLOGIES PERCEIVED SINCERITY DURING ONLINE VOM

Appendices

Appendix A

Apology conditions

(Note: One of the four apology conditions below was randomly presented to the participants of the research in video format)

In your case, your offender has taken the initiative of wanting to have contact. Resolutely the mediator reached out to you and told you that the offender wants to tell you something via a pre-recorded video message.

You just indicated your willingness to engage in different forms of VOM. However, for the purpose of the study we are now interested how you would respond, independently of your willingness, to a pre-recorded video apology of the offender during a simulated online VOM.

Therefore, please watch the following apology attentively, you will be asked to give your responses towards it afterwards. Make sure that your computer sound is working so that you can hear the offender.

Video Apology 1.4.21: Manipulation of the absent factor of suffering and responsibility-taking and absent factor offer to repair

You will now be shown a video. Please watch it carefully.

"Hello. I have written down what I want to say to you to make sure I use the right words as I am very nervous. First of all, thank you very much for your willingness to have contact with me, I have a lot of respect for that.

I can imagine that you have had to be very scared about what I did in the past period. ~~I feel very bad about my criminal behaviour in the past and what I have done with my robbery. I~~

~~wanted to tell you that I feel guilty and ashamed of what I have done to you. I acknowledge I~~ ~~behaved injustice and immorally.~~

~~I realised that I misbehaved and have caused for you with my behaviour. I personally feel~~ ~~responsible for the fear and stress it has caused, and it was my own decision to rob you which~~ ~~I want to make up for.~~

~~I am motivated to not engage I criminal behaviour again and promise to work on myself to~~ ~~change my future behaviour. Of course, you will get the stolen money back.~~

I am sorry and apologise hereby."

Video Apology 2.4.21: Manipulation of the present factor suffering and responsibility-taking

You will now be shown a video. Please watch it carefully.

"Hello. I have written down what I want to say to you to make sure I use the right words as I am very nervous. First of all, thank you very much for your willingness to have contact with me, I have a lot of respect for that.

I can imagine that you have had to be very scared about what I did in the past period. I feel very bad about my criminal behaviour in the past and what I have done with my robbery. I wanted to tell you that I feel guilty and ashamed of what I have done to you. I acknowledge I behaved injustice and immorally. I realised that I misbehaved and have caused harm for you with my behaviour.

I personally feel responsible for the fears and stress it has caused, and it was my own decision to rob you ~~which I want to make up for.~~

~~I am motivated to not engage I criminal behaviour again and promise to work on myself to~~ ~~change my future behaviour. Of course, you will get the stolen money back.~~

I consider as important to tell you that I am sorry and apologise hereby."

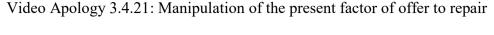Video Apology 3.4.21: Manipulation of the present factor of offer to repair

"Hello. I have written down what I want to say to you to make sure I use the right words as I am very nervous. First of all, thank you very much for your willingness to have contact with me, I have a lot of respect for that.

I can imagine that you have had to be very scared about what I did in the past period. ~~I feel very bad about my criminal behaviour in the past and what I have done with my robbery. I wanted to tell you that I feel guilty and ashamed of what I have done to you. I acknowledge I behaved injustice and immorally.~~

~~I realised that I misbehaved and have caused for you with my behaviour. I personally feel responsible for the fears and stress it has caused, and it was my own decision to rob you which I want to make up for.~~

I am motivated to not engage my criminal behaviour again and promise to work on myself to change my future behaviour. Of course, you will get the stolen money back.

I consider it as important to tell you that I am sorry and apologise hereby."

Video Apology 4.4.21: Manipulation present factor of suffering and responsibility-taking and present factor of offer to repair

"Hello. I have written down what I want to say to you to make sure I use the right words as I am very nervous. First of all, thank you very much for your willingness to have contact with me, I have a lot of respect for that.

I can imagine that you have had to be very scared about what I did in the past period. I feel very bad about my criminal behaviour in the past and what I have done with my robbery. I wanted to tell you that I feel guilty and ashamed of what I have done to you. I acknowledge I behaved injustice and immorally. I realised that I misbehaved and have caused harm for you with my behaviour.

I personally feel responsible for the fears and stress it has caused, and it was my own decision to rob you which I want to make up for.

I am motivated to not engage in criminal behaviour again and promise to work on myself to change my future behaviour. Of course, you will get the stolen money back.

I consider it as important to tell you that I am sorry and apologise hereby."

APOLOGIES PERCEIVED SINCERITY DURING ONLINE VOM

Appendix B

Informed Consent

Declaration of informed consent

First of all, thank you very much for your time in participating in this research. This study is part of the psychology Bachelor thesis of Judith Sturm from the Department of Conflict, Risk, and Safety at the University of Twente.

Purpose and procedure

This research deals with investigating participant's responses towards a video apology in the context of a simulated online victim-offender mediation (VOM).

The study consists of four parts and will take approximately a maximum of 15 minutes:

1. Please answer a short demographic questionnaire.

2. Please read a fictional robbery scenario and imagine that you are the depicted victim. In the following you will be introduced to the topic of victim-offender mediation (VOM), please consider to what extent you would like to participate in victim-offender mediation.

3. Please watch the pre-recorded video apology of an offender.

4. Please answer a small set of questions regarding the seen apology. Then you completed the study.

For the validity of this experimental research, it is important that you answer the questions intuitively and as you feel at the current moment.

Participants rights

-There are no right or wrong answers and your participation in this research is completely voluntary.

-You can stop participating without having to mention a reason at any time. Nevertheless, it would be very helpful for the researcher to complete the study by filling out all questions until the end of the study is reached.

-The researchers will treat your responses anonymously and confidentially, your data will only be used for the scientific purpose of this study and not shared with third parties without asking for your permission.

-This research has been approved beforehand by the Secretary of the Ethics Committee BMS / Domain Humanities & Social Science of the University of Twente, Netherlands.

Risks for participants

As in every experiment, there are some minor risks when participating in a study. Nevertheless, there is no danger for your safety or well-being when participating.

-If you have any questions regarding this research, do not hesitate to contact the researcher: Judith Sturm (j.sturm@student.utwente.nl).

-The supervisor of this project is: Dr. Sven Zebel (s.zebel@utwente.nl).

Thank you very much for your participation!

By clicking on the button 'I agree to participate' you declare that you are voluntarily participating in this study: 'The dynamics of online mediation in conflict', including the VOM and the offender's apology.

- o   I agree to participate
- o   I do not agree to participate

APOLOGIES PERCEIVED SINCERITY DURING ONLINE VOM

Appendix C

Demographic Questionnaire

1) Which nationality do you have?

    a) (open question)

2) What is your mother tongue?

    a) English

    b) German

    c) Other

3) What is you gender?

    a) Male

    b) Female

    c) Non-binary / third gender

4) How old are you?

a) (open question)

5) What is your highest obtained educational degree?

    a) High school degree (Abitur/Mittlere Reife)

    b) Bachelor's degree

    c) Master's degree

    d) Other, namely…

6) What do you do on a daily basis?

    a) Student

    b) Working

    c) Unemployed

    d) Retired

    e) Other, namely…

7) Have you ever been a victim of a serious crime in your life?

    a) Yes

    b) No

8) Have you ever been an offender of a serious crime in your life?

    a) Yes

    b) No

9) Do you know someone from your direct social environment (friends / family members / work) that has ever been a victim of a serious crime?

APOLOGIES PERCEIVED SINCERITY DURING ONLINE VOM

    a) Yes

    b) No

10) Do you know someone from your direct social environment (friends / family members / work) that has ever been an offender of a serious crime?

    a) Yes

    b) No

APOLOGIES PERCEIVED SINCERITY DURING ONLINE VOM

Appendix D

Fictitious Crime Scenario

Please read the following text carefully, you will be later asked to answer questions belonging to what was stated here. Please imagine that what is told in the following has happened to you as a victim. This story is about a fictitious crime scenario and the aftermaths for the victim and the offender.

Imagine it is Friday evening and you want to withdraw some money before you go into the city. As you walk to the ATM, you see that it is quiet on the street and you can use the ATM and nobody is around. You take the money from the machine and put it in your wallet. Suddenly you hear someone is approaching you and then feel a hit against your head. You stagger and see one man who aims a gun at you. He shouts that he wants the money. You do not see another option other than handing over your money. The offender runs away. You are left in shock and you feel blood running down your face. You have a wound on your head. After the robbery, you feel scared and you are more attentive in your life. You pay more attention to strangers when going out and make sure that you never walk alone during the night. As a consequence of the crime, every time you see an ATM you feel anxious. Sometimes you experience flashbacks about what has happened to you that one Friday night during the offense.

Victim-offender mediation (VOM):

A little bit later, the police managed to arrest the perpetrator based on your descriptions. The perpetrator has been convicted to go to prison for six months. A police officer tells you that there is a possibility of mediated contact with the perpetrator. He explains the following: Victim-offender mediation is a voluntary contact between a victim and an offender. The purpose of such traditional mediation is to help you and the offender. The mediator is impartial and wants to help both parties to let go of the incident. The mediated contact with the offender may help you to deal with the offense as it might be difficult to cope with the emotions alone and to find closure after the offense. It often helps the perpetrator to cope with feelings of guilt. Mediation usually takes place face-to-face when offender and victim meet under the guidance of a neutral mediator to solve the dispute of the crime together. A professional mediator will guide the contact and try to meet both parties' wishes, needs, and expectations. Both you and the perpetrator could apply for but also refuse the mediation.

APOLOGIES PERCEIVED SINCERITY DURING ONLINE VOM

Alternative forms of VOM:

Next to such traditional (face-to face) VOM there are also other options to take part in mediation. Referring to online dispute resolution strategies such as online victim-offender mediation. Here, the exchange of messages within the resolution process may take place online. Those online methods are considered as alternative opportunity next to traditional mediation sessions.

Online mediations are meant to widen the scope for participants to take part in VOM as they desire it for themselves. Here, technological methods such as email-exchange or online video conferences are used for the online mediation process. In video mediation, for instance, parties and mediator can interact online either via live video interaction or by exchanging pre-recorded video messages.

After you read this crime scenario and the description of what (online) victim-offender mediation entails, please indicate below to what extent you are willing to participate in different forms of VOM.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Traditional VOM (face-to-face)	○	○	○	○	○
Exchange of pre-recorded video messages (VOM)	○	○	○	○	○
Live video interaction (VOM)	○	○	○	○	○

APOLOGIES PERCEIVED SINCERITY DURING ONLINE VOM

Appendix E

Questionnaire

After you have seen the apology of the offender, please answer the following questions. Even if you are not sure what to indicate, please respond. To remind you, there are no right or wrong answers.

For each statement below, please click on the item that best represents your agreement: 0 = Strongly disagree, 1= Disagree, 2 = Somehow disagree, 3 = Neither agree nor disagree, 4 = Somehow agree, 5 = Agree, 6 = Strongly agree.

	0	1	2	3	4	5	6
"How much does this apology indicate that the offender suffers emotionally when thinking about the harm he caused among the victim?"	○	○	○	○	○	○	○
"How much is this offender emotionally absorbed about the harmful consequences of the offense for you?"	○	○	○	○	○	○	○
"In this statement, how much does the offender appear unconcerned about the harmful consequences of the offense?"	○	○	○	○	○	○	○
"To what extent does the offender seem unaffected when thinking about the harm the offense caused among you as the victim?"	○	○	○	○	○	○	○

	0	1	2	3	4	5	6
"How much does this statement show that the offender takes responsibility for the harmful consequences of the crime for you as the victim?"	○	○	○	○	○	○	○
"How much does this statement show that this offender feels that he takes responsibility of the harmful consequences of the crime for you as the victim?"	○	○	○	○	○	○	○
"How much does this statement show that this offender feels accountable for the fact that the consequences of the crime harm you?"	○	○	○	○	○	○	○
"How much does this statement indicate that this offender admits that he caused harm to you?"	○	○	○	○	○	○	○
"How much does this statement show that this offender acknowledges his role in the damage inflicted among you as the victim?"	○	○	○	○	○	○	○

After you have seen the apology of the offender, please answer the following questions. Even if you are not sure what to indicate, please respond. To remind you, there are no right or wrong answers.
For each statement below, please click on the item that best represents your agreement.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
"Do you perceive the apology as offering a reparation or compensation for the harm done?"	○	○	○	○	○	○	○
"Do you perceive the apology as symbolic reparation for the caused harm by the offender?"	○	○	○	○	○	○	○
"Do you perceive the apology as guarantee that the offender will change his behaviour in the future by taking steps to prevent further inflicting harm?"	○	○	○	○	○	○	○

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APOLOGIES PERCEIVED SINCERITY DURING ONLINE VOM

What are your thoughts about the following questions? Please answer based on your impression of what the offender has given to you as the victim in his apology. Even if you are not sure what to indicate, please respond. To remind you, there are no right or wrong answers.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
"Do you believe the offender to be sincere and genuine?"	○	○	○	○	○	○	○
"Do you believe that the offender truly expresses his feelings within this apology?"	○	○	○	○	○	○	○
"Based on the given apology, do you doubt his words?"	○	○	○	○	○	○	○
"How realistic do you perceive the offender?"	○	○	○	○	○	○	○
"To what extent do you believe that the offender is authentic?"	○	○	○	○	○	○	○

→

What are your thoughts about the following questions? Please answer based on your impression of what the offender has given to you as the vicitm in his apology. Even if you are not sure what to indicate, please respond. To remind you, there are no right or wrong answers.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
"Based on what the offender stated here, would you accept his apology?"	○	○	○	○	○	○	○
"Based on what the offender stated here, do you feel satisfied with this apology statement?"	○	○	○	○	○	○	○
"Based on what the offender stated here, do you feel pleased?"	○	○	○	○	○	○	○

APOLOGIES PERCEIVED SINCERITY DURING ONLINE VOM

Appendix F
Debriefing

Debriefing:

Thank you very much for taking part in this study. We are interested in how distinct elements of an apology influence the sincerity and acceptance tendency of victims in the context of online victim-offender mediation.

Study:

Within this research, you were part of one of four different apology video groups which varied in their content. The goal of this study is to find out what ingredients make an apology more preferred by victims compared to other apologies. You were randomly allocated to one of the four apology conditions to examine this.

Background of the study set-up:

Existing literature on the effectiveness of an apology indicates that elements of perceived suffering and responsibility-taking, and offering reparation make an apology sincerer for victims. Therefore, the four apologies differed regarding the completeness level of those elements by having them absent or present in the statement of the offender. We expect that apologies that include the described elements are more strongly perceived as sincere by victims, resolutely get more often accepted compared to incomplete apologies.

Important:

For the validity and sake of this research, if you know friends or acquaintances that would like to participate, please do not share the debriefing information with new participants. Therefore, please do not discuss the portrayed goals of this study.

To finish; please click on the yellow arrow below.

Thank you very much for participating in this study. Have a nice day!