Examining Subjective and Physiological Responses to Norm Violation Using Text-Based Vignettes

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Abstract

In this article, we describe a paradigm using text-based vignettes for the study of social and cultural norm violation. Towards this aim, a range of scenarios depicting instances of norm violations was generated and tested with respect to their ability in evoking subjective and physiological responses. In Experiment 1, participants evaluated 29 vignettes on how upsetting, excusable, and realistic the described behavior appeared to be. Based on those ratings we selected and extended three norm violation vignettes for Experiment 2 in which participants' physiological responses were obtained in addition to their subjective ratings. In both studies, the vignettes were successful in eliciting negative responses to norm violations and were significantly affected by the perceivers' level of ethnocultural empathy. The trait measure of cultural empathy further predicted facial EMG activity at muscle sites associated with disgust (*M. Levator Labii*), thereby suggesting a potential moral response to norm violating scenarios. We discuss the methodological merits and implications of this vignettes paradigm for investigating perceived norm transgressions and make recommendations for future work.

Keywords: norm violation, vignettes, empathy, disgust, facial expression

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Success in present-day culturally and ethnically diverse societies requires an aptitude for effective cross-cultural communication. Communication failures may be costly as they might affect various life domains such organizational and personal relations (Gillespie & Richardson, 2011). One example of ineffective cross-cultural communication is the violation of social and cultural norms, which is often unintended and occurs due to lack of familiarity with the respective norm. Failure to respect social and cultural norms might in turn lead to misunderstanding and conflict. One step towards preventing such conflict is to better understand how norm violations are viewed by the receivers of such behavior. The purpose of the present research was to develop a set of text-based vignettes which can be used as a paradigm for measuring perceivers' responses to cultural and social norm violations.

Norms are rules that are understood, agreed upon, and observed by the members of a group. They form an integral part of society as they constitute behavioral guidelines and define desirable behavior (Hewstone & Martin, 2012). In many instances, their operation only becomes salient when an action "falls outside the range of acceptable behavior and is deemed deviant or inappropriate" (Levine et al., 2000, p. 124). Norm violation may have various negative consequences with respect to person perception and communication. These consequences can range from hostility, exclusion from one's group, to dehumanization at the most extreme end. According to Brandt and Reyna (2011) respective effects are due to moral transgressions lowering a person's positioning on a chain of moral hierarchy. Such violation of cultural and moral rules may lead to the dehumanization even of ingroup members whose flaws are usually more likely to be humanized (e.g., Koval, Laham, Haslam, Bastian, & Whelan, 2011). Further consequences of norm violation entail punishment such as denied

assistance and resources (e.g., Henry & Reyna, 2007) and greater physical and psychological distance (e.g., Skitka, Bauman, & Sargis, 2005).

Besides these adverse effects of norm transgression, moral evaluations have been repeatedly shown to have a strong emotional component that may lead to experiences of pure disgust (e.g., Chapman & Anderson, 2013) or disgust in combination with anger and contempt (e.g., Gutierrez, Giner-Sorolla, & Vasiljevic, 2012). Hutcherson and Gross (2011) refer to disgust, anger, and contempt as 'the moral emotions', as these emotions play a central role in moral judgments. It is therefore reasonable to assume that these emotions will also play a role in the perception of norm violation as this observation entails moral considerations. Hareli, Moran-Amir, David, and Hess (2013) recently demonstrated that others' emotional reactions to norm transgression provide feedback to the transgressor that his or her behavior is not well-received. As such, emotional responses mediate the perception of norm violation and the learning of the social norm. Other work similarly suggests an augmentative function of emotions in learning and adopting social norms (e.g., Hareli & Hess, 2012).

Negative affective responses to norm violation in the form of anger or disgust, however, may not always occur, but instead are influenced by dispositional factors such as the capacity for empathy, particularly when it applies to intergroup settings. This culture-specific type of empathy has been termed *cultural empathy* (Ridley & Lingle, 1996) and shown to alleviate intergroup prejudice and automatic expressions of racial bias, as well as to improve attitudes toward another group (e.g., Batson et al., 1997; Dovidio et al., 2004). In their review Wang and colleagues (2003) also proposed the term *ethnocultural empathy* to refer to various aspects of empathy in cross-cultural settings. They developed and validated a self-report Scale of Ethnocultural Empathy (SEE) which assesses empathic perspective taking, empathic feeling and expression, acceptance of cultural differences, and empathic

awareness. Thus, by definition ethnocultural empathy is associated with understanding and acceptance of the existence of different norms in different societies and cultures. As such, high levels of ethnocultural empathy may reduce the likelihood of engaging in norm transgression and mitigate any negative consequences on the side of the perceiver or receiver.

Vignettes & Norm-violation

The systematic assessment of perceived social and cultural norm violation is an important component in the study of moral considerations. We therefore made it the goal of the present research to develop a diverse set of scenarios, while considering ethnocultural empathy as the dispositional variable of interest. The proposed paradigm is comprised of short text-based vignettes describing instances of social and cultural norm violation. Vignettes are short scenarios that require respondents to immerse themselves in an imaginary context which is less personal than a self-report measure and thus desensitizes them to the effects of social desirability. In the literature on intergroup perception, vignettes generally employ various types of perspective taking as an avenue for the improvement of intergroup relations and reduction of prejudice. For example, Batson et al. (1997) and Dovidio et al. (2004) demonstrated that audio and video vignettes can serve as powerful tools for inducing empathy and thus altering the perception of stigmatized groups. Tettegah (2007) used animated narrative vignettes to evaluate empathic dispositions. Furthermore, text-based vignettes have been used to study emotional reactions to threat and offences (e.g., Rodriguez Mosquera, Manstead, & Fischer, 2002), suggesting the applicability of vignettes in the study of threat- and offence-like behaviors such as norm violations.

Due to social desirability effects, affective reactions to norm violation however might not always be apparent. For example, when it is inappropriate to show anger or disgust the subjective ratings might appear more moderate and the facial expressions relating to the experienced emotions might be intentionally controlled. While there is not much from the

experimenter's side that could be done to eliminate such response biases in the case of the subjective ratings, a possible solution exists in the domain of facial expressions. Even though expressive responses might be masked, even very subtle facial activity may still be captured by electromyographic activation (EMG) recordings which reflect the slightest changes in muscle activation. Facial EMG has been successfully used in measuring direct affective responses to norm transgression and has been shown to predict moral judgments (Cannon, Schnall, & White, 2011). We therefore included facial EMG recordings in the present research to allow for an implicit measure of responses to norm violation beyond social display rules. In addition, we also recorded electrodermal activity as a measure of arousal.

Present Research

The aim of the present research was to develop a set of text-based vignettes for the study of social and cultural norm violation and to measure respective behavioral and physiological responses. Furthermore, we tested the predictive role of ethnocultural empathy for both explicit and implicit responses to norm violation. Participants were instructed to read short scenarios describing various norm violating behaviors and to imagine how they would feel if they were the recipients of these behaviors. In Experiment 1 and 2, subjective ratings were obtained with respect to how upsetting, excusable, and realistic the scenarios were found to be. Throughout Experiment 2 participants' facial activity was measured at the muscle sites associated with expressions of anger (*M. Corrugator Supercilii*) and disgust (*M. Levator Labii Superioris*), as well as their electrodermal activity. By combining explicit and implicit measures, we were interested whether the responses to norm violation observed in the subjective ratings would match EMG activation related to anger and disgust.

To test the predictive role of ethnocultural empathy in the perception of social and cultural norm violation we included in both studies the Scale of Ethnocultural Empathy (SEE) by Wang et al. (2003). If the self-report scale acts as a successful dispositional

measure of ethnocultural empathy, it should predict participants' physiological responses as well as how upsetting, excusable, and realistic they found the norm-violating behaviors to be.

Experiment 1

In the first experiment we developed a range of short vignettes that describe various types of social and cultural norm violation, and assessed the potential of these vignettes to elicit subjective responses. We also tested whether participants' explicit subjective responses to the vignettes could be predicted by a measure of trait ethnocultural empathy.

Method

Participants. Forty (28 female) White British students from a university in the UK, aged 18 – 39 years (M = 21.23, SD = 3.91) took part in the experiment in return for a small monetary reward. Informed consent was obtained from all volunteers prior to their participation.

Materials. We generated 29 text-based scenarios inspired by various online resources on culture clashes and intercultural training methods such as cultural simulators. The newly created vignettes described the behavior of a character named "Feanor" in situations where he acted against or outside of a social/cultural norm. Topics were chosen to be as diverse as possible and ranged from table manners, personal space, hygiene, to gender equality issues and lifestyle choices. All vignettes were fitted to Western culture, but varied depending on whether a Western norm (i.e., personal space, gender equality) or Middle Eastern norm (i.e, alcohol, body exposure) was the initial target of violation (see Table S1 of the Supplemental Materials). In order to exclude alternative interpretations of Feanor's behavior (e.g., personality based attributions), scenarios were written in a manner that allowed the specific behavior to be explained in terms of a social/cultural norm.

Procedure and dependent measures. The experiment was conducted in individual sessions. The vignettes were presented via Medialab software (Empirisoft Corporation), one

at a time, in a random sequence. Participants were instructed to read carefully through each statement and then to imagine that they were the recipients of Feanor's behavior. Emphasis was placed on the aim of understanding how most people perceive certain actions of other people, and participants were reminded that there were no right or wrong answers. For each vignette participants indicated on a 7-point Likert scale ranging from 1 = *not at all* to 7 = *very* (*much*) their responses to three questions: a) *Would you be upset by Feanor's behavior?*, b) *How excusable is Feanor's behavior?*, and c) *Is this a scenario you could imagine in real life?* The questions appeared on the screen one at a time and in a fixed order.

Following the vignette rating task, participants completed a computerized version of the Scale of Ethnocultural Empathy (SEE) by Wang et al. (2003). The SEE items were presented in a fixed order one at a time. Responses to the SEE items were obtained on a 6-point Likert scale ranging from 1 = *strongly disagree* to 6 = *strongly agree*. An overall SEE score was computed for each participant by summing the responses to the 31 individual items ($\alpha = .89$).

Results and Discussion

The effect of participant gender was neither significant for the three dependent variables, *t*s < .81, *p*s > .422, nor for the measure of ethnocultural empathy, $t(37) = -.92$, $p = .363$; hence, this variable was excluded from further analysis. Overall, participants judged the vignettes as considerably high in norm violation (see Table S1 for the means and standard deviations of the 29 vignettes). Mean rating for *upset* was $M = 4.67$ ($SD = 0.65$), for *excusable* $M = 3.61$ ($SD = 0.67$), and for *realistic* $M = 4.24$ ($SD = 0.95$). The ratings for *upset* and *excusable* differed significantly from the scale midpoint (4), $t(39) = 6.48$, $p < .001$ and $t(39) = -3.70$, $p = .001$ respectively, suggesting that the vignettes were sufficiently strong in eliciting the predicted negative responses. The ratings for *realism* did not differ significantly from the scale midpoint, $t(39) = 1.59$, $p = .119$, indicating moderate levels of perceived

plausibility for all vignettes. Aggregating the responses to the 29 vignettes into one composite measure revealed good scale reliabilities for each variable, upset (α = .84), excusable (α = .86), and realistic (α = .92), thereby allowing for its use as a collective paradigm for social/cultural norm violation.

Regression analyses were conducted to explore whether participants' level of ethnocultural empathy was a significant predictor of their subjective responses to the vignettes. Results showed that ratings for *upset* and *excusable* were significantly predicted by participants' overall SEE score, β = -.53, $t(38) = -3.82$, $p < .001$, and β = .59, $t(38) = 4.41$, $p < .001$, respectively. Specifically, greater ethnocultural empathy was associated with lower *upset* and higher *excusable* scores of the vignettes. The overall SEE also explained a significant proportion of the variance in the *upset* and the *excusable* ratings, $R^2 = .28$, $F(1, 38) = 14.61$, $p < .001$, and $R^2 = .35$, $F(1, 38) = 19.46$, $p < .001$, respectively. Ratings for *realism* were not predicted by participants' overall SEE score, β = .19, $t(38) = 1.19$, $p = .241$.

Correlational analyses showed that ratings of *upset* and *excusable* were highly correlated in a negative direction, $r(38) = -.67$, $p = .000$, whereas *excusable* and *realistic* ratings were positively correlated, $r(38) = .40$, $p = .011$. In this sense, the more upset participants were by a particular behavior, the less excusable they found that behavior to be; and the more realistic the behavior was, the more excusable it appeared. No significant correlation emerged for ratings of *upset* and *realistic*, $r(38) = -.23$, $p = .151$.

In this study we aimed at developing a paradigm using text-based vignettes that describe social and cultural norm violations. On average, the described norm violating behaviors were effective in eliciting the predicted negative responses in our participants. Ratings for *upset* and *excusable* differed significantly from the midpoint, with many vignettes being perceived as highly conflictive but still overall plausible. Furthermore, the explicit subjective responses to the vignettes were predicted by participants' trait ethnocultural

empathy, demonstrating the involvement of empathy in the perception of social and cultural norm violation.

Experiment 2

In the second study we focused on a limited number of vignettes which were shown to portray strong cases of social and cultural norm violation in Experiment 1. Here we aimed at testing *implicit* reactions to social and cultural norm violation in the form of physiological responses. Specifically, we were interested in autonomic activation, as indexed via electrodermal activity, as well as expressive changes, linked to a facial muscle that is known to be activated in the context of disgust - the muscle that lifts the upper lip, *M. Levator Labii Superioris*, as well as *M. Corrugator Supercilii*, the muscle that pulls the eyebrows together and down and that is activated typically in situations that are perceived as being negative (Kappas, Krumhuber, & Küster, 2013). In addition, we sought to replicate the predictive role of trait ethnocultural empathy in the perception of social and cultural norm violations.

Method

Participants. Thirty (19 female) students at an international university in Germany, aged 17 – 32 years (M = 21.10, SD = 2.94) volunteered to take part in this experiment in return for a small monetary reward. All volunteers had lived in Germany for at least 9 months and were proficient in the use of the English language. Informed consent was obtained prior to their participation and debriefing was administered at the end of the testing session.

Materials. Based on the results from Experiment 1 we selected vignettes 1, 12, and 20 as most powerful examples of social and cultural norm violation that were capable of eliciting strong subjective responses and at the same time were sufficiently ecologically valid. We then expanded the three selected vignettes to make them more relatable to our participants and to allow time for electrodermal responses to manifest themselves during

reading. Finally, as a control condition we included three neutral vignettes describing typical everyday non-norm violating behaviors selected from a different experiment. The three expanded norm violation vignettes (containing instances of social or cultural norm violation) and the three neutral vignettes used in the present experiment are shown in Table 1.

Design and procedure. These were identical to those of Experiment 1 with the following alterations. Physiological data were recorded continuously throughout the entire experimental session. To avoid electrical interference with the physiological signal, all instructions and stimulus materials were presented on a computer placed outside the experimental room and were projected inside the booth on a single monitor. Responses were obtained via a mouse connected to the outside computer.

A typical trial began with participants carefully reading a randomly chosen vignette. (*reading phase*). They could either freely proceed to the next phase once they finished reading, or the program would automatically move on after 60 seconds. In the next step with a fixed duration of 30 seconds participants imagined what it would feel like to be the recipient of Feanor's behavior (*reflection phase*). Once the 30 seconds of reflection had expired, participants responded to the three questions from Experiment 1 (*upset*, *excusable*, *realistic*). This was followed by the computerized SEE questionnaire, with item presentation one at a time and in a fixed order ($\alpha = .77$).

Dependent measures. The vignette ratings and the SEE were the same as in Experiment 1.

The two continuous physiological measures were facial electromyography (facial EMG) and electrodermal activity (EDA). Facial EMG was recorded at the *M. Corrugator Supercilii* and *M. Levator Labii Superioris* sites, indicative of frowning and disgust related facial expressions, respectively. We also recorded facial activity at the *M. Zygomaticus Major* site to control for smiling behavior in response to the vignettes. Following Fridlund and

Cacioppo (1986), EMG recordings were obtained via bipolar placement of Ag/AgCl electrodes on the left side of the face, while grounding was achieved via unipolar placement of an Ag/AgCl electrode at the middle of the forehead. In parallel, EDA was recorded via bipolar placement of Ag/AgCl electrodes at the distal second and fourth phalanges of the non-dominant hand (Boucsein et al., 2012). The raw EMG and EDA signals were recorded via a BIOPAC Systems MP150 amplifier, and digitized using a 16-bit analog-to-digital converter. Facial EMG was stored with a sampling frequency of 2000 Hz, whereas EDA was stored at 500 Hz. An additional 30-seconds interval was provided prior to each individual vignette to allow physiological activity to return to baseline.

Data preparation. The data from three participants were not included due to technical or procedural issues. Thus, the analyzed sample consisted of 27 participants (17 female), aged 19 – 26 years (M = 20.96, SD = 2.01). EMG channels with impedance measures equal to or above 30 kΩ before commencing the experimental session were treated as missing data, resulting in n_{Cor} = 25, n_{Lev} = 25, and n_{Zyg} = 18, for the analyzed data.

The raw EMG data were filtered offline with a 30–500 Hz bandpass filter and a 50 Hz notch filter. The signal was then integrated over 40 samples and rectified. The raw tonic EDA signal was filtered offline with a 10 Hz low pass filter and was used as a measure of skin conductance level. Difference scores were calculated for each channel by subtracting the activity from the baseline intervals prior to each vignette from the activity throughout the *reading phase*, and by subtracting the activity from the baseline intervals from the activity throughout the *reflection phase.*

Results and Discussion

Analyses of variance were used to compare both explicit (subjective ratings) and implicit (physiology) reactions to norm violation versus neutral vignettes. Regression

analyses were employed to test the predictive power of dispositional ethnocultural empathy on both types of responses to perceived norm violation.

Analyses of variance.

Subjective ratings. Separate repeated measures analyses of variance (RM-ANOVA) with Vignette Type (norm violation vs. neutral) as a within-subjects factor and Participant Gender (female vs. male) as a between-subjects factor were computed for each subjective dependent measure (*upset, excusable, realistic*). A Greenhouse-Geisser adjustment to degrees of freedom was applied in all cases.

A main effect of Vignette Type was observed for all three measures with participants rating the norm violation vignettes as more *upsetting* ($M = 5.80$), $F(1, 25) = 412.94$, $\eta_p^2 = .94$, $p < .001$, less *excusable* ($M = 2.58$), $F(1, 25) = 150.80$, $\eta_p^2 = .86$, $p < .001$, and less *realistic* ($M = 4.07$), $F(1, 25) = 79.34$, $\eta_p^2 = .76$, $p < .001$, compared to the neutral ones ($M_{upset} = 1.54$, $M_{excusable} = 5.99$, $M_{realistic} = 6.26$). Means and standard deviations for each vignette are shown in Table 1. These results served as a validation of the vignettes by demonstrating the expected differences in the subjective perception of the norm violation and neutral scenarios. No significant main effects or interaction effects including participant gender occurred ($ps > .118$) and this factor was dropped in further analysis.

Physiology. RM-ANOVAs with Vignette Type (norm violation vs. neutral) as a within-subjects factor were performed on each physiological measure separately for the *reading* and *reflection* phase. A Greenhouse-Geisser adjustment to degrees of freedom was applied.

Facial reactions. A main effect of Vignette Type was observed for *M. Levator Labii* during both the *reading* phase, $F(1, 24) = 4.86$, $\eta_p^2 = .17$, $p = .037$, and *reflection* phase, $F(1, 24) = 6.49$, $\eta_p^2 = .21$, $p = .018$. Specifically, participants showed lower activation of *M. Levator Labii* in response to neutral ($M_{reading} = -.14$ μV, $M_{reflection} = -.20$ μV) as compared to

norm violation vignettes ($M_{reading}$ = .18 μV, $M_{reflection}$ = .57 μV), revealing the predicted differences in facial reactions consistent with a disgust expression both during reading and reflection upon the scenarios. There were no significant differences of activation in the brow region.

Electrodermal activity. No difference was observed in terms of skin conductance level between the norm violation and neutral vignettes both for the *reading* and *reflection* phase (all *p*s > .1).

Regression analyses. Regression analyses were employed to test for the predictive effect of trait ethnocultural empathy on the subjective vignette ratings, and on the more subtle physiological responses.

Subjective ratings. The *excusable* and *realism* ratings obtained for the norm violation vignettes were marginally significantly predicted by participants' overall SEE score, β = -.37, $t(26) = -2.00$, $p = .057$, and β = .35, $t(26) = 1.88$, $p = .072$, respectively. Interestingly, greater ethnocultural empathy was associated with lower *excusable* and higher *realism* scores of scenarios that violated social and cultural norms. Ratings for *upset* were not predicted by participants' overall SEE score, β = .26, $t(26) = 1.34$, $p = .191$.

Physiology. During the *reflection phase M. Levator Labii* activity was significantly predicted and explained by the SEE overall score, β = .45, $t(24) = 2.41$, $R^2 = .20$, $F(1, 24) = 5.82$, $p = .024$. In other words, disgust-related facial muscle activity was positively linked to participants' overall levels of ethnocultural sensitivity.

In Experiment 2 we selected the strongest instances of social and cultural norm violation form Experiment 1 and tested explicit as well as implicit responses to them. Similarly as in the first study, participants viewed the social/cultural vignettes as considerably high in norm violation, with ratings being significantly different from those of the neutral vignettes. When testing for the predictive power of trait ethnocultural empathy, we found that

subjective ratings for *excusable* and *realism* as well as implicit facial responses in the *M. Levator Labii* region were (marginally) significantly predicted by this variable.

General Discussion

The purpose of this research was to employ a paradigm for the study of social and cultural norm violation that takes subjective and physiological responses into consideration. In addition, we studied the predictive power of ethnocultural empathy for both types of responses. Towards this aim we developed a set of text-based vignettes featuring instances of norm violation for which participants imagined to be the recipients of the described behavior. In Experiment 1 participants were asked to rate how upsetting, excusable, and realistic they found a large number of norm violation vignettes. Ratings for upset and excusable differed significantly from the scale midpoint, indicating that the vignettes were powerful enough to elicit negative responses to perceived norm violation. We relied on the ratings from this experiment to isolate three vignettes that were capable of eliciting negative responses and were at the same time plausible enough to occur in real life. In Experiment 2 we extended the chosen vignettes and added three more vignettes that were considered to be neutral with respect to norm violation to permit differential assessment of bodily responses. Specifically. in addition to participants' explicit ratings we also recorded physiological responses such as electrodermal activity and facial expressive behavior to the vignettes.

During both reading and reflection phase a significant difference was found for facial reactions consistent with disgust, with lower activation of *M. Levator Labii* in response to the neutral as opposed to the norm violation vignettes. The findings corroborate previous evidence (i.e., Cannon at al., 2011) of facial affective expressions of disgust in response to norm violating behavior and suggest that the perception of norm transgressions entails a moral component. Hence, facial responses appeared to convey moral evaluations, even in the

context of hypothetical behavior as described in the form of vignettes. Until recently, text-based vignettes have been used for reducing prejudice, inducing empathy, and studying reactions to threats and offences (e.g., Batson et al, 1997; Dovidio et al., 2004). The present research builds upon those findings by showing that vignettes are effective in evoking subjective and physiological responses to norm violation. These findings may be promising for the future with view to novel methodological approaches in investigating evaluative components of norm transmission using multimodal assessment. In this sense one could use systematic multimodal assessment including a battery of stimuli, such as standardized text-based vignettes, visual material, and physical interactions, as a means to assess levels of intercultural skills, as well as, in a repeated measures approach, index effects of training or simply long term exposure to different cultures.

In both studies, trait empathy functioned as a predictor of participants' responses, thereby pointing towards its potential role in moderating moral judgments. Interestingly, the direction of the predictive effect for how *excusable* the norm violating behavior was seen slightly changed in the second study. Here, greater levels of ethnocultural empathy were associated with lower excusable ratings. Also, *M. Levator Labii* activation increased with higher SEE scores, suggesting that disgust related activity directly translated into an explicit negative response. Given that participant samples differed in their ethnicity and homogeneity between the two studies (White British students in Experiment 1, international students in Germany in Experiment 2), it is feasible that these factors contributed to different predictive effects of the SEE score obtained in the second study. Specifically, participants' higher levels of ethnocultural empathy among the international sample (M = 142.56, SD = 13.85) as compared to the British sample (M = 130.23, SD = 18.71) could have increased their sensitivity to norm violation in Experiment 2. Across both studies we showed that norm violating instances consistently led to negative responses. In order to clarify the predictive

role of ethnocultural empathy, future research might benefit from additional behavioral measures (i.e., IAT, Greenwald, Nosek, & Banaji, 2003) as well as more homogenous participant samples. Also, it would be worthwhile testing for potential gender effects in the perception of norm violation. While this factor was controlled in the current study by using only one male actor (Feanor), subjective and physiological responses may vary with the demographic information of the protagonist.

In general, the vignettes paradigm may find application in cross-cultural communication trainings (see Fowler & Blohm, 2004) as a pre- and post-training probe for norm transgressions. A large body of research considers certain types of empathy to be a trainable skill that could be used for fostering positive attitudes and improving intergroup relations (e.g., Tarrant, Dazeley, & Cottom, 2009). In view of the present findings which showed that the extent of perceived norm violation depends on trait empathy, we believe that the proposed vignettes would be especially relevant for cross-cultural communication trainings that are based on empathy (e.g., Mullavey-O'Byrne, 1997). As such, the vignettes have already been successfully applied for cultural and emotional learning approaches in virtual environments in the context of the EU FP7 project eCute (Education in Cultural Understanding, Technology Enhanced) (e.g., Degens, Hofstede, Beulens, Krumhuber, & Kappas, in press; Nazir et al., 2012). As portable devices for measuring physiological and subjective responses become cheaper and more robust, such technology might be ready to leave the laboratory soon and become an established element in the toolbox of intercultural trainers and researchers in the field alike.

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Table 1

Mean Ratings of Upset, Excusable and Realistic for the Extended Vignettes Used in Experiment 2. Standard Deviations are in Parentheses.

Type of Vignettes	**Upset** ***M***	**Excusable** ***M***	**Realistic** ***M***
Norm Violation Scenario			
Feanor visits a friend and his wife at home. The table is set beautifully, full of food and drinks. During the course of the dinner, they talk about their hobbies and various interests they share. All goes well and everyone has a pleasant time. When Feanor starts to talk about business, he suddenly asks the woman to leave the room.	6.22 (1.42)	2.22 (1.45)	3.67 (1.88)
Feanor has recently taken an internship position in a well-known company. He is fascinated by the projects he is working on and proud of being part of the company. In a lunch break, his supervisor offers to introduce him to several people. When a female colleague reaches out her hand to greet Feanor, he refuses the handshake by remaining still.	6.11 (1.09)	2.41 (1.57)	4.07 (2.00)
Feanor has been invited to stay over at a friend's house. Both enjoy going out and visiting various bars and clubs downtown. On the evening, everything goes fine and they spend a joyful time together. When having breakfast the next morning, Feanor suddenly tells his friend that he has used his toothbrush because he had forgotten his own.	5.33 (1.80)	2.85 (1.49)	4.41 (1.93)
Neutral Scenario			
Feanor decides to sort out his CD collection. He has been an ample collector of modern music and built an astonishing library of various interpreters from that genre. When he goes to see his friend who lives in an apartment at the outskirts of town, he tells him that he owns 80 CD's but he wants to sell 30 of them.	1.70 (1.03)	5.56 (1.76)	5.74 (1.56)
Feanor spends the weekend with several colleagues from the neighbourhood. They have organized a picnic in one of the parks which is close to the river. Feanor gets to talk to lots of people and enjoys the nice atmosphere. When a colleague reports that she has two brothers and one sister, Feanor says that he has a brother as well but no sister.	1.63 (1.55)	6.33 (1.27)	6.59 (0.93)
Feanor arranged to meet with a friend after work. It's a warm day and they decide to take a walk in a park nearby. Both have not seen each other for a while and they are excited to spend some free time together. When they talk about sports, Feanor says that he always goes swimming for about an hour each week.	1.33 (0.96)	5.96 (1.70)	6.56 (0.85)