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Reports

Cyber-dehumanization: Violent video game play diminishes our humanity

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ABSTRACT

Across two studies we show that engaging in violent video game play diminishes perceptions of our own human qualities. In addition, when other players are the targets of this violence it reduces our perceptions of their humanity also. In Study 1, we demonstrate that playing Mortal Kombat against another player reduces the perceived humanity of the self as well as the humanity of one's opponent (compared to playing a non-violent game). In Study 2 we replicate this effect on perceived humanity of the self when playing a violent game with a co-player. However, we find no dehumanization of co-players who are not the targets of violence. We demonstrate these effects cannot be reduced to mood, self-esteem, gender, or other characteristics of the game such as excitement and enjoyment. The findings provide a broader perspective from which to view previous work on the adverse effects of violent video games.

"FINISH HIM!"

— Mortal Kombat

This instruction from the popular video game "Mortal Kombat" encourages players to commit a final gory blow that ends the life of their opponent. Given such explicit instructions to engage in violent behavior, it is not surprising that many people are concerned about the effects of playing violent video games. There are good reasons to be concerned: the negative effects of violent video games have been well documented (Anderson & Bushman, 2001; Anderson et al., 2010) and appear to be more significant than those associated with other forms of violent media (Anderson, Gentile, & Buckley, 2007; Polman, Orobio de Castro, & Van Aken, 2008).

The focus of much research on video game violence links exposure to increased aggression (Anderson & Bushman, 2001; Anderson & Dill, 2000; Bartlett, Harris, & Bruey, 2008). However studies have also demonstrated a host of other negative outcomes. Players of violent video games are more likely to endorse violence in real-life (Dill, Brown, & Collins, 2008), to see others as more hostile (Bushman & Anderson, 2002), and are less likely to experience empathy (Funk, Buchman, Jenks, & Bechtoldt, 2003) or engage in pro-social behavior (Anderson et al., 2010). Moreover, playing violent video games appears to have a desensitizing effect on players, reducing their sensitivity to real-life violence (Carnagey, Anderson, & Bushman, 2007) and numbing them to the pain and suffering of others (Bushman & Anderson, 2009).

One reason that violence within video games is more powerful that other forms of violent media is that people identify with, and to some extent feel responsible for, the violence they perpetuate within virtual environments. Previous work has demonstrated that players become personally engaged with video game content (Anderson et al., 2010). Players often personally identify with video game avatars (Fischer, Kastenmuller, & Greitemeyer, 2010; Konijn, Bijvank, & Bushman, 2007), see themselves as more aggressive after playing violent games (Bluemke, Friedrich, & Zumbach, 2010; Uhlmann & Swanson, 2004) and use moral disengagement strategies to facilitate enjoyment of virtual violence (Hartmann & Vorderer, 2010). In short, perpetrating violence within virtual environments has personally relevant consequences, affecting how we see ourselves and respond to others.

Recent work has begun to establish links between video game violence and dehumanization. Specifically, Greitemeyer and McLatchie (2011) demonstrated that playing violent video games has the effect of reducing the perceived humanness of real-life antagonists, helping to explain how violent video games can lead to aggressive behavior. These findings are consistent with previous work showing that dehumanizing others allows people to behave violently towards them through processes of moral disengagement (Bandura, 1999; Kelman, 1976; Opotow, 1990), reducing empathy (Cehajic, Brown, & Gonzalez, 2009) and restoring psychological equanimity (Castano & Giner-Sorolla, 2006). In short, dehumanization oils the wheels of aggression and violence against others.

What is unclear, however, is whether playing violent video games has dehumanizing consequences for those involved in on-line interactions. People are increasingly spending large amounts of time engaging in on-line games (e.g., second life; world of warcraft; Ng & Wiemer-Hastings, 2005) and relatively little is known about how the experience of cyber-violence affects perceptions of the self as well as co-players. People who provoke us in real-life

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may be viewed as less human (Bastian & Haslam, 2010; Greitemeyer & McLatchie, 2011), however whether co-players who harmlessly provoke us within the context of a video game are also perceived as less human is unclear. Perhaps more importantly, do these acts of aggression and violence have consequences for self-perception? As we note, previous work suggests a link between video game violence and self-perception, such that players see themselves as more aggressive (e.g., Bluemke et al., 2010). According to Self Perception Theory (Bem, 1972) people infer their internal attributes from observations of their own overt behavior. Importantly, observations of one's own aggressive behavior may have more pervasive effects on self-perception than increased aggressiveness alone: it may also lead to a perception of the self as less human. Indeed, theorists have often claimed that perpetrators of violence are dehumanized by their own brutality (Kelman, 1976). In line with self-perception theory we argue that engaging in inhumane behavior (e.g., acts of extreme violence and aggression) will affect our perceptions of our own humanity.

In the current studies we explore whether the experience of cyber-violence has dehumanizing consequences for the self and others. Specifically, we focus on self-perceptions of the perpetrators of cyber-violence (self) as well as perceptions of the victims of cyber-violence (others). We investigated these effects within a video game context where players were opponents engaged in violent behavior against each other (Mortal Kombat, Study 1). We also investigated whether engaging in cyber-violence against computer generated avatars, as opposed to other players, is sufficient to affect self-perceived humanity (Call of Duty 2, Study 2). In both studies we compared our findings against a similar but non-violent video game. In line with self-perception theory and observations that violent behavior is dehumanizing for perpetrators, we expected that engaging in the violent, compared to the non-violent video game would lead players to view *themselves* as less human (Hypothesis 1). We also expected that, in line with previous work on real-life violence, players would view their opponents as less human when they were the targets of violence compared to when they were opponents in a non-violent video game (Hypothesis 2). The design of Study 2 also provided the opportunity to explore another possible consequence of cyber-violence: perceptions of co-perpetrators. Co-players are often engaged in cooperative violent behavior rather than being the targets of violence (e.g., in two-player games) and no previous work has investigated perceptions of co-perpetrators, let alone whether co-perpetrators of violence are also dehumanized or not. As elaborated in Study 2, even though we made no specific predictions regarding the dehumanization of co-perpetrators, we were open to the finding that dehumanized perceptions would be less apparent when co-players were not the targets of violence.

Study 1

Our first study aimed to demonstrate that playing a violent video game against another player would lead to dehumanized perceptions of both the self and the other. We selected the highly popular game Mortal Kombat. In this game participants select a character and then enter into fighting bouts against another player. We predicted that, compared to playing an equally competitive non-violent interactive game, playing Mortal Kombat would reduce self-perceived humanity (H1) as well as humanness attributions of the opponent player (H2).

Our measure of humanness incorporated two dimensions identified in previous work (Haslam, 2006; Haslam, Bain, Douge, Lee, & Bastian, 2005). Human Nature refers to features that are seen as fundamental to our humanity and Human Uniqueness to attributes that distinguish people from animals. Perceiving a lack of Human Nature in a target is akin to likening them to objects or machines; cold, rigid, inert, and lacking emotion. On the other hand, perceiving a lack of Human Uniqueness is akin to likening them to animals; immature, coarse, irrational, or backward. This framework implies that people can be viewed as lacking humanness in two ways, and we argue that both may be implicated when playing violent video games.

Participants

Participants were 106 undergraduates (74 women, 32 men) who took part in the study for course credit. Their ages ranged from 17 to 34 years ($M = 19.28$, $SD = 2.39$). Participation was in groups of two with random assignment to conditions.

Materials

Participants were seated in front of a video screen with an X-box video game console. Each had a wireless X-box controller and separate head phones. Although both participants were looking at the same screen, a portable dividing wall obscured their view of each other and they were instructed not to interact throughout the course of the experiment. This was to ensure the interaction between participants was fully mediated by the video game environment. Participants then proceeded to play either two-player Mortal Kombat ($n = 52$) or Top Spin Tennis ($n = 54$) for 15 min. After playing the video game participants were given a questionnaire to complete. Before continuing onto the remainder of the questionnaire they were asked to indicate how much they enjoyed playing the video game on a scale from 1(*not at all enjoyable*) to 7 (*very enjoyable*), how exciting it was on a scale from 1(*not at all exciting*) to 7(*very exciting*) and how frustrating it was 1(*not at all frustrating*) to 7(*very frustrating*).

Humanness

Participants then rated themselves on 8-items adapted from Bastian and Haslam (2010) assessing the attribution of Human Nature (4-items; e.g., "I felt like I was open minded, like I could think clearly about things", "I felt that I was emotional, like I was responsive and warm", "I felt superficial like I had no depth" (*reversed*), "I felt like I was mechanical and cold, like a robot" (*reversed*)) and Human Uniqueness (4-items; e.g., "I felt like I was refined and cultured", "I felt like I was rational and logical, like I was intelligent", "I felt like I lacked self-restraint, like an animal" (*reversed*), "I felt like I was unsophisticated" (*reversed*)). Participants also rated the other person on the same items, with item stems changed to "I felt like the other person…" Responses were made from 1 (*not at all*) to 7 (*very much so*). Specifically they were asked to think about their "experience of playing the video game" and to answer each question in relation to how they saw themselves/the other person they played against as possessing each of the characteristics highlighted in the measure of dehumanization. Given high correlations between the dimensions of humanness for self: $r(106) = .63$, $p < .001$, and other, $r(106) = .64$, $p < .001$, we collapsed across both dimensions to form measures of Self ($\alpha = .71$) and Other Humanity ($\alpha = .75$). Participants were probed as to the purpose of the study. None indicated that they suspected any links between video game violence and dehumanization.

Results and discussion

Preliminary analysis revealed that participants found both games equally frustrating (violent: $M = 3.27$, $SD = 1.42$; non-violent: $M = 3.04$, $SD = 1.59$), $t(104) = 0.79$, $p = .430$. Mortal Kombat was marginally more enjoyable than Top Spin Tennis (violent: $M = 4.86$, $SD = 1.57$; non-violent: $M = 4.35$, $SD = 1.39$), $t(104) = 1.78$, $p = .077$, and was significantly more exciting (violent: $M = 4.52$, $SD = 1.51$; non-violent: $M = 3.46$, $SD = 1.25$), $t(104) = 3.92$, $p < .001$.

As we collected the data within dyads we investigated the possibility that assumptions that self and other humanity ratings are independent were violated (Kenny, Kashy, & Cook, 2006). To this end we