The role of identification during a war scenario

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Abstract

World war 2 videos games, there exist many of them, with large fanbases, games as for example Call of Duty 1, Battlefield 1 and Medal of Honor. But what do people feel when being in such a scenario? What if you are the person accountable for the death of your troops, how do you act? In this thesis we looked at how people write a letter to the family of a deceased soldier, where you as commander are accountable for. The identification with all humanity scale is used to see if there is a difference in how empathic people write a letter to the family of the deceased. This is done by the hand of three hypotheses. The first hypothesis is: Do people that identify more with their community write a more empathic letter. The second hypothesis is: Do people that identify more with their nation write a more empathic letter. The third hypothesis is: Do people that identify more with humanity write a more empathic letter. The hypotheses are answered through analysing the survey and data from the game Radio general. This thesis consists out of two parts. The written letters from radio general and the survey. In total(n=56) participants wrote a letter in the survey which is analysed in combination with the identification with all humanity scale questionnaire. In total (n =3020) letters were written by players in the game radio general and percentual compared to the survey letters. A Pearson correlation and multiple regression were used to analyse the effect between the two. The results showed that there was no significant effect between identifying with the community, nation and all humankind and the empathy level of the written letters. There was a significant difference between the letters from the survey and the letters from the game. The letters from the survey and the game were compared to real-life letters to families of deceased troops, which showed a big similarity between the letters.

The role of identification during a war scenario

Video games are becoming an increasingly central part of our cultural lives. Video games even have developed itself to become one of the main sources of media in most parts of the world and for some are basically part of the everyday life (Greitemeyer et al., 2010).
It has become an interesting medium to use for all kinds of aspects. For example, impacting on various aspects of everyday life such as our consumption, communities, and identity formation (Daniel & Garry, 2018). Video games have emerged as a new and exciting avenue for exploring empathy and its potential applications (Schrier & Gibson, 2010). Video games are interactive digital environments that allow players to engage in a wide range of activities and experiences, from puzzle-solving and combat to adventure and exploration. These virtual gaming worlds offer a lot of opportunity to investigate the ways in which empathic behaviour can be enhanced and developed through video games.

Empathy and video games

Within these videogames empathy is used to increase the immersion a player has to the game (Klimmt et al., 2010). But what is empathy and why does it help with this immersion? Empathy is seen as a complex and multifaceted psychological construct that has been studied and research by scholar across a variety of fields (Elliott et al., 2011). It refers to the ability to observe, understand, feel and share the feelings and experiences of others, it is a crucial aspect when looked at interpersonal relationships and social interactions. The development of empathy is critical for human beings and has been linked to various positive outcomes, such as, emotional intelligence, the formation of social bonds and pro-social behaviour (Maibom, 2014).

Empathy plays a crucial role in building and maintaining healthy relationships. It functions as a bridge to connect with people on an emotional level. Empathy is a fundamental part of the human nature that allows individuals to understand and react to the feelings of others individuals (Lawrence et al., 2004). When we as humans empathize with someone, we can see the world from the perspective of the other, understand their feeling and emotions, and respond appropriate way. This ability is crucial in building strong, supportive relationships with friends, family, and colleagues (Maibom, 2014).

Furthermore, empathy has benefits to the individual well-being. When people feel understood and supported, it helps them to manage stress and deal with anxiety and depression. Individuals that have higher levels of empathy, show lower levels of anxiety, stress, depression and have overall a better mental wellbeing (Elliott et al., 2011). So overall this shows that empathy is a good behaviour component and we should ensure that video games elicit that.

The concept of empathy in video games has become increasingly popular among researchers and game developers alike (Egenfeldt-Nielsen, 2006; Greitemeyer et al., 2010). These games are immersive games that pull you into their worlds (De Grove et al., 2015). Also, many video games have been designed to encourage players to empathize with the characters and the large world the character lives in. Evidence suggest that playing these games can increase players' levels of empathy and pro-social behaviour (Greitemeyer et al., 2010). According to a study from Greitemeyer et al. (2010), playing prosocial video games increases prosocial affect and decreases antisocial affect. It suggests that the exposure to prosocial videogames, in comparison to neutral and antisocial videogames, enhanced interpersonal empathy and diminished reported schadenfreude toward a target befalling a misfortune. Schadenfreude being the pleasure felt when another's experience misfortune. Similarly, research of Markey & Markey (2010) suggests that empathic behaviour in video games can be developed and improved through gameplay. Video games in where you as a player are to take the perspective of another character, be the character, solve the problems and make moral decisions, which enhances the ability you as a player have to empathize with other people in society. Therefore, you can argue that video games have a positive effect on social behaviour.

On the other hand, video games can also have negative effects on empathic behaviour. Some video games are designed to be violent and aggressive, which can cause players to desensitize actual real-world violence and reduce their ability and capacity to have empathy (Anderson et al., 2010; Gentile et al., 2009). Next to that, evidence from a study (Anderson et al., 2010) argues that the exposure to violent and aggressive video games is a causal risk factor for increased, aggressive cognition, aggressive behaviour and for decreased empathy and prosocial behaviour. Furthermore, because there exists anonymity on the internet, also with online gaming, it can lead to toxic and rude behaviour that can cause damage the gamers empathic abilities (Sublette & Mullan, 2010). Despite of these negative remarks about violence in video games it does not say that players do not feel empathic.

Identification and gaming

Identification is an important part of empathy, it is seen as psychological phenomenon that involves individuals aligning, adapting and adopting themselves to the perspective of another communities, groups or people. The social identity theory (Tajfel, 1978; Tajfel & Turner, 1979), explains how identification can play a crucial role in developing and forming social relationships and the individuals' self-concept. It put the emphasis on those individuals which will feel similarities between themselves and a person, group or large community, leading to a sense of belonging and a shared identity. Identification can occur in various contexts, such as within social groups, organizations, or virtual communities. The process of identifying with these examples gives room for, and facilitates the development of, empathy, as the individual can relate more and understand better the experiences, emotions, and perspectives of the other individuals, groups and communities. Next to that, identification contributes to the formation of collective identities and facilitates all kind of cooperation within the group and allows for social cohesion among group members (Hogg, 2006). Understanding the mechanisms and outcomes of identification is important, as it sheds light on the processes that shape human behaviour, group dynamics and the attitudes of humans.

Like empathy, identification is also an important aspect in gaming (Klimmt et al., 2010). When you think of identification in gaming, you mostly think of how people identify with the character that they are playing. But it is more than that. Games have communities and groups that are very fondly of playing the game and share and discuss all kind of new experiences they have in the game (Van Looy et al., 2010). But mostly It starts with identifying with the character or roles of the specific game.

Identifying with a game character as a player means to perceive oneself in a different way from a real-life or non-gaming setting, with the players perceived attributes being more like the game character with who the player identifies. The players are likely to perceive video game characters as social beings and treat them in moral ways (Farrar et al., 2013). A player who identified with a war hero when playing a first-person shooter or action game, would describe himself more courageous, brave, and valuable after playing the game, where he saves the innocent, while a player who identifies with a thief in a stealth game would not feel this brave and courageous (Klimmt et al., 2010).

Besides identifying with a character, you as a person more to say also created gamer identity, which is created based on how you as a player communicate, perform and the individual's self-perception of you as a player (De Grove et al., 2015). Therefore, the gamer identity is seen as a subject to social and cultural indicators. For example, the individual's embedding in friendship networks, social groups, and overall social environment as well as the players position towards societal perceptions of gaming (De Grove et al., 2015). While people identify more with game characters, also identification with gamer groups and communities happens. Identification with groups has extended into the realm of video games, where individuals can immerse themselves in virtual worlds and become part gaming groups or communities. According to Grooten & Kowert (2015) Video games give many opportunities to the players, they can join clans, guilds, factions, or teams, which can accommodate a certain sense of belonging and shared identity within these communities.

While being in these communities the gamers can develop a strong identification with their in-game communities, have similar goals, values, and social dynamics. Besides this, the identification with these communities can improve multiple things while playing the game, for example, intensified sense of immersion, increased enjoyment and overall improvement of the gaming experience (Grooten & Kowert, 2015). Next to that, identification with these game communities can lead to teamwork and new friendships with fellow players, in the game and beyond it (Cole & Griffiths, 2007).

Current research

In this research data will be gathered from a survey surrounding behavioural and empathic topics in combination with written letters. Besides that, in collaboration with a Canadian game development studio (foolish Mortals Inc) written letters are obtained form the game 'Radio General'. Both written letters are based on a scenario that you have to write a letter to the family of a deceased soldier.

For this research it is interesting to compare the content of the written letters of the survey to the scores on identification. To what extend do people identify with their community, nation and humanity, and does that impact how they perform the written letter task. In the task participants are given a scenario of a deceased soldier were you as the end responsible have to write a letter to the family at home. Coding schemes will be created to find certain patterns in the letters.

while we now understand that empathy and identification are intertwined and play a role in game scenarios, the focus of the thesis is put on identification and empathy. The goal of the study is to find out if the identification/empathy people feel and have towards certain groups influences the way people write letters.

Therefore 3 hypotheses are created.

H1.1: People that identify strongly with their community will write a more empathic letter.

H1.2: People that identify strongly with their nationality will write a more empathic letter.

H1.3: People that identify strongly with all humanity will write a more empathic letter.

Methods

Design & Procedure

In order to investigate empathy in games, a combination of naturalistic and survey data was used, and thus this study consists of two different parts. The first part is an analysis of letters written by players of the video game "Radio General 1", developed by "Foolish Mortals Games". Radio General 1 is a real-time strategy game 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 second part of the study consists of a survey. 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. In the survey participants were asked to give their consent (see Appendix B for the full form) and fill out their demographic data, namely their age, gender and nationality. Furthermore, the participants were asked about their level of English proficiency on a scale from A1 to native speaker, the amount 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. 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 focused 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 were free to choose the length and content of the letter they wrote.

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 free games were provided by the developer studio.

Participants of the survey

The participants of the survey 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. The demographics consisted out of (M= 32, F= 24), with an average age of 23.57. Total of 56 participants, with most of the participant originating from Germany (24), followed by The

Netherlands (14). The rest of the participants have the following nationalities: Canadian (4), French (1), Greek (1), Italian (2), Polish (1), Portuguese (1), Russian (1), Singaporean (1), Spanish (4), Tunisian (1), and US-American (1).

Survey Material

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, Webb & Brown(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. It has 16 items, such as "When someone else is feeling excited, I tend to get excited too", of which eight were reverse coded, for instance "Other people's misfortunes do not disturb me a great deal". Participants were asked to indicate how much they agreed with those items by choosing a score on a 0-4-point Likert scale, ranging from Never (0) to Always (4). 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 was used. The scale by McFarland, Webb & Brown(2012) was chosen. For this research the subscales bond, concern and pure are left out while the overall identification is measured instead of types of identification. The Identification with All Humanity (IWAHS) scale consist of nine items, each include three answers per item, in which participants were asked to reflect on the extent to which the item applies to people in their community, people of the same

nationality and for all humanity. 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. It consists of six items, for example "I could picture myself in the scene of the events described in the narrative.", which were answered on a 5-point-Likert scale. 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 for the last two items another subscale was used 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

No demographics were available of the written letters of the game radio general. The only data that was acquired is the written letters. 3020 written letters were acquired. All these letters were written by players of radio general 1.

The developers of the game provided the research team with a total of 3020 of those letters written by players. Further no demographics were available of the written. The only data that was provided is the written letters. In order to find themes and topics the players write about and to establish a codebook for efficient analysis of the letters, the following strategy was applied: First, each of the three researchers read 100 letters and wrote down themes that were mentioned often in the letters. Then, the researchers discussed these themes and came up with a first draft of the codebook consisting of themes such as "Sorrow/Sadness", "Condolences" or "Type of death". This first draft was then applied to 250

other letters, coding "1" if the specific theme emerged and "0" if it did not. After finishing this procedure, the researchers discussed the results and dropped some redundant codes and added missing codes. 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. Single codes that were similar in their theme were put together in overarching themes which can also be found in the codebook. Distributions and total scores of the single codes and overarching themes were then computed.

Data Analysis

After data collection the data was cleaned. Specifically, participants that did not consent to the participation or did not consent to more than two of the specific consent questions, as well as those that did not fill out all three questionnaires included in this study were excluded. Further excluded were those that did not pass the attention question, those below the age of 18, and those who had an English Level of A. Further, participants that did not write a letter, or that did not write in English, were sorted out leaving a data frame of 56.

After cleaning the data, all remaining letters written by the survey participants were coded according to the codebook. 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 thematize other aspects than the players of Radio General 1.

Further, Pearson correlations and multiple regressions are performed to see if there is any effect between Identification with community (IWC), Identification with Nation (IWA) Identification with all humanity (IWA) and the sub-scores of the letters, which are Emotion score (EM), Soldier details (SD), and Purpose (PP). Scatterplots are created to look at any patterns in the results of the letter scores and survey scores. Furthermore, the prevalence of the overarching themes described in the codebook in both sets of letters was compared by

computing their respective percentages. Furthermore, gender and nation of the participant are analysed in combination with the scores of the identification with all humanity scale and the letter scores. Finally, a qualitative analysis is performed of existing letters from the second World War compared to the letters of the survey and game.

Results

To answer the all hypotheses, Pearson correlations and multiple regressions are performed to see if there is a correlation between the identification with all humanity scale(IWAHS) and the written letters from the survey. The IWAHS consists of 9 items which each include 3 answers per item, for identification with their community (IWC), identification with their nation(IWN), and identification with all humanity(IWA).

Scores of the IWC, IWN and IWA

While testing the IWC, the Cronbach's alpha showed a reliability of 0.87 which probably can't be increased if items are deleted (M = 4.08, SD = 0.60) (M =(Male 4.09, Female 4.06)) While testing the IWN a The Cronbach's alpha showed a reliability of 0.87 which probably can't be increased if items are deleted (M = 2.99, SD = 0.70). (M = (Male 2.83, Female 3.14)) While testing the IWA, The Cronbach's alpha showed a reliability of 0.89 which probably can't be increased if items are deleted (M = 2.83, SD = 0.73). (M = (Male 2.65, Female 3.06))

Pearson correlations

Three Pearson correlations are performed to see if there is any effect between IWC/IWN/IWA and the sub-scores of the letters, which are Emotion score(ES), Soldier details(SD), and Purpose(PP).

Identification with community

IWC correlation with Emotion score (ES) showed, r (54) =.20, p =.139, 95% CI [-.07, .44], which indicates that there is no significant effect between the two variables.

The IWC correlation with Soldier details (SD) showed, r (54) = -.05, p = .728, 95% CI [-.30, .22], which indicates that there is no significant effect between the two variables.

The IWC Correlation with Purpose showed, r (54) = -.07, p = .490, 95% CI [-.32, .20], which indicates that there is no significant effect between the two variables.

We can say that when a Pearson r correlation is performed, there is overall no significant effect between the IWC and the sub-scores of the letter

Identification with Nation

IWN correlation with Emotion score (ES) showed, r (54) = .16, p = .254, 95% CI [-.11, .40], which indicates that there is no significant effect between the two variables.

The IWN correlation with Soldier details (SD) showed, r (54) = .04, p = .791 95% CI [-.23, .30], which indicates that there is no significant effect between the two variables.

The IWN Correlation with Purpose (PP) showed, r (54) = .11, p = .403, 95 % CI [-.15, .37], which indicates that there is no significant effect between the two variables.

We can say that when a Pearson r correlation is performed, there is overall no significant effect between the IWN and the sub-scores of the letter

Identification with all humanity

IWA correlation with Emotion score (ES) showed, r (54) = .13, p =.354, 95 % CI [-.14, .38], which indicates that there is no significant effect between the two variables.

The IWA correlation with Soldier details (SD) showed, r (54) = 0.17, p =.210, 95 % CI [-.10, .41], which indicates that there is no significant effect between the two variables.

The IWA Correlation with Purpose (PP) showed, r (54) = .12 p =.396, 95% CI [-.15, .37],which indicates that there is no significant effect between the two variables.

We can say that when a Pearson r correlation is performed, there is overall no significant effect between the IWA and the sub-scores of the letter

Multiple regressions

Three multiple regressions are performed where the Emotion score(ES), Soldier details(SD) and the purpose(PP) were used as the criterion and each of the subscales(IWC,IWN,IWA) were used as the predictors in one model.

The multiple regression where the Emotion score (ES) functions as the criterion showed, F(3, 52) = 0.9745, p =. 412, R² =. 05. IWC was the strongest predictor (β =. 28, SE = .22, 95% CI [-0.17, 0.73], p =. 0. 214), followed by IWN (β = .12, SE = .28, 95% CI [-.45, .68], p =.684) and IWA (β = .06, SE = .26, 95% CI[-.47, .58], p = . 825). Nonetheless, due to the high p-values, there is no significant effect between the criterion and the predictors.

The multiple regression where the Soldier details (SD) functions as the criterion showed, F (3, 52) =. 85, p =.471, R² =. 047, IWA was the strongest predictor (β = .43, SE =

.29, 95% CI [-.14, 1.01], p =. 135), followed by IWN (β = -.26, SE = .31, 95%CI [-.88, .36], p =. 403) and IWC (β = -.08, SE = .24, 95% CI [-.57, .41], p = .740). Nonetheless, due to the high p-values, there is no significant effect between the criterion and the predictors.

The multiple regression where the Purpose (PP) functions as the criterion showed, F (3, 52) =. 43 p =.734, R² =. 024, IWC was the strongest predictor (β = -.13, SE = .19, 95% CI [-.51, .26], p = .506), followed by IWN (β = .11, SE = .24, 95% CI [-.38, .59], p = .668) and IWA (β =.08, SE = .23, 95% CI [-.38, .53], p = .739). Nonetheless, due to the high p-values, there is no significant effect between the criterion and the predictors.

Scatterplots of letter distribution

Scatterplots of the distribution of the survey letters scores in comparison with the identification with the community, nation and humanity are created to see if there is a significant pattern between the two.

Figure 1

Distribution of letter scores in comparison to IWC,IWN and IWA
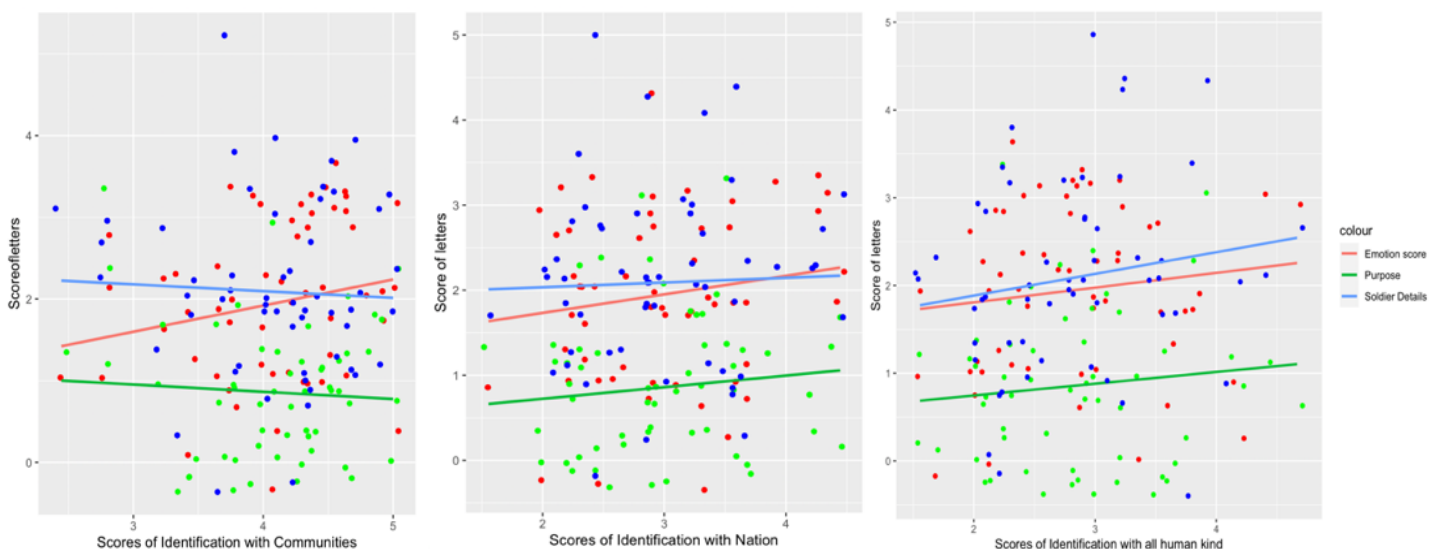
Note. In the figure we see three distribution of letter scores compared to the identification with community, nation and humanity. Each colour indicates a sub score of the letters. On the y-axis the scores of letters and on the x-axis the scores of community, nation and humanity.

In figure 1 we see that people score lower on SD and PP when they score higher on the IWC questions. In all figures we see a lower score on purpose and see it move more to the left

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when starting from the IWC to the IWA. The medium scores of the IWA and the IWN are showing high scores of the emotion score and soldier details.

Top vs bottom 5

Due to the small sample an additional analysis is done to look if there a qualitative difference between the bottom 5 and top 5 scores on the scales scores compared how they wrote the letter. On all scales were no significant difference in the letter writing to notify. Therefore, no significant difference was shown when looked at the top 5 and bottom 5 scores of the letters.

Comparison game letters vs survey letters

For the data analysis of the game letters a comparison table is made with the percentages of the game and survey letter scores per code. Only wordcount is measured in average number of words not in percentages. The amount of survey letters(n=56), amount of game letters(n=3020)

Table 1

Comparison of survey and game letters in percentages

Codes	Survey	Game
1 meme/troll	1.79	17.15
2 harsh	0	12
3 sarcastic	0	4.64
4 wordcount*	74.38*	16.67*
5 military jargon	66.07	18.19
6 sorrow/ Sadness	62.50	27.53
7 apology	55.40	20.88
8 condolences	71.43	9.01
9 aggressive	1.79	1.56
10 religion	7.14	2.08
11 responsibility player	14.29	2.14
12 responsibility enemy/Germany	10.71	2.76
13 responsibility soldier	0	1.56
14 soldier details	14.29	3.47

15 positive attributes	69.64	16.83
16 location of death	14.29	21.30
17 type of death	23.21	6.91
18 soldier name	87.5	36
19 purpose /sacrifice/ for the greater good	23.21	7.1
20 for the country	50	4.96
21 for fellow soldiers	12.5	3.73

Note. * Average amount of words instead of percentages.

In table 1 you can see that there exist a lot of difference between the survey and game letters. A Significant difference are shown in multiple codes, e.g. memes/troll, harsh and sarcastic are almost not present in the survey letters, while more present in the game letters. The wordcount for the survey letters is significantly higher than the wordcount for the game letters. On average in the survey letters 57.71 more words are used. Next to that, on sorrow, sadness, apology, and condolences the survey people score significantly higher with condolences having the biggest difference of 62.42 %.

Survey Letter scores based on gender and nationality

The "people" mentioned in the hypotheses, are the participants, the demographics differ between these participants. These different demographics might impact the scores. Therefore, gender and nationality are analysed to see if there exist difference between man and woman and German and Dutch. Only the German and Dutch nationalities are analysed while the other nationalities groups were too small.

The mean scores of Emotion (ES) was for male (M=1.9) and for female (M=2), the mean scores of soldier details(SD) was for males (M=2.06) and for female (M=2.12) at last the mean score of Purpose(PP) was for males (M=0.91) and for females (M=0.79)

The most prevalent nationalities in the survey letter where German(n=24) followed by Dutch(n=14). The IWC, IWN, IWA and the mean scores of the letters are analysed.

German IWC (M= 4.13), IWN (M=2.76), IWA (M= 2.79), ES (M= 1.86), SD (M= 2.63) PP (M= .83).

Dutch IWC (M= 4.13), IWN (M=2.82), IWA (M= 2.51), ES (M= 2.07), SD (M= 1) PP(M= .5).

Real-life letters vs survey and game letters

As a qualitative analysis we looked at letter that have been written to real life families of deceased soldiers during war time. The goal is to compare them to the survey and game letters. Visible in Appendix G is an example of an American letter written in 1941 to a family during second world war. In this letter is written "I have just read with deep sorrow of the loss of your son, Sidney. It is really tragic that you have been forced to pay for the country's defence with the life of a son" This part is comparable with the start of many letters that are analysed in the survey and game. Regret and sorrow are shown, soldiers name and the sacrifice for country is addressed.

Visible in appendix H is an example of another American letter written during the second world war in 1944. This letter is addressed to the brother of the deceased soldier. In this letter is written "With keenest regret, I have learned that your brother, second lieutenant Jack Limber, missing in action since February 10, 1944, has been reported as having died on that date in the European Area". This part is also comparable with the start of many letters that are analysed in the survey and game. Regret is shown, soldiers name is addressed, and the location of the death is mentioned. The letter continues with addressing the qualities the deceased soldier had. Written is "He worked hard to establish an exemplary record and his untiring efforts were recognized by superior officers…" and following with "The reputation gained by your brother is a fine one…" this part is comparable with the acknowledgement of positive attribute of the soldier given in the survey and game letters.

Discussion

The aim of this study was to see if there is an effect between identifying more with your community, nation and humanity and how empathic you write a letter. Standard Pearson correlations and three multiple regressions are performed to see if identification with community, nation and all humankind influence the way people write a letter to the family of a deceased soldier. Three sub scores were created to analyse and sum the letters, purpose, emotion and soldier details.

In the main analysis we found that there is no significant effect between the Identification with Community and the letter score of the participants. Which is indicated out of a high p values of .139, .728 and .490 on the Pearson correlations and a high p value of .412 on the multiple regression. We could interpret this result as that if you identify more with your community, you do not write a more empathic letter than when you identify less with your community. Therefore H1: People that identify strongly with their community will write a more empathic letter is rejected

Next, we found that there is no significant effect between the Identification with Nation and the letter score of the participants. Which is indicated out of a high p values of .254, .791 and .403 on the Pearson correlations and a high p value of .471 on the multiple regression. We could interpret this result as that if you identify more with your nation you do not write a more empathic letter than when you identify less with your nation. Therefore H2: People that identify strongly with their nationality will write a more empathic letter is rejected

Finally, we found that there is no significant effect between the Identification with all humanity and the letter score of the participants. Which is indicated out of a high p values of .354, .210 and .396 on the Pearson correlations and a high p value of .739 on the multiple regression. We could interpret this result as that if you identify more with all humanity you do not write a more empathic letter than when you identify less with all humanity. Therefore H3: People that identify strongly with all humankind will write a more empathic letter is rejected.

Does this mean that the more you identify is not equal to how empathic you write a letter? Yes, you can argue that in this research this is the case. People that identify not as strong as others might still write a similar empathic letter. Nevertheless, existing research does show that there is a positive relationship between group identification and empathy, suggesting that the more an individual identifies with a group, in the case of this research with community, nation and humanity, the stronger their empathic responses towards that group become (McFarland et al., 2019). So why is it that in this research there was no effect? Is it because of the war scenario? Or the way people identified with the scenario? This should be researched in the future.

The scatterplots presented give a result of the scores of the scales compared to the type of letter scores. What is interesting is that we see for the identification with community that, soldier details and purpose scores are lower the higher the participants score on identification with community. While identification with nation and identification with all humanity shows that when participants score higher on the letter score, they score higher on the scales. Due to

the small participant size and the selective group, it is difficult to say something concrete about this, but it might be interesting to investigate it in further research with a large sample.

For extra analysis the top 5 scores and the bottom 5 scores of the identification with community, nation and all humanity were looked at to see if there is a difference in letter writing. After a qualitive analysis there was not a significant difference between the top 5 and bottom 5 scorers.

It is interesting to see that the results show that woman score higher on the identification with nation and identification with all humanity scales than man. The average scores of the letters for Emotion and Soldier details were also higher for females. Males scored higher on the Purpose one and the identification with the community. In this sample gender is not equally divided, so it is difficult to see if there is an effect. You could argue that the reason for the higher means might be that women overall process more empathy (Mestre et al., 2009). For further research and game development it is valuable to see if there are more sustainable difference in gender.

Next to gender, nationality was also an interesting factor to look at. The participants were mostly divided between German(n=24) and Dutch(n=14) people. For the identification with community, nation and humanity there was no mentionable difference. However, between the scores of the letters were some large differences. Germans scored higher on soldier details (M=2.63) while the Dutch scored lower (M=1). This is a significant difference. Which can indicate that Germans tend to write more positive attributes, location of death and name of the soldier. This might be because in general the Dutch people are more individualistic (Hofstede, 2001).Nonetheless it's difficult to justify this difference while the sample of the groups have a big difference in size. The other nationalities were left out of the analyse while they were too small to compare. For further research it is interesting to compare the identification with community, nation and humanity to the nations culture society.

The results of the game letters where interesting to analyse after comparing them with the letters of the survey, there was a clear difference in a lot of codes, for example the troll/meme and harsh code was way more used in the game letters than in the survey letters. The more emotional coding like apologies, sadness and sorrow were more used in the survey letters. You could argue that because of the being a controlled group, people that wrote a letter in the survey really tried their best to create a nice and kind letter, while in the uncontrolled group (game letters) they just wrote whatever they wanted to say. The average wordcount also differed a lot with the survey letters consisting of 58 words on average more

than the game letters. This could be explained by the many game letters where player only wrote 1 word.

It was also interesting to see how many harsh and troll letters were written in the game data. Besides not knowing that their letters were going to be analysed, the letter writing task reduces the pace of the game. It can annoy gamers when they suddenly must stop playing the action game and write a letter to the family of a deceased soldier. We can argue that this could be the cause of the amount of harsh and troll/meme letters. It could also be that the players are more desensitized when playing the game becoming toxic (Sublette & Mullan, 2010).

Next to comparing both game letters and survey letters we also compared letters that were written to a brother and a mother during times of the second world war. There is a clear view that the real-life letters are very similar, especially to almost all letters of the survey. People show their regret, sorrow and show sympathy to the relatives. Next to that a positive attribute is mentioned. It's more difficult to say that the real-life letters are comparable to the game letters while there were a lot of troll/meme letters, nevertheless there is a big similarity to the game letters that scored also high on the letter scores and the real-life letters. This can indicate that during the last 80 years we did not change the way we write these letters during a scenario like this (Collectors Weekly, z.d.; The National WWII Museum, 2018). There can be argued that empathy is a human characteristic and in scenarios like this we tend to apologize and show our sympathy (Elliott et al., 2011).

Limitations

In this research we came across some limitations. One and maybe the most prevalent one is the size of the participants. The size in which the multiple regression and the Pearson correlations were performed consisted of 56 participants. The reason for the small sample size can explained by multiple causes. For example, the length, the effort and the reward. The length of the questionnaire is around 10 to 15 minutes which causes participants to lose interest, this was visible in the decline of participants from the start of the questionnaire until the end. Which also shows that the effort was for some participants to much. At the end of the survey a task must be performed were you write a letter which participant left blank. The reward for participating was maybe too much focused on gamers. A game key could be won if they completed the questionnaire, this might only attract a certain group which reduces our reach to more participants and keeps the group selective.

A limitation also might be that all participants of the survey received the same scenario, it would be interesting to see if people wrote different stuff based on multiple given scenarios.

Another limitation might be that due to the fact that it was a scenario about a deceased soldier, the participants were prompt to write a apology letter to the family of the deceased. Therefore, you could argue that the participants were somewhat forced to write a empathic letter.

Additionally, the age of the participants, which averaged around 23,5, can indicate that the sample was to selective group in which we cannot gain a general idea if there is an effect within society at large.

Another limitation was the demographic of the game letters, the only data we had were the letters, no age, gender, type of scenario etc. this makes it difficult to compare the survey letter with the game letters.

At last, it is a given scenario, as a participant you don't experience how it really is to write an actual letter during a second World War scenario. This is similar for the game. Nonetheless, In the game you play a more active role in this scenario but still it is not real-life

Further research

The limitation gives us a thought of how to improve further research on this topic.

For further research it might be interesting to take this research to another type of game, were there exist other scenarios or other game aspect where you can measure identification and empathy with. We now used written letters in a World War 2 scenario, but for another game it might be interesting to see how you as the player interact with the non-playable characters around you. Will you act the same way to a non-playable character knowing the non-playable character is part of a different group than you are part of? In single player games this can be tested but using multiplayer games could be even more interesting. With the reason that people all over the world are playing and interacting with each other. We could take for example a MMORPG, were people do quest, raids and all kind of activities together (Van Looy et al., 2010). Would the player be more likely to help a player that is from the same country instead of helping a player from a different country? These are all very interesting topics to dive deeper in.

For further research it might be interesting to connect the survey to the players of radio general, because it will enhance the sample of the study. The game should be used a tool to analyse the empathy and identification. In the current study it is compared but not combined.

It also might be interesting to take a look at the differences in gender. Existing research on empathy shows that females overall have higher levels of empathy (Mestre et al., 2009), which also came forward in this study when looked at the mean scores of the identification scale.

In further research the nationality might be an interesting topic to go more in depth. In World War 2 video games like the one used in this research often the Germans are portrait as the villains. It will be interesting to see on a larger scale if Germans write different letter compared to other nationalities.

When looking at the real-life letters, for future research it might also be interesting to compare more letters to letters from a fake/videogame scenario. It can be interesting to see if there is a consistency in human behaviour throughout history. Additionally, to that, not only letters from the second world war might be interesting, but also letters from the Vietnam war, first world war, eighty years' war and even the current war in Ukraine.

Ultimately if the new game of radio general gets released it would be a great opportunity to use that game as a tool to analyse the empathy in comparison to the identification the players have towards their community, nationality and humanity.

Conclusion

The hypotheses are rejected and show that we do not write a more empathic letter if we identify more with our community, nation, or humanity. Does this mean that the level of identification has no effect on how empathic we write the letter? Yes, if you would look only at the results, you can argue that this is the case. But with the limitations and existing research taken in mind, there is too much uncertainty to say this is correct. Further interesting overarching results showed the difference between male and female scores on the scales, nationality difference on soldier detail scores between German and Dutch people and the similarity between the real-life letters and the survey and game letters. There is a lot of room for further research, possibly with a combination of the survey with the game. There is still much to be learned about the identification and how it impacts letter writing in these kinds of games. With further research we might get a better understanding of the effect between the two.

References

Anderson, C. S., Shibuya, A., Ihori, N., Swing, E. L., Bushman, B. J., Sakamoto, A., Rothstein, H. R., & Saleem, M. (2010). Violent video game effects on aggression, empathy, and prosocial behavior in Eastern and Western countries: A meta-analytic review. *Psychological Bulletin*, *136*(2), 151–173. https://doi.org/10.1037/a0018251

Appel, M., Gnambs, T., Richter, T., & Green, M. C. (2015). The Transportation Scale-Short Form (TS-SF). *Media Psychology*, *18*(2), 243-266. 10.1080/15213269.2014.987400

Baron-Cohen, S., Wheelwright, S., Skinner, R., Martin, J. E., & Clubley, E. (2001). The Autism-Spectrum Quotient (AQ): Evidence from Asperger Syndrome/High-Functioning Autism, Males and Females, Scientists and Mathematicians. *Journal of Autism and Developmental Disorders*, *31*(1), 5–17. https://doi.org/10.1023/a:1005653411471

Baron-Cohen, S., & Wheelwright, S. (2004). The Empathy Quotient: An Investigation of Adults with Asperger Syndrome or High Functioning Autism, and Normal Sex Differences. *Journal of Autism and Developmental Disorders*, *34*(2), 163–175. https://doi.org/10.1023/b:jadd.0000022607.19833.00

Cole, H., & Griffiths, M. D. (2007). Social Interactions in Massively Multiplayer Online Role-Playing Gamers. *Cyberpsychology & behavior*, *10*(4), 575–583. https://doi.org/10.1089/cpb.2007.9988

Collectors Weekly. (z.d.). *World War 2 Death Notification Document Signed By Gen H.H. Arnold | Collectors Weekly*. https://www.collectorsweekly.com/stories/186984-world-war-2-death-notification-document

Daniel, M., & Garry, C. (2018). Video Games As Culture. In *Routledge eBooks*. https://doi.org/10.4324/9781315622743

De Grove, F., Courtois, C., & Van Looy, J. (2015). How to be a gamer! Exploring personal

and social indicators of gamer identity. *Journal of Computer-Mediated*

Communication, *20*(3), 346–361. https://doi.org/10.1111/jcc4.12114

Egenfeldt-Nielsen, S. (2006). Overview of research on the educational use of video

games. *Digital kompetanse =*, *1*(3), 184–214. https://doi.org/10.18261/issn1891-943x-

2006-03-03

Elliott, R. J., Bohart, A. C., Watson, J. C., & Greenberg, L. S. (2011).

Empathy. *Psychotherapy*, *48*(1), 43–49. https://doi.org/10.1037/a0022187

Farrar, K. M., Krcmar, M., & McGloin, R. (2013). The Perception of Human Appearance in

Video Games: Toward an Understanding of the Effects of Player Perceptions of Game

Features. *Mass Communication and Society*, *16*(3), 299–

324. https://doi.org/10.1080/15205436.2012.714440

Gentile, D. A., Anderson, C. S., Yukawa, S., Ihori, N., Saleem, M., Ming, L. K., Shibuya, A.,

Liau, A. K., Khoo, A., Bushman, B. J., Huesmann, L. R., & Sakamoto, A. (2009). The

Effects of Prosocial Video Games on Prosocial Behaviors: International Evidence

From Correlational, Longitudinal, and Experimental Studies. *Personality and Social*

Psychology Bulletin, *35*(6), 752–763. https://doi.org/10.1177/0146167209333045

Greitemeyer, T., Osswald, S., & Brauer, M. (2010). Playing prosocial video games increases

empathy and decreases schadenfreude. *Emotion*, *10*(6), 796–

802. https://doi.org/10.1037/a0020194

Grooten, J., & Kowert, R. (2015, 15 november). *Going Beyond the Game: Development of*

Gamer Identities Within Societal Discourse and Virtual

Spaces. https://journals.sfu.ca/loading/index.php/loading/article/view/151

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and*

organizations across nations. sage.

Hogg, M. A., & Reid, S. A. (2006). Social Identity, Self-Categorization, and the

Communication of Group Norms. *Communication Theory*, *16*(1), 7–

30. https://doi.org/10.1111/j.1468-2885.2006.00003.x

Klimmt, C., Hefner, D., Vorderer, P., Roth, C. L., & Blake, C. R. (2010). Identification With Video Game Characters as Automatic Shift of Self-Perceptions. *Media Psychology*, *13*(4), 323–338. https://doi.org/10.1080/15213269.2010.524911

Lawrence, E., Shaw, P. N., Baker, D., Baron-Cohen, S., & David, A. (2004). Measuring empathy: reliability and validity of the Empathy Quotient. *Psychological Medicine*, *34*(5), 911–920. https://doi.org/10.1017/s0033291703001624

Maibom, H. L. (2014). Introduction: (Almost) Everything You Ever Wanted to Know about Empathy. In *Oxford University Press eBooks* (pp. 1–40). https://doi.org/10.1093/acprof:oso/9780199969470.003.0001

Markey, P. M., & Markey, C. N. (2010). Vulnerability to Violent Video Games: A Review and Integration of Personality Research. *Review of General Psychology*, *14*(2), 82–91. https://doi.org/10.1037/a0019000

McFarland, S., Webb, M., & Brown, D. (2012). All humanity is my ingroup: a measure and studies of identification with all humanity. *Journal of personality and social psychology*, *103*(5), 830.

McFarland, S., Hackett, J. D., Hamer, K., Katzarska-Miller, I., Malsch, A. M., Reese, G., & Reysen, S. (2019). Global Human Identification and Citizenship: A Review of Psychological Studies. *Political Psychology*, *40*(S1), 141–171. https://doi.org/10.1111/pops.12572

Mestre, M. V., Samper, P., Frías, M. D., & Tur, A. M. (2009). Are women more empathetic than men? A longitudinal study in adolescence. *The Spanish journal of psychology*, *12*(1), 76-83.

Radio General on Steam. (z.d.). https://store.steampowered.com/app/1011610/Radio_General/

Schrier, K., & Gibson, D. (2010). *Ethics and Game Design: Teaching Values through Play: Teaching Values through Play*. IGI Global.

Spreng, R. N., McKinnon, M. C., Mar, R. A., & Levine, B. (2009). The Toronto Empathy

Questionnaire: Scale Development and Initial Validation of a Factor-Analytic Solution

Sublette, V., & Mullan, B. (2010). Consequences of Play: A Systematic Review of the Effects

of Online Gaming. *International Journal of Mental Health and Addiction*, *10*(1), 3–

23. https://doi.org/10.1007/s11469-010-9304-3

Tajfel, H. (1978). The achievement of inter-group differentiation. In H. Tajfel

(Ed.), *Differentiation between social groups* (pp. 77–100). London: Academic Press.

Tajfel, H., & Turner, J. C. (1979). An integrative theory of inter-group conflict. In W. G.

Austin & S. Worchel (Eds.), *The social psychology of inter-group relations* (pp. 33–

47). Monterey, CA: Brooks/Cole.

The National WWII Museum. (2018). Letters of Condolence. *The National WWII Museum |*

New Orleans. https://www.nationalww2museum.org/war/articles/letters-condolence

Van Looy, J., Courtois, C., & De Vocht, M. (2010, September). Player identification in online

games: Validation of a scale for measuring identification in MMORPGs.

In *Proceedings of the 3rd International Conference on Fun and Games* (pp. 126-134).

Appendices

Appendix A

Code book

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 was 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 stubborness 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 autist"

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 stubborness 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, Positive attributes.

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.renzelberg@student.utwente.nl

Consent Form

Please tick the appropriate boxes

Taking part in the study

	Yes	No
I have read and understood the study information.	○	○
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.	○	○

Risks associated with participating in the study

	Yes	No
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.	○	○

Use of the information in the study

	Yes	No
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.	○	○
I understand that personal information collected about me that can identify me, will not be shared beyond the study team.	○	○
I agree that my replies to survey questions can be quoted in research outputs. The quotes will not have any names attached to them.	○	○

Future use and reuse of the information by others

	Yes	No
I give permission for the questionnaire data that I provide to be archived in the Open Science Foundation repository so it can be used for future research and learning. Note that transcripts will NOT be stored publically.	○	○

Signatures / Final consent

	Yes	No
I have answered all previous questions truthfully and consent to participate in this study.	○	○

Study contact details for further information: m.a.friehs@utwente.nl, n.busche@student.utwente.nl, y.w.j.vanpraet@student.utwente.nl, m.renzelberg@student.utwente.nl

Contact Information for Questions about Your Rights as a Research Participant

If you have questions about your rights as a research participant, or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researcher(s), please contact the Secretary of the Ethics Committee/domain Humanities & Social Sciences of the Faculty of Behavioural, Management and Social Sciences at the University of Twente by ethicscommittee-hss@utwente.nl

Please state your gender.

○ Male

○ Female

○ Non-binary

○ Prefer not to say

Please state your age in years (e.g., enter 29 for 29 years).

What is your nationality? If you have more than one Nationality, with which one do you identify the most?

Afghanistan ⇕

Level of the English language

○ A0/A1 English (Beginner/Elementary)

○ A2 English (Pre Intermediate)

○ B1 English (Intermediate)

○ B2 English (Upper Intermediate)

○ C1 English (Advanced)

○ C2 English (Proficient)

○ Native speaker

Hours_Week

How many hours per week do you spent playing video games on average? This can mean games on your phone, computer, console etc.

Knowledge

How would you rate your knowledge about the events of World War 2?
0 = No knowledge
10 = Perfect knowledge

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
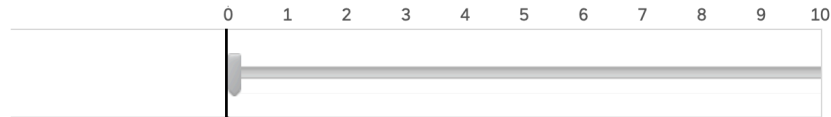
Have you played the game "Radio General" before?

○ Yes

○ No

○ Not sure

Appendix C

Survey 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 reponsible 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

Letter form 1941

SOUTHWESTERN LOUISIANA INSTITUTE
LAFAYETTE, LA.

OFFICE OF THE PRESIDENT

October 20, 1941.

Mrs. Norbert Larriviere,
Youngsville, Louisiana.

Dear Mrs. Larriviere:

I have just read with deep sorrow of the loss of your son, Sidney. It is really tragic that you have been forced to pay for the country's defense with the life of a son.

Please accept my deepest sympathy in your sorrow. I hope that the time will come when mothers like you will not have to make such sacrifices.

Very sincerely yours,

Joel L. Fletcher,
President.

JLF:mlo

https://www.nationalww2museum.org/war/articles/letters-condolence

Appendix H

Letter from 1944 during WWII

HEADQUARTERS, ARMY AIR FORCES
OFFICE OF THE COMMANDING GENERAL
WASHINGTON 25, D. C.

April 25, 1944

My dear Mr. Limber:

With keenest regret I have learned that your brother, Second Lieutenant Jack Limber, missing in action since February 10, 1944, has been reported as having died on that date in the European Area.

There is little I can say to alleviate your sorrow, but I want you to know that I have been informed of Lieutenant Limber's service in the Army Air Forces. From the beginning of his training at San Antonio, Texas, until graduation from the Advanced Flying School at Ellington Field, he worked hard to establish an exemplary record and his untiring efforts were recognized by superior officers. During his commissioned career he developed rapidly as a pilot, determined to contribute his best to our cause.

The reputation gained by your brother is a fine one, and I hope the knowledge of this affords you pride and comfort during your sorrow.

I extend my heartfelt sympathy to you and other members of the family.

Very sincerely,

H. H. ARNOLD,
General, U. S. Army,
Commanding General, Army Air Forces.

Mr. Nicholas J. Limber,
120-23 229th Street,
Saint Albans, New York.