

The Role of Transportability in a WWII Scenario

Nico Busche

s2580586

Bachelor's Thesis Psychology

1st Supervisor: Dr. Maximilian A. Friehs

2nd Supervisor: Drs. Marleen Haandrikman

University of Twente

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Abstract

The level of transportation into a narrative will determine how much the reader will feel part of the story and connected to the characters. This study examines the effect of a person's level of empathy on their level of transportation into a narrative and how transportation affects the amount of emotional content shown in a fictional letter written to the family of a deceased soldier in WWII. The study contains two parts. First, participants filled out a survey about their level of empathy and their level of transportation after reading a narrative. Then, participants wrote a letter to the family of that soldier. The second part entails a qualitative and quantitative analysis of letters written by players of the WWII game "Radio General 1", which has a similar task of letter writing as the survey. The study shows that higher levels of empathy significantly increase the level of transportation into the narrative, while the increased transportation leads participants to show significantly more emotional content in the letters than participants that have lower levels of transportation. Furthermore, while themes emerging in the survey letters and game letters are to some extent similar, both sets show significant differences in length, seriousness and depth which speaks for an incomparability of laboratory and real-life settings.

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Introduction

Empathy is an important human characteristic and has a lot of influence on how people interact with each other. Empathy helps us to understand other people's state of mind and can lead us to express positive emotions towards these people (Ickes, 1993). However, can we also show empathic responses to people that are not actually real, for instance, in the context of games or narratives? This study will examine this question and also show how empathic responses are related to transportability and identification.

Empathy

Although everybody has a notion about what empathy is, among researchers there is no clear definition of what empathy exactly entails and researchers focus on different aspects (Cuff et al., 2016). For example, Singer and Lamm (2009) established a separation between empathy and sympathy, where empathy evokes the same emotional response in the one feeling empathy as in the person to which this empathy is directed to. Sympathy on the other hand describes a process that acknowledges the other's feelings while not necessarily feeling the same, so negative emotions would therefore for example elicit concern instead of the same negative emotions. On the other hand, in their review of the concept of empathy, Cuff et al. (2016) make an important distinction between cognitive and affective empathy. Cognitive empathy describes the conscious representation of the other's state of mind in the own mind which acts as the stimulus to experience an empathic response (Blair, 2005). Affective empathy happens more subconsciously as a fast recognition of the other's emotion by visual features which leads to an automatic response: A smile and wrinkles around the eyes in someone else's face is identified as a happy face by the brain and as a result oneself also feels happy, for example (Reniers et al., 2011). Strayer (1987) reasoned that, in the end, the empathic response is probably a result of the interplay between the automatic affective response and the higher-order cognitive process.

One important characteristic in order to feel empathy is the ability to take the perspective of others. It describes the ability of people to put their own perspective of the world into the perspective of other people in order to infer what they may feel, think or experience in that moment. Perspective taking takes mental effort and is not the standard way of thinking. People usually see the world from their own point of view and tend to think that others see and experience things similar to them (Decety, 2007). In fact, even adults generally tend to overestimate the similarity between their own beliefs and knowledge and that of others (Nickerson, 1999).

However, perspective taking is not only relevant in real-world contexts but can also influence human experience in virtual settings. In a VR-study conducted by Kors et al. (2016), participants were put into a VR-environment in which they portrayed a stranded refugee in the ocean. The participants showed heightened levels of empathy towards other virtual refugees that were set in the same setting, showing the ability of fictional settings to elicit empathy towards fictional characters. Virtually taking the perspective of a refugee also increased the participants' empathy towards real-life refugees by making the participant feel like they are actually in that scenario, in other words, that they are immersed into it. A short period of reflection of their own (fictional) setting also helped in relating to the actual situation. The authors reason that immersiveness, in this case achieved through the realistic VR-environment, is detrimental to the establishment of empathy towards the own and other characters. The ability of a medium such as a game or narrative to immerse the player/reader into a scenario is called transportability. A higher level of transportability tends to elicit higher levels of empathic responses (Mazzocco et al., 2010). The concept of transportability in the context of empathy will be further explored in the next section.

Transportability and Empathy

Transportation into a narrative is described as the interplay of attention, imagery and emotion focussing on the events of a story and the more a story is able to trigger these components, the more the person will be transported into the story (Mazzocco et al., 2010). For example, a study conducted by Pianzola et al. (2019) put participants into a VR-environment in order to elicit higher levels of transportability. The VR-environment was used so that the participant can only see the text in front of them, effectively cancelling out other visual stimuli that could draw the attention from reading the narrative. The researchers found that this method elicited higher levels of empathy towards characters in the narrative.

Furthermore, high levels of transportability lead to higher levels of identification with either characters in the narrative or characters in a game, which ultimately is also another form of a narrative. Transportation here acts as a predictor of identification with the character (Christy & Fox, 2016). Identification with characters in a narrative in turn is linked to showing empathy for these characters (Gaut, 2010; Breithaupt, 2018), while transportation into the narrative itself has also been shown to increase empathy towards characters (Mazzocco et al., 2010).

Interestingly, the relationship between transportation and empathy seems to work both ways. Meade (2015) conducted a study in which it was examined which character traits influence how much a person is transported into a narrative. Among other factors, the participant's level of empathy has been shown to significantly increase the level of transportation into the narrative. Therefore, an individual's level of empathy will positively influence the level of transportation into a narrative, while the level of transportation will positively influence the amount of empathy that individual will experience towards characters in the story.

In conclusion, various research shows that there is a connection between transportation into a narrative and empathic responses towards characters in that narrative. This relationship can go both ways as empathy also increases the ability of individuals to be transported into a narrative.

Hypotheses

As Meade (2015) has shown that an individual's level of empathy increases the amount of transportability they experience, the following hypothesis is stated:

H1: Higher levels of empathy will increase the level of transportation in the participant.

In turn, since higher levels of transportation into a narrative have been proven to lead to higher levels of empathic responses, the following hypothesis is stated:

H2: Participants with a higher level of transportation will write letters with higher emotional content.

Methods

Participants

Participants were acquired using mostly social networks such as Instagram and internet forums for players of Radio General 1. There were no requirements for taking part in the survey, other than being proficient in English and at least 18 years old.

Design & Procedure

In order to investigate empathy in games and narratives, a combination of naturalistic and survey data was used, and thus this study consists of two different parts. The first part of the study consists of a survey. The second part is an analysis of letters written by players of the video game "Radio General 1", developed by "Foolish Mortals Games".

Survey Data

The survey took place via Qualtrics. Since the participants were just provided with a link to the survey, they did not have any restrictions when and where they filled out the survey, other than having a working smartphone/computer at hand and an internet connection. In the survey, participants are asked to give their consent (see Appendix B for the full form) and about their demographic data, namely their age, gender and nationality. Furthermore, the participants are asked about their level of English proficiency on a scale from A1 to native speaker, the number of hours they play video games per week, their knowledge about the events of WWII on a scale of 1 to 10, and if they have played “Radio General 1” before.

The next part of the survey consists of two scales, the Toronto Empathy Scale in order to measure the participant’s level of empathy, and the Identification with all Humanity Scale in order to measure the participant’s identification with their own community, their nationality and all of humanity, respectively. Included at the end of the Toronto Empathy Scale was a question about the participants’ attention, where participants had to select the option “always” if they were still paying attention. Failure of this question led to exclusion from the study during data processing.

Next, the participants were asked to read a short narrative in which the role of a commander that has to command his troops in the fight against the Nazis is described. This narrative was written with the aim to make the participant feel immersed into the role and was designed so that the participant has a similar role to what a player experiences in “Radio General 1”. The narrative can be found in Appendix C.

After the narrative, the participants were asked to close their eyes for 45 seconds and imagine themselves in the scenario. Note that it could not be checked if the participants actually closed their eyes because the study was not conducted in a controlled environment, which could influence the participant’s transportation into the narrative. Then, the participants were led to the next scale, namely the Transportation Scale - Short Form, consisting of six items, in order to measure how much they actually felt transported into the narrative they just read. The Transportation Scale consists of two subscales. The first subscale entails the items one to four and focuses on the emotional and transportation into the narrative. The second subscale entails only items 5 and 6 and describes how much the participants could portray themselves in the characters of the narrative, namely the soldier(s) and the commander.

The last task of the survey is to write a letter to the family of the soldier “Sgt. Wilson” who has died under the participants’ command, following the events of the narrative. Similar to Radio General 1, the participants are free to choose the length and content of the letter they write.

Lastly, the participants could take part in a lottery by typing in their email-addresses in order to win one of the two games “Radio General 1” or “Kaiju Wars”, both developed by Foolish Mortals Games. The games were provided by the developer studio for free.

Survey Material

In order to be able to take part in the survey, participants need to have access to either a smartphone or a computer with a working internet connection. The survey was built using Qualtrics. The Toronto Empathy Scale was taken from Spreng et al. (2009). The Identification with all Humanity was taken from McFarland et al. (2012), and the Transportation Scale - Short Form was taken from Appel et al. (2015). As for the letters from Radio General 1, players had to be in possession of a Windows computer/laptop and of the game itself, of course.

The Toronto Empathy Questionnaire

To assess the participants level of empathy the self-report measurement *The Toronto Empathy Questionnaire* (TEQ) by Spreng et al. (2009) was chosen (see Appendix D). It has 16 items, such as “When someone else is feeling excited, I tend to get excited too”, of which eight are reverse coded, for instance “Other people’s misfortunes do not disturb me a great deal”. Participants are asked to indicate how much they agree with those items by choosing a score on a 0-4-point Likert scale, ranging from Never (0) to Always (4). This means that the higher the score on the scale, the higher is the participant’s level of empathy. The TEQ was chosen because of its psychometric qualities. The construct validity was examined by comparing the questionnaire with the Empathy Quotient (Baron-Cohen & Wheelwright, 2004) and the Autism Quotient (Baron-Cohen et al., 2001), showing a positive correlation with the first $r = .80$, $p < .001$, and a negative correlation with the latter $r = -.33$, $p < .01$. Further, Item-remainder coefficients were analysed and found good with values ranging from .34 - .71, as well as a sufficient test re-test reliability of $r = .81$, $p < .001$. Further, the internal consistency is high with a Cronbach’s alpha of .85 (Spreng et al., 2009).

Identification with all Humanity Questionnaire

In order to assess the participants identification, the identification with all humanity scale is used (see Appendix E). The scale by McFarland et al. (2012) was chosen. For this research the

subscales bond, concern and pure are left out while the overall identification is measured. The Identification With All Humanity (IWAHS) scale consists of nine three-part items, in which participants are asked to reflect on the extent to which the item applies to people in their community, people of the same nationality and for all mankind. The identification with all humanity was adapted to refer to your nation instead of the Americans. For example, the first item reads, “How close do you feel to each of the following groups? a. People in my community; b. People with the same nationality c. people all over the world”. The scale is using a 5-point-Likert scale, where the higher the score, the stronger sense of identification. The identification with the community items were found reliable with a Cronbach’s alpha of .87. The identification with nation items were found reliable with a Cronbach’s alpha of .87. The identification with all humankind items were found reliable with a Cronbach’s alpha of .89.

Transportation Scale

In order to assess the participant’s transportation into the narrative, the Transportation Scale - Short Form by Appel et al. (2015) was chosen (see Appendix F). It consists of six items, for example “I could picture myself in the scene of the events described in the narrative.”, which are answered on a 5-point-Likert scale, thus the higher the score on the scale, the higher the level of transportation. The original scale does not differentiate between subscales, however, for this study the first four items were compiled as one subscale to analyse identification with the story itself, and the last two items as another subscale to analyse identification with the characters. The scale has a good test-retest reliability with an alpha ranging from .77 to .88. The TS-SF furthermore has good construct validity, showing correlations between the short form and long form of .93, $p < .001$ to .96, $p < .001$. A Cronbach's alpha of .80 to .84, respective to the condition, shows good internal consistency (Appel et al., 2015).

Game Data

Radio General 1 is a real-time strategy game, played on a computer, and set in a WWII scenario in which the player plays the role of a Canadian commander. The player has to command his forces through various battles of WWII by giving them orders (e.g., to attack, retreat or move position) through a radio connection. Decisions made by the player lead to higher or lower casualties amongst his soldiers. After each battle, the player is asked to write a letter to the family of the deceased soldiers, although length and content of the letter are up to the player. The player

can also decide not to write a letter. The developers of the game provided the research team with a total of 3020 of those letters written by players.

Data Analysis

After data collection of the survey, the data was cleaned from participants that did not meet the following criteria: The participant did not give full consent to the use of their data; the participant did not finish the survey; the participant did not pass the attention question, in which they were asked to select a certain answer if they are paying attention to the questions. Furthermore, participants that assessed their own English proficiency as A1 or A2 were excluded from the data set. Participants that did not write a letter were excluded as well as underaged participants.

After cleaning the data, all remaining letters written by the survey participants were coded according to the codebook (see below). Furthermore, the means and total scores of the three scales and corresponding subscales were computed, and items were reversely scored if necessary. Next, correlation analyses between the demographic variables/other questions and the respective scales were conducted. In addition, correlations between the scales and subscales were computed in order to see if the possession of these traits influences each other. Lastly, the participants' score on each scale was put in relation to their specific content and length of the letters and correlations were drawn between this.

The survey and in-game letters were compared both quantitatively and qualitatively. The prevalence of the overarching themes described in the codebook in both sets of letters was compared by computing their respective percentages. Furthermore, a qualitative analysis of themes and topics that emerge in both sets of letters was conducted in order to establish if participants of the survey thematise other aspects than the players of Radio General 1.

Coding

In order to find themes and topics the players write about and to establish a codebook for efficient analysis of the letters, the analysis incorporated deductive and inductive methods within an abductive system, and was conducted in four phases. First, each of the three researchers read 100 letters by themselves and wrote down themes that were mentioned often in the letters in their own precursory codebook. Second, the researchers verbally discussed these themes, deciding which they agreed with and which overlapped, and came up with a first draft of the final codebook consisting of themes such as "Sorrow/Sadness", "Condolences" or "Type of death". Third, this

first draft was then applied to 250 other letters to see how well it would work with the letters and each individual's coding style. It was coded by coding "1" if the specific theme emerged and "0" if it did not. After finishing this step, the researchers lastly discussed the results, determining the meaning of each code in specific terms and how they usually emerge. Further, some redundant codes were dropped and missing codes were added. The results of this compile the final codebook which can be found in Appendix A. The total amount of letters was then divided among the researchers and coded according to the codebook. Each coder looked at over 100 letters coded by both other researchers to ensure cohesive coding. Afterwards, single codes that were similar in their theme were put together in overarching categories which can also be found in the codebook. Distributions and total scores of the single codes and overarching themes were then computed.

Results

Participants

A total of 148 responses were recorded for the survey, of which 92 responses were deleted following the criteria as stated in "Methods – Data Analysis". After the exclusion of these participants, a data set of 56 respondents was left.

The data set includes 32 male and 24 female participants. The mean age of the participants is 23.57 years (Median: 22), with the youngest participant being 18 years old and the oldest 57 years old. The majority of participants is German (24), followed by Dutch (14). The rest of the participants have the following nationalities: Canadian (4), Spanish (4), Italian (2), French (1), Greek (1), Polish (1), Portuguese (1), Russian (1), Singaporean (1), Tunisian (1), and US-American (1). Four participants assess their own level of English proficiency as B1, 14 as B2, 20 as C1, 11 as C2, and seven participants consider themselves to be native speakers. Answers to the question how many hours participants play video games per week range from zero hours to 84 hours per week, with a mean of 12.68 hours (Median: 6 hours). When asked about their knowledge of the events of World War II on a scale of 1-10, participants' answers ranged from 3 to 10, with 6.43 being the mean and 7 being the median. Lastly, six participants state that they have played "Radio General 1" before while 50 participants have never played it.

Transportability Scale

Answers to the six single items asked in the transportability scale varied only slightly. For all items, except item 3 and 5, the highest number of answers was recorded in category 4 “Somewhat agree”, while item 3 has the highest number of answers in category 5 “Very much” and item 3 has an equal distribution between category 4 and 5. The distributions for the two subscales (Items 1-4, which relate to the story of the narrative, and Items 5-6, which relate to the characters of the narrative) are very similar as well with both peaks being in the upper fourth quartile of the scale. The distribution of the total score of transportability, so the summed score of each of the six items, ranges from 6, which is also the lowest achievable score, to 30, which is also the highest achievable score. The peak of the distribution is at 21 points. The value of Cronbach’s Alpha is good for the total scale (.85) as well as for Subscale 1 (.84) and Subscale 2 (.74). The means, standard deviations, and medians of each item, the subscales, and the total score can be found in Table 1, together with Cronbach's Alpha for all three scales. A visual representation of these values for the subscales and the total score can be found in Figure 1, respectively.

Table 1.

Means, Standard Deviations, Medians and Cronbach’s Alpha of Items and Scales

<i>Items & Scales</i>	<i>Mean</i>	<i>SD</i>	<i>Median</i>	<i>Cronbach's Alpha</i>
Item 1	3.89	1.06	4	
Item 2	4.04	.91	4	
Item 3	4.05	1.21	4.5	
Item 4	3.52	1.18	4	
Item 5	3.71	1.16	4	
Item 6	3.74	1.05	4	
Subscale 1	15.50	3.60	16	.84

Story

Subscale 2 - 7.46 1.96 8 .74

Character

Total 22.96 4.97 24 .85

Transportability
Score

Note: N = 56

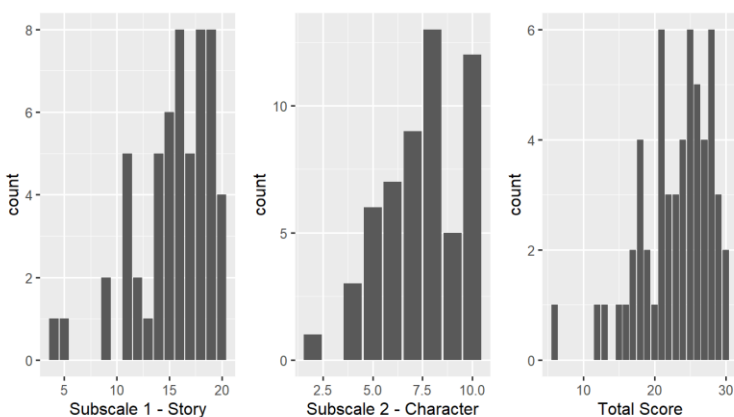


Figure 1. *Distribution of Transportability Subscale 1 - Story, Subscale 2 - Character, and Total Transportability Score, N = 56*

The correlations between demographic variables such as age, gender, and nationality as well as other variables such as English proficiency and knowledge about WWII and the total score of transportability were tested, however, no significant effects could be found. The correlation scores with their respective p-value can be found in Table 2.

Table 2.

Correlation between demographic variables and transportability scores

<i>Variable</i>	<i>Correlation score</i>	<i>p-value</i>
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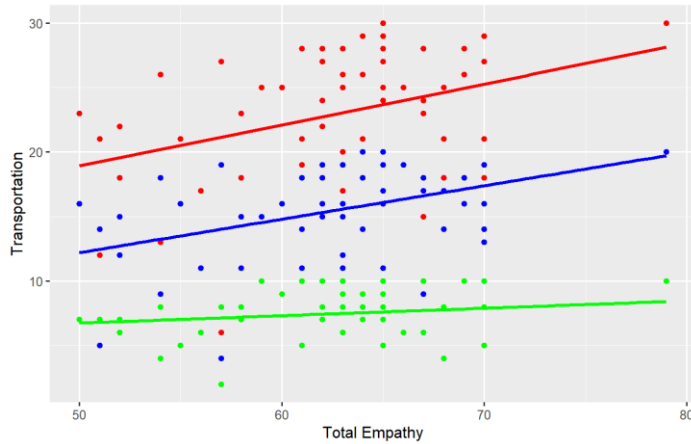
Age	.13	.34
Gender	.15	.28
Nationality	.11	.43
English Proficiency	.21	.14
Gaming Hours per Week	-.14	.32
Knowledge about WWII	.13	.33
Played RG1 before	.14	.29

Note: N = 56

Effects of Empathy and Identification with all Humanity on Transportability

In order to assess how personal characteristics influence how much participants feel transported into the narrative, the effects of the participants' level of empathy and their identification with all humanity on the level of transportability were tested, respectively.

The level of empathy has a significant effect on the level of transportability as a total score, $r(54) = .37, p < .05$. The participant's level of empathy also has a significant effect on the first subscale, transportation into the story, $r(54) = .42, p < .05$. However, the effect is not significant for the second subscale, transportation into the characters, $r(54) = .17, p = .20$. Therefore, the first hypothesis, *H1: Higher levels of empathy will increase the level of transportation in the participant*, is partially accepted. Scatterplots of these correlations can be found in Figure 2.



Red = Total Transportation Score (Subscale 1 + 2)

Blue = Score for Subscale 1 - Story

Green = Score for Subscale 2 - Character

Figure 2. *Correlations between Total Empathy Score and Transportation Scales, N = 56*

Whether participants identified more with their own community, their nation or with all of humanity also has an effect on their level of transportation. While the effect of their identification with their community is not significant, $r(54) = .01, p = .46$, both identification with their nation, $r(54) = .35, p < .05$ and identification with all humanity, $r(54) = .46, p < .05$ have a significant positive effect on the transportation of the participant. When taking all three subscales together (community, nation, humanity) there is also a significant positive correlation with transportability, $r(54) = .41, p < .05$. Correlations between identification with nation, humanity and the combined identification are also significantly correlated with Subscale 1 - Story and Subscale 2 - Character of the Transportability Scale, while identification with the community is not positively correlated with either of the two subscales. Scatterplots of the correlations with the total transportation score can be found in Figures 3a and 3b.

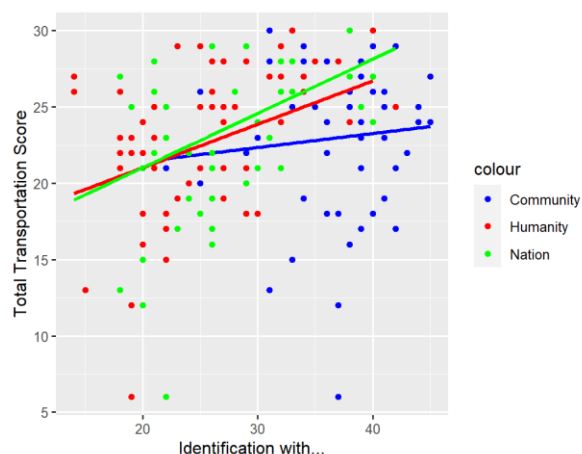


Figure 3a. *Correlations between Identification with Community/Nation/Humanity and Total Transportation Score, N = 56*

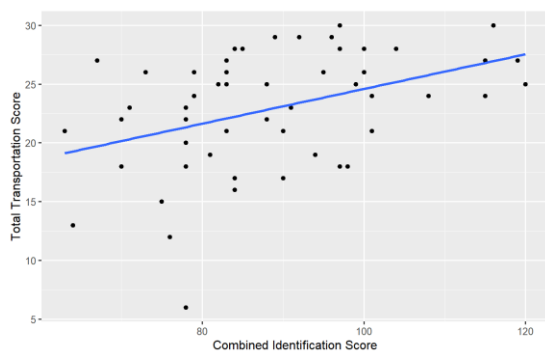


Figure 3b. *Correlation between combined identification score and total transportation score, N = 56*

Survey Letters

The mean number of words written by the participants is 74.37 (Median: 59) with the lowest number of words being 1 and the highest number being 240. According to the codebook, all single scoring categories were taken together to form overarching themes, namely Emotional Content, Soldier Details, Purpose, Sarcasm, and Richness for the sum of all categories. The distribution of the themes Emotional Content, Soldier Details and Purpose in the survey letters can be found in Figure 4a, while the theme Richness can be found in Figure 4b. The theme “Sarcasm” was only used in one letter, which said (“R.I.P.”) and is therefore not usable for statistical analysis. This is why the theme will not be used in any correlation analyses or visual representation but will be relevant again in the context of the game letters.



Figure 4a. Occurrence of themes “Emotional Content”, “Soldier Details” and “Purpose” in the survey letters.

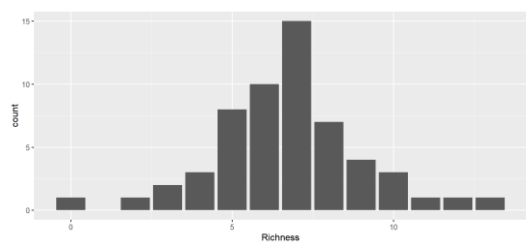


Figure 4b. Occurrence of the theme “Richness” in the survey letters

Content Analysis of the Survey Letters

Emotional Content

The theme of Emotional Content was brought up in 54 of the 56 letters. This theme entails prominently messages of condolences (“I as a result send you my dearest condolences”) that aim to show an understanding of the family’s suffering. Some participants also show a more personal depiction of sorrow and sadness about the lost life: “The history books will not forget about him and neither will we”.

Details of the Soldier

Details about the soldier were also very prominent in the letters of the survey. 54 letters mentioned at least one detail about the soldier, which in most cases was his name. However, many letters also mention positive characteristics of the soldier. Here, “brave” is an adjective that is often used to positively describe the soldier as well as talking about how the soldier has been liked by his company: “His leadership, dedication, and bravery were admired by all who served with him”. Furthermore, some letters give details about how the soldier died, often in combination with a

sacrifice: “Sgt. Wilson selflessly threw himself onto the grenade, saving the lives of his squadmates”.

Purpose

A total of 35 letters mention at least one purpose of the soldier's death, being either a sacrifice for his fellow soldiers, for the country, or for a greater good. Participants often highlight how the soldier has saved his comrades either directly or indirectly, by fulfilling some sort of mission (“Sgt. Wilson heroically fulfilled his last command and destroyed the bridge thus saving the lives of many support troops”).

Demographics and Letter Content

In order to assess if personal characteristics influence the content of the letters written, correlations between the demographic questions and the letter content were drawn. It turns out that participants who played “Radio General 1” before, write significantly longer letters than those who did not play it, $r(54) = .32, p < .05$. Furthermore, these participants also mention details about the soldier more often, $r(54) = .30, p < .05$, as well as the soldier’s purpose, $r(54) = .27, p < .05$ and the general richness of the letter is higher, $r(54) = .30, p < .05$. There is, however, no significant relationship with the emotional content, $r(54) = .01, p = .96$. In addition, the participant’s age significantly affects the general richness of the letters: the older the participant was, the lower was the richness, $r(54) = -.30, p < .05$. All other effects for age, as well as gender, knowledge about WWII, hours playing video games per week, and level of English proficiency are insignificantly correlated to the letter content.

Transportability and Letter Content

As a next step, the relationship between the participants’ score on the transportability scale and content of their letters was tested. First of all, higher levels of transportability do not significantly affect the number of words written in the letters, $r(54) = .12, p = .36$. As for the themes emerging in the letters, transportability does have a significant effect on the mentioning of emotional content, $r(54) = .30, p < .05$. The second hypothesis, *H2: Participants with a higher level of transportation will write letters with higher emotional content*, is therefore accepted.

However, transportability does not have a significant effect on the themes “Soldier Details”, $r(54) = .10, p = .47$, or “Purpose”, $r(54) = -.01, p = .97$, nor on the general richness of the letters, $r(54) = .14, p = .29$.

Qualitative Analysis of Five High – vs. Low-Transportability Letters

Lastly, the content of the letters written by the five participants with the highest transportability score were compared to the letters from the five participants with the lowest score, in order to find possible differences that could not be identified by statistical means. The letters significantly differ both in length and content. The five letters on the lower end of the scale have an average amount of 30.4 words per letter while the letters on the upper end average on 103.8 words per letter.

The content of the five top letters focuses heavily on a detailed description of the soldier's attributes, calling them "brave", "honorable", and highlighting their excellent behaviour as a soldier. An example of this is the sentence "I have had the privilege of being able to rely on him as a capable sergeant and a good and honourable man". Furthermore, the authors of the letters carefully express their condolences and put much effort and thought into how the family of the soldier must feel now, e.g., "I cannot imagine how you must feel right now, but I am deeply sorry for your loss.". Lastly, the letters stand out by mentioning unique details or sentences that are not seen in other letters. Two examples of this are "If I could exchange places with [your son], I would", and "The military will grant him a medal of honor and pay for his funeral".

The lower letters on the other hand display are much less detailed and mostly describe only basic information, such as the place of death and the fact that the soldier died, together with a short expression of condolence, "We share our deep compassion with your lost". While the soldier is still described with positive attributes, these descriptions are much more simplistic, such as "brave soldier" or "honourable man".

Game Letters & Survey Letters

In total, 3020 in-game letters taken from the game "Radio General 1" were analysed with the codebook. These 3020 letters were written by 1170 different players of the game, which means that each player wrote, on average, 2.64 letters. Of all the letters, 36.09% (N=1113) mention the name of the soldiers which is the highest number of mentions, followed by "Sorrow/Sadness" with 27.53% (N=849) of letters having that code. The name of the soldier is also the topic that has been coded the most in the survey letters (87.50%, N=49). The second highest numbers of codes are "Condolences" (71.43%, N=40) and "Positive Attributes" (69.64%, N=39) which are relatively

low in the game letters. In general, positively connotated codes are used much more often than negatively connotated codes (such as “Meme/Troll”, “Harsh/Insult”, “Sarcasm”, and “Aggressive”) in the survey letters compared to the letters written by Radio General 1 players, with frequencies of almost all codes being much higher in the survey letters. The mean number of words used for the letters is also much higher in the survey than in the game (74.37 and 16.66, respectively). An overview of the frequency of all codes can be found in Table 3.

Table 3.

Distribution of codes in game and survey letters

<i>Code</i>	<i>% of game letters</i>	<i>N of 3084</i>	<i>% of survey letters</i>	<i>N of 56</i>
Nonsense or Not*	47.99	1480	100	56
Formal Components	42.31	1305	98.21	55
Meme/Troll	17.15	529	1.79	1
Harsh/Insult	11.99	370	0	0
Sarcasm	4.64	143	0	0
Military Jargon	18.19	561	66.07	37
Sorrow/Sadness	27.53	849	62.50	35
Apology	20.88	644	55.36	31
Condolences	9.01	278	71.43	40
Aggressive	1.55	48	1.79	1
Religion	2.08	64	7.14	4

Player's Responsibility	2.14	66	14.29	8
Enemy's Responsibility	2.76	85	10.71	6
Soldier's Responsibility	1.56	48	0	0
Heroic Actions	3.47	107	14.29	8
Positive Attributes	16.83	519	69.64	39
Location	21.30	657	14.29	8
Type of Death	6.91	213	23.21	13
Name of Soldier	36.09	1113	87.50	49
Purpose/Sacrific e/Greater Good	7.10	219	23.21	13
For the country	4.96	153	50.00	28
For fellow soldiers	3.73	115	12.50	7

* "1" was coded when content was NOT nonsense

Broader Thematic Analysis

When comparing the game and survey letters qualitatively, big differences but also similarities emerge. First of all, in the game letters, memes, insults and sarcasm are much more prevalent. Players frequently use internet memes to either express their respect for someone (e.g., "F") or to make fun of the soldier and/or his family (e.g., "sussy amongus slurped your son"). However, insults do not necessarily only entail memes but can also just be sentences like "died

like a bitch”. Sarcasm, on the other hand, is not always used in insulting or degrading the soldier but can sometimes also be used to express the needless sacrifices made in war (“If it wasn’t for the press requiring us to take this town, your son might still be alive [...]”). Insults and sarcasm cannot be found in the survey letters, while the category “Meme” was only coded once as “R.I.P.” is mostly used in the context of the internet. This is a big difference between the game letters and the survey letters.

When looking at the survey letters and the game letters that were written in a serious manner, there are, however, many themes that can be found in both sets. Authors of the letters focus heavily on a description of the soldier’s positive attributes, in which bravery and honour are the most prominent adjectives. Oftentimes, it seems like the soldier who died was an extraordinarily important part of the team and was outstanding in his commitment to his fellow soldiers. Here, the writers are routinely trying to put the soldier in a very positive light so that he is remembered as such by his family.

The handling of the family is another big similarity between the two samples. Many letters convey deep condolences, showing an understanding of the family’s pain and suffering while simultaneously inviting the family to be proud of their son/husband and to not grieve too much as he died for a greater good.

Aggressive language and religion are underrepresented in both the game letters as well as the survey letters, although it is noteworthy that aggressive language in the game letters was mostly used in the context of insulting/sarcastic letters, in which the aggressive language was used against the soldier or the family instead of the enemy. Similarly, the type of death, so the mention of what actually caused the death of the soldier, is much more prominent in insulting game letters, presumably to show the soldier’s suffering or, if the soldier's death was mentioned as his own fault, to show the stupidity of the soldier.

Study Letters and Actual Condolence Letters

In order to evaluate if the content of the game and survey letters is similar to the content of condolence letters that were written in real life scenarios, they were compared to actual condolence letters written to the families of deceased soldiers. For this, one modern letter written in the context of the Iraq War in 2004 and one letter written to the family of a deceased German soldier in 1944 were compared (see Appendix G). Both letters show phrases and themes that can be found in the survey letters as well as the game letters. For example, in the WWII letter it says “The company

will always honor the memory of your son and see in him an example.”. This theme of honouring the soldier and seeing him as an example is regularly found in the letters analysed in the study as well. Furthermore, the topic of sacrifice for the (German) people and the country is also pointed out: “your son laid down his life for the greatness and future of our eternal German people”. The same is found in the Iraq War letter: “We will forever honor his memory” and “Kyle’s sacrifice [...] to make the world more peaceful and free”. These two quotes show again how similar the topics treated in the real and fictional letters are. It is therefore reasonable to say that the letters written in the survey and in the game - if they were written in a serious way - come very close to actual condolence letters written in real war scenarios.

Discussion

This study aimed to investigate the effects of empathy on transportation into a scenario and how the level of transportation influences the emotional response towards events in that scenario in the form of a written letter. Furthermore, emotional content and depth of the letters collected in a controlled environment were compared to letters gathered from “Radio General 1”, which functions as a depiction of realistic player behaviour, in order to draw conclusions about how these results differ from another.

Survey

It was found that higher levels of empathy do indeed increase the level of transportation into the scenario that the participants read. Here it is important, however, to distinguish between the two subscales of transportability. Participants with high levels of empathy felt significantly more transported into the story of the narrative itself, meaning that they wanted to know how it ended for example, than into the characters of the story. This is contradictory to Christy and Fox’s (2016) research who identified transportation to be a predictor of identification with characters which would speak for significant results in this study. In spite of this, the results of this part of the survey are in line with Meade’s (2015) research into the requirements of transportation where he identified empathy as one of the significant factors. However, Meade, other than Christy and Fox, does not make a distinction between transportation into the content of the story versus the characters, thus the reason why participants tend to feel more transported into the story rather than the characters is open for debate. Green (2021), on the other hand, reasoned that readers of a narrative tend to generalise the narrative’s content/message. The characters themselves might

therefore not be as relevant for successful transportation and transportation, in turn, happens more towards the story. Another reason may be that in the narrative the focus lies more on a description of the events in the scenario than on a detailed characterisation of the characters, thus transportation could have needed more information about the characters. Further research should test if a more detailed characterisation of the narrative's characters can elicit higher levels of transportation towards them, for example by giving them a more elaborate backstory or by showing pictures of their faces.

As for the second hypothesis, the study could prove that higher levels of transportation into the narrative increase the emotional content of the letters. This can be interpreted as having a stronger empathic response, as the category of emotional content was compiled of codes that describe empathy towards, in this case, the family of the deceased soldier. This is again in line with Meade's (2015) research which showed that transportation increases empathy. The finding that lower levels of transportation do not lead to emotional responses is supported by Bal and Veltkamp (2013) who found that emotional transportation into a story leads to higher empathy. Interesting in this context is also the difference between emotional expression in the letters written by participants with high transportability versus low transportability. While the coding of the letters with 0 and 1 only revealed if there was emotional content at all, a more detailed look at the letters showed the difference in the content. Empathic expressions of highly transported participants were much more elaborate than the lower ones and showed a lot of attention to detail. Phrases like "I cannot imagine how you must feel right now, but I am deeply sorry for your loss." show a deep emotional understanding of the family's situation while letters on the lower spectrum consist of much more repetitive, generic condolence offerings. This deep emotional content underlines the heightened empathic responses in high-transportability participants found by statistical means. Studies have shown that empathic responses elicited by transportation into a narrative can even go beyond the narrative into real life (Malecki et al., 2019; Walkington et al., 2020) and reduce, for example, prejudices (Johnson, 2013; Green, 2021). The use of narratives to elicit empathy can therefore be an important tool whenever empathic responses are needed, for example, towards minorities (Johnson, 2013), in culturally diverse settings (Moore & Hallenbeck, 2010) or in educational settings where empathy towards other pupils can lower bullying between them (Jolliffe & Farrington, 2010). Future research may further explore this direction by analysing the eliciting of empathy in educational and societal settings through the use of narrative, especially

focussing on narratives that may be even more suitable for effective transportation such as videos or VR-settings (Ma, 2020).

Although there is no significant influence of having played “Radio General 1” before on the level of transportation, there is one on the content of the letter written. Each category of letter content, expect for emotional content, is higher in those participants that played the game before than in the others. There may be several reasons for this finding. First, since they played the game before, they are familiar with the letter writing task as the survey version is very similar to the game version. Therefore, they probably have written such letters before and as a result can more easily think of content that they can put into the letter written in the survey, for example, what the soldier’s purpose was or what is attributes were. Second, these participants may be more interested in scenarios portraying WWII, as they also have played the game set in this world, and are therefore willing to dedicate more of their time and effort into writing this letter, which results in higher content of it. Indeed, studies show that interest into a topic motivates people to put more effort into it (Song et al., 2019; Milyavskaya et al., 2021). In order to further explore the effects of playing “Radio General 1” and interest into the topic, future studies could, for example, use two different samples to conduct the survey, one sample having played the game and the other not. Comparison of the letter content of these two samples would probably give more information about the mentioned effects.

Interestingly, previous knowledge about WWII did not have a significant effect on the letter content, even though one could argue that more knowledge about a topic equals more interest into it and therefore more effort put in, as Song et al. (2019) and Milyavskaya et al. (2021) have shown. It is important to note, however, that this knowledge could have also been acquired through other means than interest such as school education. Furthermore, in the survey, knowledge about WWII is self-assessed and therefore prone to over-/underestimation may have an impact on the comparability between participants. Also, there is no indication of what, for example, a 7 on the scale actually means in relation to the amount of knowledge one possesses. Future studies interested in the relationship between knowledge of a scenario and subsequent tasks in that scenario should therefore make sure that the knowledge is reliably assessed, for example, through a knowledge test rather than self-assessment.

Survey & Game Letters

Lastly, a comparison between survey and game letters was drawn. Although the survey letters generally display a much more sophisticated and elaborate content than the game letters, it is important to note that there are some similarities between the two. As all codes of the category emotional content are very high in the survey letters and the code “sorrow/sadness” is relatively high in the game letters, one could argue that the emotional aspect, so showing empathy towards the family, is an important aspect in both types of letters. Thus, this would speak for a comparability between both conditions. However, the other codes of the emotional content were quite underrepresented in the game letters, for example “Condolences”. The coding of “Condolences” required the display of understanding the family’s suffering, going a bit deeper than “Sorrow/Sadness”, and needing a more thoughtful formulation. This more thoughtful formulation is, however, not present in most game letters as they tend to be less complex compared to the survey letters. This highlights that there are in fact differences in how the participants behave in a game environment compared to a controlled study environment.

Another big difference is the trolling and nonsense-writing was practically non-existent in the survey letters while it made up a significant part in the game letters. One reason for this might be that participants tend to give socially desirable answers on surveys (Vésteinsdóttir et al., 2019), knowing that a researcher will read the answers. This leads them to be less honest and give answers that the participants think the researcher wants to hear, which is in this case, a serious (emotional) condolence letter. In the game environment, however, the player is in full anonymity, especially since no player knew that their letters will be used for research at some point, and anonymity leads to less inhibition when it comes to antisocial behaviour, e.g., trolling, insulting etc. (Wachs et al., 2019). Of course, the participants of the survey are also anonymous, but their actual feeling of anonymity may be different in a survey than in a game played in private (Whelan, 2007).

All in all, the comparison between the game and survey letters highlights an important finding: a survey being highly intrusive, cannot necessarily be compared to results found in a fully independent environment which is “Radio General 1”. Socially desirable answers and less inhibition in anonymous settings are factors that influence these results. Nevertheless, future research should keep in mind that lab experiments do not always give the same results as real-world observations.

Study Letters and Actual Condolence Letters

Comparison between the study letters and actual condolence letters shows that letters written in a fictional setting can realistically depict real-life letters. This is an important finding as it shows that fictional settings can be used to simulate real scenarios while still receiving similar results. The psychological processes involved in letter writing may be comparable across contexts if fictional letters can accurately depict the content of real condolence letters. This underlines the applicability of results drawn from fictional situations to actual circumstances, strengthening the external validity of studies carried out in controlled settings (Vissers et al., 2001). It should be kept in mind, however, that there were significant differences in the survey and game letters which do not speak for a generalizability between controlled and uncontrolled circumstances. It seems therefore that generalizability in this context is a matter of scope between detailed depth of the survey compared to game letters, versus a broader content analysis of both sets of letters compared to real-life letters.

Limitations

There are a few limitations to this study. First of all, as stated before, the players of “Radio General 1” are completely anonymous. Therefore, there is no existing demographic data about them which can be compared to the participants of the survey study. Because of this, results of this section should be interpreted carefully.

Another limitation is the sample of the survey study. On the one hand, the sample is relatively small, especially when compared to the game letters, which might not depict a realistic picture of content that a bigger sample would have written. On the other hand, the sample is not very diverse. The sample is young, mostly consisting of students and almost half of it is German which is obviously not a realistic representation of the general public. Results of the study might therefore only be partially applicable to the rest of the population. Future studies should try to get a bigger and more diverse sample by distributing the study in multiple countries and not just in the university context. This could be achieved by posting the study on internet forums, advertising campaigns on social media and having more attractive incentives for taking part, such as money.

As the survey relies on self-reported measures for all scales, these results should also be interpreted carefully. Self-reported measures are prone to socially desirable answers, thus participants do not answer completely truthfully but give answer that make them look better, which

in turn endangers the validity of the scales (Brutus et al., 2013). In this case, participants might give themselves higher scores on empathy as this is seen as a positive character trait. Future studies could reduce this effect by using measures that are not self-reported such as implicit affective tests of personality traits (Quirin & Bode, 2014).

Lastly, as the survey did not take place under controlled circumstances and could be filled out at any time, it was not possible to check if the participants really closed their eyes after reading the narrative. As Kors et al. (2016) have shown, a short period of reflection can increase the amount of transportation that the participant feels towards the narrative. Not closing one's eyes could have therefore limited the level of transportation in some participants in this survey. A recommendation for future studies is to make sure that participants use this short moment of closing their eyes for reflection by conducting the survey in a more controlled environment, for example.

Conclusion

In conclusion, this study has shown that higher levels of empathy positively influence how much participants feel transported into a narrative. When transportation levels are high, participants, in turn, write letters that have a higher amount of emotional content, speaking for a bigger empathic response. Comparison of letters gathered in laboratory settings and letters gathered in unobserved settings show some comparability in emerging themes, especially in simpler, emotional response. However, significant differences emerge in the negatively connotated topics such as trolling, which makes up a big part of the game letters, showing that laboratory results do not have to be comparable to real-world behaviour. This study shows important implications for the use of narrative in eliciting empathic responses, which works according to recent research, beyond the scope of fictional settings and can be used to strengthen empathic responses towards other individuals in real-life.

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Appendix

Appendix A - The Codebook

English or not – Exclusion of letters that are empty, unintelligible, or written in a language other than English.

Nonsense - Letters consisting of unclear words or sentences are excluded.

Formal components - Formal speech or sign offs. Example “The Canadian Army”

Meme/Troll (F) - Letters that included known internet humour, such as “F”, “RIP”, “he ded”. Or letters that showed signs of being written with provocative intent, such as “Attn Mrs. Leblanc. hes dead jk. double jk, he is actually dead lmfao ”

Harsh/Insults - Letters that had insults such as in this example or that were particularly unemphatic, for instance “Attn Mrs. Lee. We regret to inform you about the death of Earl Lee. He was kind of an asshole but a good one. Mostly because we used him as cover. Fuck you.”

Sarcastic - Informal way of saying sorry, trolling and being very sorry at the same time. For example: I am so very sorry your son is dead, he was such a great soldier but he is dead.

Wordcount – The wordcount of the letter.

Military Jargon – If the writer used military terms, such as Missing in Action (MIA) or Private (Pte), this code was used. An example is “We regret to inform you of the death of Pte Herbert Allen”

Sorrow/Sadness - Letters that express sorrow or sadness of the person writing them, mostly in the context of “I regret to inform you [...]”.

Apology - Explicitly stating or indicating that the player is at fault or partly at fault for the death of the soldier and apologizing for it. An example is “Attn Mrs. Poirier. We regret to inform you that my bull headed stubbornness to hold a key position resulted in the death of Pte Francis Poirier. Sorry.”.

Condolences – Explicit statements of condolences and implicit signs of understanding that the addressee might feel sorrow receiving the message. For instance, “Attn Mrs. Lewis. Dear Mrs. Lewis, We regret to inform you that your son, Leonard Lewis, was killed in the Dieppe Raid. We are sorrowful for your loss. Your son was a brave man.”.

Aggressive – Aggressive letters are characterized by aggressive speech against the enemy, for example the announcement of harsh retaliation or insulting of the enemy. Also included are letters that use aggressive speech against the soldier, the soldier’s family or the game. An example is “Attn Mrs. Taylor. Your son got nae naed and 360 noscoped from across the map lmao and he lost the gulag too what a fucking autistic”

Religion – Mentions of religious aspects or spiritual notions for example “[...] may god rest his soul.”

Responsibility Player – The player/author gives the responsibility of the soldier’s death (partly) to himself, either because he/she was for example new in the game, or because he/she commanded the troop, such as “Attn Mrs. Poirier. We regret to inform you that my bull headed stubbornness to hold a key position resulted in the death of Pte Francis Poirier. Sorry.”

Responsibility Enemy/Germans - The player/author gives the responsibility of the soldier’s death to the enemy because they, for example, set up an ambush. For this to be coded, the author has to specifically mention the enemy as the reason for the soldier’s death because a soldier being killed by the enemy is a usual occurrence in war. Example: “He died how he lived killing germans [...]”

Responsibility Soldier – Includes the notion that the soldier himself is at fault for his death. This code is often used in combination with codes of meme/insult/sarcasm as authors, for example, write that the soldier died because of his own stupidity or because he did not listen to the orders. “Your son died... skill issue”

Soldier Details (Heroic Actions) - Letters containing information about a heroic action the soldier committed before his death, for example, saving fellow soldiers. “His bravery saved the lives of his comrades,”

Positive Attributes – Letters containing positive attributes about the soldier, such as bravery, honour, greatness and likeability. “[...] he was the bravest soldier in the army.”

Location of Death/Battle - If the writer mentioned where the Soldier died or where they are currently stationed, for instance “[...] killed in action at valguarnera”

Type of Death - If the letter describes the circumstances of the death, either by mentioning the soldier was killed in action or more specifically, such as described in this letter “Attn Mrs. Gauthier. It is with my deepest regret to inform you that your son was lost in battle today. He gave his life defending against odds that were known to be too great, his knowing sacrifice ensured many others could live and for that we honour him.”

Soldier Name – Used when the name of the Soldier was stated. For example, “robert nadueau was a man that [...]”

Purpose/Sacrifice/Greater Good – Mentions of sacrifice that were not disclosed further or sacrifices for a bigger concept such as humanity or democracy (if not specifically stated that it is the own country’s democracy). For instance: “His sacrifice shall not be in vain.”

For the country – Includes mentions such as “For the King” or “For the country”

For the fellow Soldiers – Mention of a sacrifice that allowed fellow soldiers to live or that will allow fellow soldiers to keep fighting. “[...] his knowing sacrifice ensured many others could live and for that we honour him.”

General comment – If one of the coders wanted to specifically point something out, they were able to leave a comment.

Overarching Categories

Some of the codes were considered to have associated topics, and thus were grouped together.

Emotional Content – Consists of the codes “Sorrow/Sadness”, “Apology”, “Condolences”, “Aggressive”, “Religion”

Soldier Details – Groups together all codes that offer details about the soldier; Location of Death/Battle, Soldier Details

Purpose – All codes related to the theme of ‘what the soldier died for’, either for the greater good, his country, or for his fellow soldiers

Meme/Insult/Sarcasm - Made up of the codes “Meme/Troll”, “Harsh/Insult” and “Sarcasm”

Appendix B - Full Form of Consent

Dear participant, thank you for your interest in this study!

Goal of the study

The aim of this research is to investigate the personal connections formed in video games and how people relate to virtual characters in a game environment. For this, we ask you to answer some questions about yourself, fill out a few short questionnaires and write a short text in relation to a given scenario. This research will help us understand how people interact with games and as a result potentially design better games.

How long will it take?

The whole survey should not take longer than 10-15 minutes.

What can I get out of it?

You may enter your email address to participate in a lottery and gain an access code to a game on the platform Steam. Your email will not be linked to the questionnaire scores.

Was this study approved by an ethics committee?

The BMS Ethics Committee at the University of Twente (Netherlands) has reviewed and approved this study. Consenting to this study means that we can use your responses for the purposes of this research. Further, you can withdraw at any time. Confidentiality will be maintained throughout the study. The entire process and data will be anonymized. Data will only be presented in the aggregate and any individual user comments will be anonymized prior to presentation in academic venues.

On the next page you'll be provided with a detailed consent form.

Does this study involve any risks for me?

Some parts of this survey include sensitive topics. Specifically topics such as death, grief and World War 2 will be addressed. If you feel distressed or you feel like thinking about these topics may cause discomfort, feel free to not participate in this study.

Who are we?

We are three students from the University of Twente writing our bachelor thesis in Psychology in the Department of Psychology of Conflict, Risk and Safety in collaboration with Foolish Mortals Inc.. This project is supervised by assistant Professor Dr. Maxmilian A. Friehs.

If you have any further questions, feel free to contact one of the researchers:

m.a.friehs@utwente.nl, n.busche@student.utwente.nl, y.w.j.vanpraet@student.utwente.nl,
m.renzberg@student.utwente.nl

1. I have read and understood the study information.

2. I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason.
3. I understand that taking part in the study involves the risk of mental discomfort due to difficult subject matter, Specifically topics such as death, grief and World War 2 will be addressed.
4. I understand that information I provide will be used for research purposes. This entails the publication of a research article based on the data as well as the publication of the anonymized data online in a database.
5. I understand that personal information collected about me that can identify me, will not be shared beyond the study team.
6. I agree that my replies to survey questions can be quoted in research outputs. The quotes will not have any names attached to them.

Appendix C - The Narrative

Please take your time to read the following narrative carefully and try to imagine yourself in that situation.

It is the beginning of August 1944. Some weeks after the invasion of the Normandie. You are a Commander responsible for a large number of soldiers. Your commando tent is set up somewhere in France. You are only a couple of kilometres behind the front line, and consequently you can hear the shooting and explosions that come from where your unit and other allied forces are fighting the Germans.

Still, you are too far away to give direct orders. The only way to contact your troops is via radio signals but that does not always work. You give them orders – attack the enemy, push back, hold the position – but what exactly is happening in every moment is impossible to know. Sometimes, you don't hear anything from your troops for hours. Have they just lost signal or did their radio break? Are they preoccupied fighting the Nazis? Did they get captured or even killed?

The consequences of your commands have wide-reaching implications. Every day, a soldier brings a list of casualties to your tent. Most soldiers that were wounded or died under your command were only in their early 20s or just over 30, some even younger. Most had families at home, desperately waiting for their return. It is now your job to write letters to the families of the deceased.

Appendix D - Toronto Empathy Questionnaire

1. When someone else is feeling excited, I tend to get excited too

0 = Never

1 = Rarely

2 = Sometimes

3 = Often

4 = Always

2. (R) Other people's misfortunes do not disturb me a great deal

0 = Never

1 = Rarely

2 = Sometimes

3 = Often

4 = Always

3. It upsets me to see someone being treated disrespectfully

0 = Never

1 = Rarely

2 = Sometimes

3 = Often

4 = Always

4. (R) I remain unaffected when someone close to me is happy

0 = Never

1 = Rarely

2 = Sometimes

3 = Often

4 = Always

5. I enjoy making other people feel better
- 0 = Never
 - 1 = Rarely
 - 2 = Sometimes
 - 3 = Often
 - 4 = Always
6. I have tender, concerned feelings for people less fortunate than me
- 0 = Never
 - 1 = Rarely
 - 2 = Sometimes
 - 3 = Often
 - 4 = Always
7. (R) When a friend starts to talk about his/her problems, I try to steer the conversation towards something else
- 0 = Never
 - 1 = Rarely
 - 2 = Sometimes
 - 3 = Often
 - 4 = Always
8. I can tell when others are sad even when they do not say anything
- 0 = Never
 - 1 = Rarely
 - 2 = Sometimes
 - 3 = Often
 - 4 = Always
9. I find that I am “in tune” with other people’s moods
- 0 = Never
 - 1 = Rarely
 - 2 = Sometimes
 - 3 = Often
 - 4 = Always

10. (R) I do not feel sympathy for people who cause their own serious illnesses
- 0 = Never
 - 1 = Rarely
 - 2 = Sometimes
 - 3 = Often
 - 4 = Always
11. (R) I become irritated when someone cries
- 0 = Never
 - 1 = Rarely
 - 2 = Sometimes
 - 3 = Often
 - 4 = Always
12. (R) I am not really interested in how other people feel
- 0 = Never
 - 1 = Rarely
 - 2 = Sometimes
 - 3 = Often
 - 4 = Always
13. I get a strong urge to help when I see someone who is upset
- 0 = Never
 - 1 = Rarely
 - 2 = Sometimes
 - 3 = Often
 - 4 = Always
14. (R) When I see someone being treated unfairly, I do not feel very much pity for them
- 0 = Never
 - 1 = Rarely
 - 2 = Sometimes
 - 3 = Often
 - 4 = Always
15. (R) I find it silly for people to cry out of happiness

- 0 = Never
- 1 = Rarely
- 2 = Sometimes
- 3 = Often
- 4 = Always

16. When I see someone being taken advantage of, I feel kind of protective towards him/her

- 0 = Never
- 1 = Rarely
- 2 = Sometimes
- 3 = Often
- 4 = Always

Attention Question:

17. If you still pay attention, select the answer “always”

- 0 = Never
- 1 = Rarely
- 2 = Sometimes
- 3 = Often
- 4 = Always

Appendix E - Identification with all Humanity Scale

Refer to the Nationality you identify with most.

Community is defined as a group you feel close to, for example: friends, sports club, neighbors, church group, etc.

1. How close do you feel to each of the following groups?
 - a. *People in my community*
 - b. *People with the same nationality*
 - c. *People all over the world*

1 = Not at all

2 = Not very close

3 = Just a little or somewhat close

4 = Pretty close

5 = Very close

2. I often use the word “we” to refer to the following groups of people?

a. *People in my community*

b. *People with the same nationality*

c. *People all over the world*

1 = Almost never

2 = Rarely

3 = Occasionally

4 = Often

5 = Very often

3. How much would you say you have in common with the following groups?

a. *People in my community*

b. *People with the same nationality*

c. *People all over the world*

1 = Almost nothing in common

2 = Little in common

3 = Some in common

4 = Quite a bit in common

5 = Very much in common

4. Sometimes people think of those who are not a part of their immediate family as “family.” To what degree do you think of the following groups of people as “family?”

a. *People in my community*

b. *People with the same nationality*

c. *People all over the world*

1 = Not at all

2 = Just a little

3 = Somewhat

4 = Quite a bit

5 = Very much

5. How much do you identify with (that is, feel a part of, feel love toward, have concern for) each of the following?

- a. *People in my community*
- b. *People with the same nationality*
- c. *People all over the world*

1 = Not at all

2 = Just a little

3 = Somewhat

4 = Quite a bit

5 = Very much

6. How much would you say you care (feel upset, want to help) when bad things happen to:

- a. *People in my community*
- b. *People with the same nationality*
- c. *People all over the world*

1 = Not at all

2 = Just a little

3 = Somewhat

4 = Quite a bit

5 = Very much

7. How much do you want to be:

- a. *A responsible citizen of your community*
- b. *A responsible citizen of your nation*
- c. *A responsible citizen of the world*

1 = Not at all

2 = Just a little

3 = Somewhat

4 = Quite a bit

5 = Very much

8. How much do you believe in:

- a. *Being loyal to my community*
- b. *Being loyal to your nation*
- c. *Being loyal to all mankind*

1 = Not at all

2 = Just a little

3 = Somewhat

4 = Quite a bit

5 = Very much

9. When they are in need, how much do you want to help:

- a. *People in my community*
- b. *People with the same nationality*
- c. *People all over the world*

1 = Not at all

2 = Just a little

3 = Somewhat

4 = Quite a bit

5 = Very much

Appendix F - Transportation Scale - Short Form

1. I could picture myself in the scene of the events described in the narrative.

1 = Not at all

2 = Somewhat disagree

3 = Neither agree or disagree

4 = Somewhat agree

5 = Very much

2. I was mentally involved in the narrative while reading it.

1 = Not at all

2 = Somewhat disagree

3 = Neither agree or disagree

4 = Somewhat agree

5 = Very much

3. I wanted to learn how the narrative ended.

1 = Not at all

2 = Somewhat disagree

3 = Neither agree or disagree

4 = Somewhat agree

5 = Very much

4. The narrative affected me emotionally.

1 = Not at all

2 = Somewhat disagree

3 = Neither agree or disagree

4 = Somewhat agree

5 = Very much

5. While reading the narrative I had a vivid image of the Commander I portrayed.

1 = Not at all

2 = Somewhat disagree

3 = Neither agree or disagree

4 = Somewhat agree

5 = Very much

6. While reading the narrative I had a vivid image of the soldiers I commanded.

1 = Not at all

2 = Somewhat disagree

3 = Neither agree or disagree

4 = Somewhat agree

5 = Very much

Appendix G - Real Life Condolence Letters

1. Condolence Letter written to the father of US-soldier Kyle D. Crowley in 2004, taken from www.alamy.com (Image ID: 2DDB934):

“Dear Mark,

I am deeply saddened by the loss of your son, Lance Corporal Kyle D. Crowley, USMC.

Kyle's noble service in Operation Iraqi Freedom has helped to preserve the security of our homeland and the freedoms America holds dear. Our Nation will not forget Kyle's sacrifice and unselfish dedication in our efforts to make the world more peaceful and more free. We will forever honor his memory.

Laura and I send our heartfelt sympathy. We hope you will be comforted by your faith and the love and support of your family and friends. May God bless you.

Sincerely,

George W. Bush"

2. Condolence Letter written to the father of German soldier Herbert Bendzus in 1944, taken from Deutsches Historisches Museum

(https://www.dhm.de/archiv/ausstellungen/lebensstationen/2_163.htm):

(English translation below)

“Im Felde, den 18.2.1944 Sehr geehrter Herr Bendzus! In dem Gefecht in Dubno (Ukr) am 12.2.44 fiel Ihr Sohn der Soldat Herbert Bendzus im Kampf um die Freiheit Großdeutschlands in soldatischer Pflichterfüllung, getreu seinem Fahneneid für Führer, Volk und Vaterland.

Zugleich im Namen seiner Kameraden spreche ich Ihnen meine wärmste Anteilnahme aus. Die Kompanie wird Ihrem Sohn stets ein ehrendes Andenken bewahren und in ihm ein Vorbild sehen.

Die Gewißheit, daß Ihr Sohn für die Größe und Zukunft unseres ewigen Deutschen Volkes sein Leben hingab, möge Ihnen in dem schweren Leid, das Sie betroffen hat, Kraft geben und Ihnen ein Trost sein. [...]¹

¹ Typical form of greeting was omitted

“In the field, 18.2.1944 Dear Mr. Bendzus! In the battle in Dubno (Ukr) on 12.2.44 your son, the soldier Herbert Bendzus, fell in the fight for the freedom of Greater Germany in the fulfillment of his soldierly duty, true to his oath of allegiance to the Führer, the people and the fatherland. At the same time, on behalf of his comrades, I express my warmest sympathy. The company will always honor your son's memory and see in him a role model. May the certainty that your son laid down his life for the greatness and future of our eternal German people give you strength and comfort in the heavy sorrow that has affected you. [...]”¹