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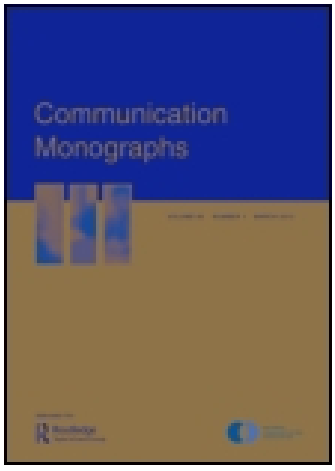

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How Violent Video Games Communicate Violence: A Literature Review and Content Analysis of Moral Disengagement Factors

Tilo Hartmann, K. Maja Krakowiak & Mina Tsay-Vogel

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Mechanisms of moral disengagement in violent video game play have recently received considerable attention among communication scholars. To date, however, no study has analyzed the prevalence of moral disengagement factors in violent video games. To fill this research gap, the present approach includes both a systematic literature review and a content analysis of moral disengagement cues embedded in the narratives and actual game play of 17 top-ranked first-person shooters (PC). Findings suggest that moral disengagement factors are frequently embedded in first-person shooters, but their prevalence varies considerably. Most violent video games include justifications of the portrayed violence, a distorted portrayal of consequences, and dehumanization of opponents. Implications of the findings for research on violent games are discussed.

Keywords: Video Games; Moral Disengagement; Violence; Violent Video Games; Virtual Violence; Content Analysis; Morality; Entertainment; Enjoyment; Guilt

Mechanisms of moral disengagement in violent video game play have recently received considerable attention among communication scholars, for two reasons. First, moral disengagement factors may help explain why users enjoy violent video games. Experiments and in-depth interviews revealed that their presence in violent video games effectively reduces feelings of guilt (Hartmann, 2012; Hartmann & Vorderer, 2010; Klimmt, Schmid, Nosper, Hartmann, & Vorderer, 2006). More

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specifically, the justification given for violent acts (Hartmann, Toz, & Brandon, 2010; Hartmann & Vorderer, 2010; Lin, 2010), the dehumanization of opponents (Gollwitzer & Melzer, 2012; Lin, 2011), and portrayal of consequences of violent actions (Hartmann & Vorderer, 2010), influence how users respond affectively to virtual violence. For example, Hartmann and Vorderer (2010) found that users felt less guilty when shooting virtual characters for a justified reason, as compared to an unjustified reason. Gollwitzer and Melzer (2012) found that inexperienced players felt greater moral distress when they inflicted violence against humans rather than objects. Similarly, Lin (2011) found that shooting monsters resulted in less guilt and shame, and more enjoyment, as compared to shooting virtual humans.

Second, past research suggested that playing violent video games may increase real-life aggression (e.g., Anderson et al., 2010; Fischer, Kastenmuller, & Greitemeyer, 2010; but see also Elson & Ferguson, 2014). Moral disengagement has been examined as a potential mechanism underlying this effect (Gabbiadini, Andrighetto, & Volpato, 2012; Greitemeyer & McLatchie, 2011; Richmond & Wilson, 2008). For example, Gabbiadini et al. (2012) found that recent and frequent exposure to a violent video game increased moral disengagement in adolescents, and Greitemeyer and McLatchie (2011) established that playing violent video games increased dehumanization, which in turn elicited aggressive behavior.

However, although previous research provided evidence of the *effects* of moral disengagement factors embedded in violent video games, no study has yet, systematically examined the *prevalence* of moral disengagement mechanisms in violent video games. Existing content analyses have examined the context and nature of virtual violence in video games without focusing explicitly on moral disengagement factors (e.g., Haninger & Thompson, 2004; Shibuya, Sakamoto, Shiratori, Arai, & Kato, 2004; Smith, Lachlan, & Tamborini, 2003; Thompson, Tepichin, & Haninger, 2006). It is thus unclear whether contemporary violent video games give players ample opportunities to disengage morally, and whether certain moral disengagement mechanisms are more pervasive than others. This study attempts to address this research gap, first by systematically reviewing previous studies that have noted the presence of moral disengagement factors in video games, and second by content-analyzing the prevalence of moral disengagement factors in first-person shooters, the most popular genre of violent video games.

Moral Disengagement in Violent Video Games

Research in the tradition of the "media equation" hypothesis provided ample evidence that human beings tend to treat computers and virtual agents as *social* beings (Reeves & Nass, 1996). Furthermore, contemporary violent video games feature increasingly life-like characters and environments. Accordingly, evidence is growing that users may intuitively perceive video game characters, including opponents of virtual violence, not just as "dead pixels on the screen" but as social beings that also deserve proper moral treatment (for more extensive discussions of this argument, see Hartmann, 2012; Hartmann & Vorderer, 2010; Hartmann et al., 2010). Accordingly, particularly more

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empathic users tend to feel guilty about harming (seemingly social) video game characters (e.g., Hartmann et al., 2010; Lin, 2011). But why do most users still experience video game violence as fun? Scholars have applied Bandura's moral disengagement approach (2002; Bandura, Barbaranelli, Caprara, & Pastorelli, 1996) to explain why users still willingly engage in transgressions against video game characters and why they may even enjoy virtual violence (Hartmann & Vorderer, 2010; Klimmt et al., 2006; Lin, 2011).

In the process of moral disengagement, individuals reframe reprehensible acts against others in a way that makes them appear worthy, just, necessary, or inconsequential. Bandura et al. (1996) identified eight different moral disengagement factors or cues that, if present in a situation, may effectively influence the way in which individuals frame their violent acts. *Moral justification* implies that a violent act is redefined as serving some socially worthy or moral purpose (e.g., justifying killing someone for a greater good or religious purpose). *Euphemistic labeling* means that an act is given a sanitized label in order to make it seem less severe (e.g., referring to innocent civilian victims as "collateral damage"). *Advantageous comparison* occurs if one act is compared to an even more heinous one perpetrated by an opponent (e.g., justifying military action as a response to terrorist attacks). *Displacement of responsibility* implies that the perpetrator does not take personal responsibility for the act, but rather places the responsibility on someone else, usually an authority figure (e.g., placing responsibility for a soldier's action on a military commander). When *diffusing responsibility*, the perpetrator minimizes his or her personal responsibility for the act by placing the responsibility on others who were involved (e.g., diffusing responsibility among all of the soldiers who were involved in the attack). *Disregard or distortion of consequences* occurs if harmful consequences of the act are ignored or minimized (e.g., censoring images of the horrific aftermath of an attack). *Dehumanization* implies that victims are portrayed as distant others or stripped of human qualities (e.g., referring to opponents as "savages"). Finally, *attribution of blame* implies that adversaries, victims, or circumstances are blamed for necessitating the act (e.g., blaming victims for provoking an attack).

Recent experimental and survey studies have provided compelling evidence that the presence (or absence) of these moral disengagement cues in violent video games effectively influences users' enjoyment, guilt, disgust, and subsequent aggressive states (Gabbiadini et al., 2012; Gollwitzer & Melzer, 2012; Greitemeyer & McLatchie, 2011; Hartmann et al., 2010; Hartmann & Vorderer, 2010; Lin, 2010, 2011; Richmond & Wilson, 2008; Shafer & Raney, 2013). This evidence suggests that most users feel irritated, if not outright guilty or morally disgusted, if a video game urges them to engage in virtual violence against seemingly social characters that is *not* contextualized by moral disengagement factors (e.g., torture sequence "By The Book" in Grand Theft Auto V; massacre among civilians in "No Russian" mission in Call of Duty: Modern Warfare 2).

Literature Review of Existing Content Analyses

To date, no study has systematically analyzed the prevalence of moral disengagement factors in violent video games. Multiple content analyses have examined the amount

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and general display of virtual violence in video games (Braun & Giroux, 1989; Castillo, 2009; Dietz, 1998; Dill, Gentile, Richter, & Dill, 2005; Haninger, Ryan, & Thompson, 2004; Haninger & Thompson, 2004; Heintz-Knowles et al., 2001; Ivory, Williams, Martins, & Consalvo, 2009; Lachlan & Maloney, 2008; Shibuya et al., 2004; Smith, 2006; Thompson & Haninger, 2001; Thompson et al., 2006; Weber, Behr, Mathiak, Ritterfeld, & Tamborini, 2009). Although examining the prevalence of moral disengagement factors was not within the scope of any of these past studies, most of them already provide valuable first insights about a few moral disengagement factors, specifically justification of violence, distortion of consequences, and euphemistic labeling. Accordingly, in a first step, we aimed to illuminate the prevalence of moral disengagement cues in violent video games by utilizing and reconsidering the results of existing content-analytical studies.

Justification of Violence

Several content analyses suggest that narratives of violent video games provide reasons for users to justify their virtual violence against other characters. These studies suggest that violent video games tend to justify violence using four reasons. First, they communicate that violence serves a higher good (e.g., to protect others or to preserve equity through retaliation). Second, the enemy is often introduced as a perpetrator of heinous acts, which allows users to engage in advantageous comparisons. Third, victims usually consist of groups that are commonly perceived as less worthy of protection, such as men or male soldiers, but rarely ever of civilians, women, or children. And fourth, violent video games reward rather than sanction violence.

Castillo (2009) conducted a qualitative content analysis of violent video games. In his study, three lawyers assessed violations of rules of international law in warfare-related scenes featured in 20 popular first-person and third-person shooter games. He found that opponents, and not the players' characters, were responsible for most of the observed violations, such as extensive and unjustified injury or killing of civilians. This suggests that the games' story lines justified players' violent conduct by portraying the enemy's atrocities. Similarly, Dietz (1998) examined violence (and gender stereotypes) in 33 Nintendo and Sega Genesis video games that were popular in the area of Dallas, Texas at the time of the study. Half of the analyzed games involved violence and 21% depicted violence directed at women. However, the report of the analysis suggests that violence against women was primarily displayed in non-interactive narrative scenes that portrayed the enemy's malice (e.g., an unjustified kidnapping scene). Smith et al. (2003) analyzed 60 of the most attractive video games for three major video game consoles based on sales figures from 1999. In most of the 1,389 violent interactions analyzed in their study, both the typical perpetrator and victims were adult male humans; only 23% of the interactions featured violence against females and only 4% featured violence against children. Instead, the most frequently occurring narrative was that of "a human perpetrator engaging in repeated acts of justified violence" (Smith et al., 2003, p. 73; see also Smith, 2006). More

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specifically, 77% of all games analyzed in the study included justified acts of virtual violence (i.e., "violent interaction that was motivated by protection of life, protection of property, or retaliation;" Smith et al., 2003, p. 63).

Heintz-Knowles et al. (2001) examined the 10 top-selling video games for six different video game consoles. They found that killing was almost always seen as justified in the games, and players were always rewarded for their acts of violence. Conversely, killing by computer-controlled characters was almost always seen as unjustified. The study by Heintz-Knowles et al. (2001) points to another facet of "justified violence," namely that it is rewarded. In fact, most content analyses find that violence is rewarded (and rarely punished) in violent video games. Shibuya et al. (2004) analyzed 30 video games that were popular among children and found that 54% featured attractive perpetrators and that violence was rewarded in 94% of the games. Thompson and Haninger (2001) examined a convenience sample of 55 video games rated E for "Everyone" released between 1985 and 2000 and found that injuring other characters was rewarded or required in 60% of the analyzed games. Similarly, Haninger and Thompson (2004) reported that in a random sample of 81 T-rated video games, 90% rewarded or required the player to injure characters, and 69% rewarded or required the player to kill. Thompson et al. (2006) found that all games in a random sample of 36 M-rated video games rewarded or required the player to injure characters, and 92% rewarded or required the player to kill. In 56% of the 60 ten-minute segments of violent video game play analyzed in the study by Smith et al. (2003), violence was rewarded; in 98% of the segments, violence was not punished.

Distortion of Consequences

Next to the justification of violence, past content analyses also suggest that violent video games contain *distorted or sanitized portrayals of consequences* of violence, although the reported findings are open for interpretation in this regard. One way in which violent games distort consequences of violence is that consequences of violent acts are barely visible to the user. For example, this is often the case if the virtual violence includes the use of long-distance weapons such as guns or other automatic weapons. In this case, virtual victims may often be attacked over a long distance and their injuries and suffering may not be observable to the user. In the study by Thompson and Haninger (2001), 24% of the analyzed video games rated E for "Everyone" featured gun-violence, and Thompson et al. (2006) found that 75% of the M-rated video games analyzed in the study featured the use of guns. Likewise, Heintz-Knowles et al. (2001) found that of all the characters capable of committing violent acts in their study, 41% used weapons—often a gun—to commit their aggression.

Another important aspect of how video games distort the consequences of violence is that their portrayal is—in comparison to the suffering of real flesh-and-blood victims of—aesthetically made up and cleaned of potentially disturbing aspects such as disgusting wounds or serious and enduring psychological pain. In the study by

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Shibuya et al. (2004), harmful consequences were depicted in 94% of all analyzed games—usually "only" by showing falling victims and distorted faces (80%) or screams or groans (66%), however—whereas body injuries of victims were portrayed in only 9% of all games. Examining portrayals of virtual violence to human characters, Thompson et al. (2006) found that 83% of the analyzed games included depictions of violence they interpreted as "severe" (e.g., involving characters screaming in agony or bleeding excessively when injured). However, ad-hoc reviews of the analyzed first-person shooter games conducted by the authors of the present study suggest that consequences were coded as "severe" in Thompson et al.'s study if victims that were usually aggressive in the first place "only" briefly screamed and showed some bloodshed when injured. But virtually none of virtual victims in the ad-hoc reviewed first-person shooters (e.g., *Red Faction II*, *Robocop*, *Soldier of Fortune II*) showed continued suffering (whining, screaming, pleading or begging for help or mercy) after being shot or injured. This may suggest that video game violence coded as "severe" in Thompson et al.'s study actually contained sanitized or distorted portrayals of realistic consequences. In line with this interpretation, Smith et al. (2003) found that half of all violent interactions analyzed in their study featured unrealistically low levels of harm or pain to the victim. Similarly, Heintz-Knowles et al. (2001) observed that most virtual victims appeared comparatively unaffected by the aggressive acts committed against them. Also, Haninger et al. (2004) found that many teen-rated video games did not realistically portray the consequences of violence.

Euphemistic Labeling

Furthermore, a few content analyses examined if violent video games embed violence in a humorous context. This may be interpreted as a *euphemistic labeling* of violence. Shibuya et al. (2004) found that hostile or mild humor accompanied violence in 60% of the analyzed games. In the Smith et al. (2003) study, humor was a contextual cue of depicted violence in 41% of the analyzed game segments.

Conclusion

Taken together, the existing content-analytical studies have advanced our understanding of moral disengagement factors in violent video games, but to date there has not been a thorough and systematic content analytic investigation of the issue employing a representative sample of popular violent video games. The findings of previous studies suggest that violence in video games is often portrayed as justified because opponents are displayed as gruesome (advantageous comparison), players have to fight for a higher good (e.g., to save the world), violence is rewarded, and victims rarely include civilians, females, or children. Quite often, violence also seems to be embedded in a humorous or euphemistic context. Furthermore, consequences are often portrayed in distorted ways in violent video games, either because victims

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are barely visible (e.g., long-distance fights) or because realistic but upsetting forms of victims' suffering are not displayed (e.g., ongoing physical and psychological pain).

Although these findings are valuable, they are also partly interpretative, because none of the existing studies directly aimed to examine moral disengagement factors. Furthermore, previous content analyses do not shed any light on a couple of other important moral disengagement factors, such as the "diffusion of responsibility" or "dehumanization."

Content analysis of Moral Disengagement Cues in First-person Shooter Games

In light of previous content analyses that have attempted to examine the context and nature of violence in video games, an objective investigation of the presence of Bandura et al.'s (1996) moral disengagement factors—moral justification, euphemistic labeling, diffusion of responsibility, distortion of consequences, dehumanization, and attribution of blame—in video games is warranted. Accordingly, we aimed to provide the first systematic content analysis of the presence of all eight moral disengagement cues embedded in violent video games. We chose specifically to examine *first-person shooter games* (FPS games) for three reasons. First, FPS games are a top-selling genre of violent video games and enjoy great popularity (Entertainment Software Association, 2012). FPS games such as the *Call of Duty* series are among the best-selling video games worldwide. Second, Haninger et al. (2004) suggested that of all video game genres, violent acts are most prevalent in FPS games. Accordingly, it is reasonable to focus on FPS games when examining virtual violence. Third, public debates about violent video games frequently refer to popular FPS games such as *Counterstrike* or *Call of Duty*. Therefore, scientific insights about how FPS games communicate violence bear societal relevance and promise to substantiate the public debate.

Method

Sampling

Initially, 28 of the highest ranked FPS games (platform: PC) based on available 2011 GameSpot (gamespot.com) review scores were included in the sample (see Table 1).[1] We were interested in examining the prevalence of moral disengagement factors in the narratives and actual game-play of FPS games. A narrative provides a game with standard elements of storytelling, such as an introduction and the development of a main character in cinematic scenes during game play or between missions (Schneider, Lang, Shin, & Bradley, 2004). Accordingly, we dropped one game that featured no narrative. Ten other games were excluded from the list. We dropped *Orange Box* because it was not a single game but a package of single games. We dropped another six titles because they were part of a series and a higher-ranked game of that series was already sampled. Finally, we dropped *Quake III Arena* because it featured only a (non-narrative) multiplayer mode, and we dropped two games from the *Portal* series that featured no violence.

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The 17 FPS titles, we eventually sampled were not only among the best-evaluated FPS games according to GameSpot, but also appeared among the most highly ranked FPS games based on Metacritic ratings (metacritic.com), all receiving metascores of 87 or higher. Most of the sampled titles represent "classics" of the FPS genre.

Levels of Analysis (Unitizing)

Following previous content analyses of violent video games (e.g., Heintz-Knowles et al., 2001; Smith et al., 2003), the content analyzed in this study was subjected to two levels of analysis: a macro-level (general scenario and narrative of video game) and a micro-level (video game segments; actual game play).

Macro-level: video game. The macro-level analysis examined general characteristics of the 17 FPS games in the sample, including ESRB rating, PEGI rating, setting, conflict, and choice of main character. To assess these descriptors, information about the game was based on content and plot descriptions from GameSpot and Wikipedia, and, if necessary, the first five minutes of each game's introductory mission (or tutorial) found on YouTube. We decided that coders should also take the first five minutes of the introductory mission (or tutorial) of each FPS game into account as a context unit, because these generally provide a narrative context, presenting information about the main character, objectives of game play, nature of conflict, and types of enemies. In almost all cases, however, the information provided on GameSpot and Wikipedia was already sufficient and allowed for a clear assignment of codes.

Of the analyzed FPS games, all games had an ESRB rating of M (Mature 17+) and the majority of the games had PEGI ratings indicating suitability for ages 16 years and older (88.2%). The settings for these games varied. Events occurred in historical settings (23.5%), such as the Cold War in *Call of Duty: Black Ops*; completely fictional settings (35.3%), such as an underwater city in *BioShock*; or partially fictional settings (41.2%), such as with mercenaries and mutants on a Micronesian island in *Far Cry*. All analyzed games featured a clear conflict against either a single enemy (64.7%), such as aliens in *Quake*, or two different enemies (35.5%), such as aliens and guards in *The Chronicles of Riddick: Escape from Butcher Bay*. In all the sampled games but one, the user played the default main character, whereas in *Unreal Tournament*, the user was allowed to design his or her own character.

Micro-level: video game segments. The micro-level analysis examined the presence of moral disengagement mechanisms during actual game play of the sampled video games. The single-player mode of FPS games usually consists of a series of missions that users have to accomplish. A video game mission is often characterized as a level in game play where the majority of the player's actions take place within a single location or scenario. In a mission, the player's goal is to complete particular objectives before being able to progress to the next level or scenario. In the present approach, we first listed all missions of each of the sampled FPS games. To check for the total number of missions per game, we first consulted GameSpot and then

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alternatively looked at the official website of the game if GameSpot did not indicate the total number of missions. From the list of total missions per game, we randomly selected two missions per game, resulting in 34 missions.

Following suggestions by Schmierbach (2009), we coded a five-minute segment of recorded game play per mission (2 five-minute segments per sampled game, 34 coded segments in total). This approach matched the standards of previous content analyses that also relied on the coding of only a fraction (e.g., about 10 minutes) of overall game play per title (e.g., Heintz-Knowles et al., 2001; Smith et al., 2003). We also coded only five minutes per sampled mission, as we believed that aspects informing about moral disengagement factors such as the game logic (e.g., shooting for points) and ways of display (e.g., enemy screams if shot) were unlikely to change throughout a mission.

Digitally recorded game play was retrieved from clips posted on YouTube (so-called "walkthroughs"). Analyzing recorded segments of game play has been commonly employed in previous content analyses of video games (Beasley & Standley, 2002; Haninger & Thompson, 2004; Lachlan, Smith, & Tamborini, 2005; Smith, 2006; Smith et al., 2003). A common problem in content analyses of video games is that the examined material may vary depending on the skill of the user (Schmierbach, 2009). This genuine problem in content-analytical video game research is very difficult to circumvent (Schmierbach, 2009). By relying on publicly available walkthroughs in the present study, we may have examined the game-play of relatively experienced and dedicated FPS users.[2]

We searched for the game title and the number of the mission (e.g., "Crysis Mission 7"), or the official name of the mission (e.g., "Crysis Mission Core") on YouTube. FPS walkthroughs posted on YouTube are often organized in individual clips whose titles adhere to the different missions of the game (e.g., Crysis Mission #6 Awakening, Crysis Mission #7 Core). We first examined the top search results from YouTube and selected a clip only if it contained only pure game-play (i.e., no voice-over narration or captions, such as in "Let's play" documentations), no indication of editing video game content/play (e.g., music instead of original sound effects), and a seamless game-play without interruptions or pauses. Furthermore, we sampled only clips that included recorded game-play of an English version of the game (e.g., characters spoke in English). As a convenient but systematic sampling method, we always selected the first video segment from the list of search results that met our inclusion criteria.

We then coded the first five minutes of each sampled clip portraying the actual game play of each sampled mission. To ensure that the 34 five-minute segments of game play that we coded did not omit important contextual information about moral disengagement mechanisms, we asked coders to recall the narrative of the game and to check if each coded segment contained violence committed by the player's character. All video game segments in the sample met this criterion.

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Coding Scheme

Closely following Bandura's theoretical conceptualization of eight moral disengagement mechanisms, and building on our personal experience with FPS games, as well as unsystematic analysis of descriptions of FPS narratives on GameSpot and of actual FPS game-play, we operationalized potential indicators of each moral disengagement mechanism. In a next step, we modified our initial codebook after testing it with clips of actual FPS game play and discussing the comprehensiveness and applicability of indicators (e.g., we initially started out with several "reward" categories but eventually decided to collapse these categories; we clarified under which circumstances coding of an indicator would not be applicable; we included improved examples from the game-play we examined to aid coders in their decisions). We also enhanced our initial coding plans of the macro- versus micro-level of a game (e.g., we decided that the first five minutes of the intro-mission or tutorial of each FPS game should also be taken into account to code the macro-level). Eventually, six moral disengagement categories, each with at least one indicator, emerged from the discussion of how to code segments of actual game-play.[3] Because we wanted to determine which moral disengagement mechanisms appear in FPS games, the presence or absence of each moral disengagement indicator was coded in each segment. Specifically, an indicator was coded as "present" if it was encountered at least once in a given segment.

Moral justification. This category was defined as portraying conduct as serving a socially worthy or moral purpose. We found it difficult to disentangle moral justification from the mechanism of advantageous comparison, which relies on minimizing an immoral action by comparing it to the action of an enemy. As a result, we decided to include advantageous comparison as one indicator of moral justification, in addition to one regarding the verbal aggressiveness of the enemy and one assessing whether the enemy attacked first. Moral justification can also be reinforced with praise, medals, and other types of rewards that signal the moral correctness of an action. Finally, we noted whether civilians could be shot as a reverse-coded indicator because shooting innocent individuals is not generally morally justifiable.

Therefore, the moral justification category comprised five indicators, which included the presence of: (1) advantageous comparison if a segment featured a gruesome, harsh, or unwanted violent act of an enemy (e.g., the bombing of Pearl Harbor, torturing of civilians); (2) verbal aggression if enemies displayed aggression through language, either with words, tone of voice, or sounds; (3) attacking first if enemies opened fire or attacked before the user attacked them; (4) rewards for violent action if praise or language-based reinforcement (e.g., "well done"), points (e.g., counter of kills), medals, or other rewards were apparent; and/or (5) civilians as capable of being shot if it was possible to shoot innocent or helpless people, which was possible only if civilians were visible during the segment and was reverse-coded so that the absence in the segment indicated moral justification.

Euphemistic labeling. This category was exemplified by language, sounds, or graphical depictions that make harmful conduct respectable if not humorous. The

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presence of three indicators was coded in the euphemistic labeling category: (1) sanitized language if the user character, an allied character, or the game commentary utilized sanitized language to describe violence (e.g., "to take them out" instead of "to kill"), which was possible only if the segment featured the use of language or commentary; (2) euphemistic responses to violence if humorous or unrealistically exaggerated sounds and graphics accompanied violent user action; and/or (3) euphemistic music if encouraging, heroic, or uplifting music (distinguished from suspenseful music) was heard during the context of violent action.

Diffusion of responsibility. This category was defined as minimizing personal agency for a violent act by placing responsibility on others who were involved, such as soldiers in a squad. Relatedly, displacement of responsibility occurs when the agentive role of a perpetrator is obscured by placing responsibility on someone else, typically an authority figure. Because displacement of responsibility is very closely related to diffusion of responsibility, we decided to include both in this category. Therefore, the presence of three indicators was coded: (1) orders if the player had to follow explicit orders given in a mission briefing or by a commander; (2) fighting in a team if the player visibly fought in a team or squad that consisted of at least one other comrade; and/or (3) aggressive team members if squad members attacked the enemy autonomously, even if the player was not attacking them; this was possible only if the segment featured fighting in a team.

Distortion of consequences. This category included minimizing, ignoring, distorting, and/or disbelieving the effects of immoral actions. This is common when suffering is not visible or when destructive actions are physically and temporally removed from their effects. This category included eight indicators, which focused primarily on enemy responses to being injured by a player. The enemy response indicators were possible only if the enemy was not a machine or object such as a tank or UFO. Specifically, we coded the presence of enemies (1) crying if they cried or sent auditory signals of pain when hit; (2) tumbling in pain if they visibly reacted to pain (e.g., by distorting their face); (3) suffering and moaning on the ground if they suffered, crawled, or moaned after being hit; (4) having severe injuries if cut body parts, inner organs, or other severe injuries were visible; (5) bleeding if their blood spilled after being injured; (6) showing fear if they fled, screamed, or used protective gestures when attacked; and/or (7) remaining on the ground after death if their bodies stayed visibly on the ground after a fatal hit. All indicators (except for showing fear) were reverse-coded so that their absence indicated a distortion of consequences. In addition, the presence of (8) long-distance weapons was coded if the player made use of at least one long-distance weapon, such that enemies hit by this weapon were barely visible and hearable; this could include a sniper rifle with field glass as long as the enemies that were hit were seen but not heard.

Dehumanization. This category was exemplified by having enemies that either do not possess human qualities or are stripped of human qualities, therefore seeming to possess fewer moral rights. This may include instances when enemy groups are

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Table 1 List of sampled and dropped video games.

Video game	GameSpot grade	Release date	Sampled?
1. Crysis	9.5	November 13, 2007	Yes
The Orange Box	9.5	October 10, 2007	No, package
2. Unreal Tournament	9.5	November 30, 1999	Yes
Unreal Tournament 2004	9.4	March 6, 2004	No, series
3. Half-Life	9.4	October 31, 1998	Yes
4. The Chronicles of Riddick: Escape From Butcher Bay	9.3	December 8, 2004	Yes
5. No One Lives Forever 2: A Spy in H.A.R.M.'s Way	9.3	September 30, 2002	Yes
The Operative: No One Lives Forever	9.3	November 9, 2000	No, series
6. Quake	9.3	May 31, 1996	Yes
Half-Life 2	9.2	November 16, 2004	No, series
7. Far Cry	9.2	March 23, 2004	Yes
8. Return to Castle Wolfenstein	9.2	November 20, 2001	Yes
Quake III Arena	9.2	December 2, 1999	No, multiplayer
Descent 2	9.2	February 29, 1996	No, no narrative
9. F.E.A.R.	9.1	October 17, 2005	Yes
10. Serious Sam: The Second Encounter	9.1	February 4, 2002	Yes
11. Clive Barker's Undying	9.1	February 21, 2001	Yes
Portal 2	9.0	April 19, 2011	No, no violence
12. Call of Duty: Black Ops	9	November 9, 2010	Yes
13. Battlefield: Bad Company 2	9	March 2, 2010	Yes
14. Left 4 Dead 2	9	November 17, 2009	Yes
Crysis: Warhead	9	September 16, 2008	No, series
Portal	9	October 10, 2007	No, no violence
Call of Duty 4: Modern Warfare	9	November 5, 2007	No, series
15. BioShock	9	August 21, 2007	Yes
16. Brothers in Arms: Road to Hill	9	March 15, 2005	Yes
Call of Duty	9	October 29, 2003	No, series
17. Halo: Combat Evolved	9	September 30, 2003	Yes

Note: Overview of first-person shooters analyzed in the present study.

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portrayed as interchangeable objects, as animals or beasts, or in a stereotypical way as out-group members. Additionally, a lack of information about an enemy's lifestyles, values, emotions, and so on, may signal dehumanization. In this category we coded the presence of four indicators: (1) dehumanizing labels if enemies were labeled with derogatory terms (e.g., "bastard," "rat," "Jap,"), which was possible only for segments that contained at least some sort of language or commentary; (2) interchangeable enemies if single soldiers of the enemy appeared faceless or fungible, usually because all of the enemy soldiers looked the same, making it hard to identify unique personalities or faces; (3) single opponents if the player was usually confronted with individual enemy soldiers; and/or (4) visible enemy emotions if the faces of enemies

and their emotional expressions were visible, which was possible only if the enemy had the capability of showing emotions. The last two indicators were reverse-coded because being confronted with individual soldiers and seeing their emotions may negate dehumanization.

Attribution of blame. This category was defined as blaming adversaries or circumstances for the violent action in the game. One indicator was included in this category: the presence of attribution of blame was coded if voiceovers or text-commentaries explicitly blamed the enemies or victims for the violent action (e.g., "they deserved what they got"), which was possible only if the segment featured language, such as commentary of the ongoing action in the game.

Coding: Training and Reliability

Three coders (who were also involved in the development of the research project) from universities located in the Western and Northeast regions of the United States and Amsterdam, The Netherlands, coded the video game descriptors and moral disengagement mechanisms in the sample of 17 FPS games, consisting of 34 randomly selected missions (two missions per game) or 340 total minutes of game play. After the final codebook was accomplished, the actual coding of the video games and video game missions took one month to complete.

To allow for assessment of their consistency, all three coders coded 47% of the sample (16 video game missions). Reliability for each of the individual categories of this respective subset of the sample was calculated using Krippendorff's alpha (Hayes & Krippendorff, 2007). The coders showed absolute agreement in their coding in all but three macro-level categories: introduction of supporters (.83), black-and-white conflict (.82), and number of different enemy groups in game (.70). Furthermore, the coders showed absolute agreement in their coding of 16 out of 25 micro-level categories. Of the remaining 9 micro-level categories, the coding of 6 categories was reliable: advantageous comparison (.87), sanitized language (.93), bleeding (.83), dehumanized labeling (.87), visible enemy emotions (.73), and enemy is blamed (.92). However, three micro-level categories had to be dropped from further analyses because of low reliability: enemy shows fear (.00), euphemistic sounds and graphics (−.02), and dead body remaining on ground (−.02).[4]

For the remainder of the video game missions in the sample, each coder was randomly assigned to code missions for three other games.

Results

Macro-level of Analysis: Video Game (Narrative)

A first goal was to examine the prevalence of moral disengagement factors included in the general settings and narratives of the analyzed FPS games. Preliminary analyses reported in the method section already revealed that the typical (single-player modus) analyzed FPS games presented a narrative in which users played a

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pre-defined protagonist that fought in a conflict against one or two different enemy groups in either a completely (e.g., aliens on space base) or partially fictional (e.g., mercenaries on existing tropical island) setting.

We further examined if the FPS games tended to justify violence by portraying conflicts as "black-and-white." A majority of the analyzed FPS games featured a black-and-white conflict (76.5%) with clearly good and/or culturally close protagonists and clearly bad and/or culturally distant opponents (e.g., US special forces versus soldiers of the North Korean People's Army and aliens in *Crysis*). We also examined whether the video games in our sample tended to blame opponents and provided reasons for advantageous comparison by highlighting opponents' initial atrocities in their narratives. Almost all analyzed video games (88.2%) highlighted initial atrocities or other severe misconduct of opponents in their narrative (e.g., torturing and human experiments by Nazi soldiers in *Return to Castle Wolfenstein*).

Violence appears more justified if it is enacted against dehumanized opponents. In almost all of the analyzed video games, users slipped into the role of a *human* protagonist as a player character (94.1%). In virtually all of the games that featured a player character whose race could be identified (64.7%), the character was Caucasian (90.9%). In contrast, about 54% ($N = 24$, because 7 video games included two enemy groups) of the identified enemy groups consisted of fictional *animal*-like creatures, such as aliens, whereas only about 46% of all identified enemy groups were human. This finding suggests that many of the analyzed video games tended to induce dehumanization by featuring opponents that were culturally and psychologically remote to users (and more so than protagonists). Furthermore, 70.6% of the analyzed video games in the sample included supporters or allies who followed the same goals as the protagonist of the game. Allies who strive for the same goals (and therefore support or even engage in the same violent action as the protagonist) may allow for a diffusion of personal responsibility.

Micro-level of Analysis: Video Game Mission (Actual Game Play)

In a second step of the analysis, we examined the prevalence of moral disengagement factors in the 34 sampled segments. Almost all of the analyzed segments (91.2%) featured representatives of only one of the enemy groups introduced in the game's narrative. When representatives of more than one enemy group were identified in a segment (8.8%), subsequent coding (e.g., the portrayal of consequences) referred to the group that was identified first. Results of the analysis are displayed in Table 2.

To provide an overview of the prevalence of all six coded moral disengagement factors, we computed a mean-index of each moral disengagement factor per segment based on all dichotomous indicator variables of the respective factor. These mean-indices provided an initial step toward our valence measure and indicated how much or how many of the indicators of a factor were present in a given segment (e.g., $M = .5$ showed that 50% of the indicators of a factor were present in that segment). We then computed the mean of these mean-indices across all 34 segments (see Table 2, first column). The reported means show the average prevalence of indicators of each

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Table 2 Prevalence of Moral Disengagement Factors in Violent Video Game Segments (N = 34)

Factor	*M (SD)*	> 0	Indicator(s)					
Distortion of consequences	.68(.19)[A]	100%	No Suffering 94.1%[a]	Distance weapon 88.2%[a]	No tumbling in pain 79.4%[ab]	No severe injuries 67.6%[ac]	No bleeding 38.2%[b]	No crying 38.2%[c]
Moral Justification	.55(.25)[AB]	100%	No civilians shot 94.1%[a]	Attacking first 64.7%[ab]	Verbal aggression 47.1%[bc]	Rewards 41.2%[bc]	Advantag. compar. 26.5%[c]	
Dehumanization	.55(.20)[ABC]	100%	No faces visible 79.4%[a]	Identical enemies 61.8%[ab]	Individual opponents 47.1%[ab]	Dehuman. labeling 32.4%[b]		
Diffusion of responsibility	.43(.37)[BC]	70.6%	Orders 58.8%[a]	Team members 38.2%[a]	Aggressive team 32.4%[a]			
Euphemistic labeling	.37(.31)[C]	64.7%	Sanitized language 50.0%[a]	Euphem. music 23.5%[a]				
Attribution of blame	.12(.33)[D]	11.8%	Text or voice 11.8%					

Note: As a first prevalence measure, reported means show the average prevalence of the indicators of a moral disengagement factor across all 34 coded segments. For example, a mean of .68 of the "distortion of consequences" factor implies that - on average - any indicator of this factor occurred in 68% of the segments. (The reported mean is identical to the average prevalence of individual indicators reported on the right side of the table). Moral disengagement factors that do not share the same uppercase letter in the column "*M (SD)*" significantly differ in their prevalence according to Bonferroni-corrected paired sample t-tests (additional Wilcoxon signed-rank tests for nonparametic data yield identical findings). As a second prevalence measure, reported percentages in the column labeled ">0" show how many of the 34 segments contained at least one of the indicators of a factor. The other reported percentages in the table show how often an indicator of a factor occurred in the 34 coded segments. Indicators of a factor that do not share the same lowercase letter significantly differ in their prevalence according to Bonferroni-corrected McNemar tests.

factor in the coded segments. For example, a mean of .68 of the *distortion of consequences* factor shows that, on average, any indicator of this factor occurred in 68% of the coded segments. As Table 2 shows, indicators of distortion of consequences were most prevalent in the analyzed segments, followed by moral justification, and dehumanization. Attribution of blame was the least prevalent factor and occurred in only about 12% of all segments.

A closer examination of the indicators of the most prevalent factor, *distortion of consequences*, showed that all analyzed segments included at least one of the six indicators of this factor (see Table 2, second column). In virtually all analyzed segments, victims did not continue to suffer on the ground after being seriously hit (see Table 2 for exact prevalence of indicators). Also, in barely any of the segments did opponents tumble in pain after being hit by the player. In addition, attacks on victims frequently involved long-distance weapons so that consequences were not fully visible. In a majority of the analyzed segments, however, harmful consequences were portrayed in that enemies cried when hit, and attacks resulted in some blood spill.

All analyzed segments also contained at least one of the five indicators of *justification of violence*. Virtually none of the segments featured violence of the protagonist against civilians. In most of the segments, opponents initiated violence if the player character came into sight (e.g., by opening fire). In almost half of the segments, enemies were also verbally aggressive if the player character approached. In about 41% of the segments, violence was rewarded. However, only about a fourth of the sequences offered an advantageous comparison by featuring gruesome or exceedingly violent acts of the enemy (e.g., in cut scenes or "scripted behavior").

Dehumanization was also a prevalent moral disengagement factor. All analyzed segments contained at least one of the four indicators of this factor. The analysis of the sampled games' general set-up already revealed that in more than 50% of all games, enemies were non-human creatures. Furthermore, in most segments, faces of opponents were barely visible (e.g., because opponents wore masks or helmets or were simply too far away to be fully visible). Accordingly, potentially humanizing emotional expressions in the faces of most victims were barely identifiable. In addition, in most segments, opponents looked interchangeable, like fungible entities without their own personalities, because they wore exactly the same uniform, were of the same height or size, and so on. In almost half of all analyzed segments, players fought against opponents who attacked in smaller or larger groups, which again made it difficult to identify unique personalities. Moreover, in about a third of all segments, opponents were labeled in a dehumanized way (e.g., as "parasites," "the krauts," or "alien scum").

About 71% (n = 24) of all segments contained at least one of the three indicators of *diffusion of responsibility*. The factor was already an evident part in the narratives of most analyzed games, because the majority of them featured allies who supported the player's character. This aspect was also reflected in the finding that in most of the segments, players received orders from somebody and were instructed to commit violent actions. In addition, in about 38% of all analyzed segments, the player

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character fought together with other autonomously or semi-autonomously operating team members (non-player characters, or NPCs; some NPCs could be instructed by the player). If present, these team members were virtually always aggressive and initiated attacks on opponents (e.g., opened fire).

In about 65% (n = 22) of all segments, at least one of the two indicators of *euphemistic labeling* was present. In half of all segments, sanitized language or euphemistic expressions were used to describe violence (e.g., "let's give these ugly bastards a taste of their own" in *Crysis*). The other indicator was rare: Euphemistic background music accompanied violence in only about a quarter of all analyzed segments.

The least prevalent of all six coded moral disengagement factors was *attribution of blame*, which was part of only about 12% (n = 4) of all coded segments. If it occurred, the enemy was usually blamed in cut-scenes that interrupted the actual game play (e.g. an NPC in *F.E.A.R.* stating that "it is the nature of monsters to destroy their makers").

Discussion

How do violent video games communicate violence? In the context of this question, moral disengagement factors embedded in violent video game play have recently received considerable attention among scholars (Gabbiadini et al., 2012; Gollwitzer & Melzer, 2012; Greitemeyer & McLatchie, 2011; Hartmann et al., 2010; Hartmann & Vorderer, 2010; Klimmt et al., 2006; Lin, 2010, 2011; Shafer & Raney, 2013). In line with the idea that users treat virtual actors as social beings (Reeves & Nass, 1996), scholars argued that users enjoy shooting virtual actors not because they are fully aware that they are tackling only pixels on the screen, but because the seemingly real violence becomes morally acceptable and enjoyable due to the presence of moral disengagement factors (e.g., Hartmann, 2012). Other researchers suggested that moral disengagement may also play an important role in understanding potential effects of video game violence on aggression. Our present study complements these lines of research by providing evidence for the (so far untested) assumption that virtual violence is often accompanied by moral disengagement factors. Our systematic review of existing content analytical studies and our own additional content analysis of narratives and actual game play of the single-player campaigns of 17 top-rated FPS games suggest that moral disengagement factors are frequently embedded in FPS games and in other violent video game genres.

The present content-analytical examination of moral disengagement factors embedded in the *narratives and general scenarios* of the top-ranked FPS games suggests that they typically feature a black-and-white conflict in which a (good) human Caucasian protagonist fights against (bad) non-human creatures in a setting that is at least partly fictional. Results also show that the plots of FPS games typically portray initial atrocities of the enemy. Black-and-white conflicts may allow players to morally justify violence committed against "seemingly real" video game characters. The portrayal of initial atrocities of the enemy may allow players to engage in

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advantageous comparisons. Black-and-white conflicts also convey ingroup-outgroup distinctions that effectively trigger a dehumanization of outgroup members; this general mechanism has also been observed in the context of video game play (Besmann & Rios, 2012). Together with the finding that most enemy groups in the analyzed FPS games were not human, this mechanism suggests that justification of violence and dehumanization are prevalent moral disengagement factors in the narratives and general scenarios of FPS games.

Furthermore, the analysis of moral disengagement factors contained in *actual game play* (segments) of the sampled top-ranked FPS games suggest they tend to distort the consequences of violence, dehumanize opponents, and provide cues that assist users in morally justifying virtual violence. Findings of the prevalence of individual indicators of moral disengagement factors demonstrate that FPS games typically involve violence against enemies that show no continued suffering when seriously wounded. Opponents also typically do not belong to protection-worthy groups, such as civilians or children. The depicted violence often includes long-distance fights and enemies whose faces and emotions are barely visible. In addition, players often receive orders to carry out violence.

However, it is noteworthy that the analyzed FPS games usually did not provide completely sanitized violence. According to the present findings, virtual opponents hit by the player usually cry and shed some blood. Furthermore, two of the examined moral disengagement factors, attribution of blame and euphemistic labeling, seem to be less prevalent in FPS games.

In general, these findings suggest that moral disengagement cues are commonly embedded in FPS games. The present findings contribute to our understanding of why many users enjoy FPS games, even if they automatically tend to perceive virtual opponents as social beings (e.g., Reeves & Nass, 1996). FPS games seem to include some aspects that make violence informative (so that users can feel effective or competent) and exciting (e.g., a victim's cry or bloodshed). At the same time, they tend to lack features that potentially make violence an irritating or distressful experience, such as killing for unjustified reasons, harming innocent victims, or showing victims' enduring physical and psychological pain. The present findings adhere to the results of experimental studies by Hartmann and Vorderer (2010) that suggest that users enjoy virtual violence most if it is only partly sanitized. The finding that moral disengagement factors are commonly embedded in FPS may also explain the substantial irritation (and heated debates), even among avid gamers, about the few existing scenarios in which moral disengagement factors are presumably largely absent, including the infamous "No Russian" mission of the *Call of Duty: Modern Warfare* series in which users have to conduct a massacre of innocent civilians. Taken together, these findings recall that contemporary FPS games are primarily designed to entertain their users and not to represent reality.

Following this argument, it seems reasonable to expect that moral disengagement factors are also frequently embedded in other violent video game genres that seek to entertain their users. In line with the findings of the content analytical studies reviewed above, we believe that action-adventures such as *Grand Theft Auto V*,

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fighting games such as *Tekken*, or role-playing games such as *World of Warcraft* also commonly embed violence in a set of moral disengagement factors that free users of moral concern, thereby enhancing enjoyment. As moral disengagement factors can be embedded in both the narrative and actual game-play of a game, their prevalence may not depend on whether a genre features more games with narratives (e.g., role-playing) or without (e.g., fighting games). Similar to FPS games, in the rare cases when moral disengagement factors are assumingly largely absent, such as in a mission in *Grand Theft Auto V* that requires the torturing of another person and that provides a realistic display of consequences, the debate even among avid gamers (e.g., Hern, 2013) suggests that virtual violence is normally contextualized by moral disengagement factors.

In summary, the present content analytical research complements and extends past content analyses of violent video games. For example, previous studies found that violence in video games is often portrayed as a justified and rewarded behavior with limited serious consequences (e.g., Heintz-Knowles et al., 2001; Smith et al., 2003). This finding is in line with the present outcome that distorted consequences and moral justification are prevalent moral disengagement factors in FPS games. Moving beyond previous studies, the present findings also show that dehumanization, and diffusion of responsibility, in particular, are prevalent moral disengagement factors in both the narratives and actual game-play of many FPS games. Whereas other studies that examined different types of violent video games have found that virtual violence is often embedded in a humorous context (Shibuya et al., 2004), this factor—addressed in the present context as euphemistic labeling—appears less prevalent in FPS games.

Although not directly examined in the present study, the findings may also have important implications for studies examining the *effects* of moral disengagement in violent video games on aggression (e.g., Greitemeyer & McLatchie, 2011). The present findings suggest that FPS games commonly depict violence as morally acceptable behavior. It seems relevant to examine whether the presence or absence of moral disengagement factors moderates the effects of violent game-play on users. For example, users tend to perceive violent acts as more extreme if they are not justified (Tamborini, Weber, Bowman, Eden, & Skalski, 2013) and feel more guilty or irritated about virtual violence if moral disengagement factors are absent (Hartmann & Vorderer, 2010). Maybe such negative emotional responses instigate a more critical reflection of the portrayed violence and, thus, diminish aggressive effects. In addition, users may also learn from violent video games that violence is an appropriate or acceptable behavior (Anderson & Bushman, 2002). For example, if they frequently engage in playing FPS games, they may implicitly learn and enhance cognitive scripts that trigger moral disengagement in situations that include violence (Anderson & Bushman, 2002; but see Elson & Ferguson, 2014). Future studies examining the effects of violent video game use on aggression may test these assumptions, specifically by studying the influence of the most prevalent moral disengagement factors identified in the present approach on users' aggression and tendency to morally disengage.

As with any research, these findings have to be interpreted within the study's limitations. First, the sampling of actual game play provides a typical challenge in the

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analysis of video game content (Schmierbach, 2009). The micro-level analysis of this study focused on sampled segments of game play represented in walkthroughs (i.e., material produced by video game users who record how they play through a video game and publish these recordings online). One important (and, eventually, empirical) question is whether five minutes of analyzed game-play can adequately represent the content of a whole mission or level, and whether 10 minutes of analyzed game-play can adequately represent the content of a whole FPS game. Another important question is whether the game-play we analyzed in the present study may have been different if we relied on recordings by other users. It may be that most walkthroughs on YouTube represent the game-play of more skilled video users. To the extent this assumption is true, and to the extent that game-play of skilled users includes moral disengagement factors in a systematically different way than does the game-play of unskilled users, the present findings may be representative only of the FPS game-play of more skilled users. Future studies should test these assumptions. A relevant follow-up study could measure the individual skill of users, record their FPS game play, and then examine if the prevalence of moral disengagement factors differs based on players' skill (e.g., Matthews & Weaver, 2013). In general, we assume that the rise of emergent narratives or even *interactive story-telling techniques* in video games (Klimmt, Roth, Vermeulen, Vorderer, & Roth, 2012) may result in a greater variation of plotlines and narratives (maybe less in FPS games than in other genres, such as role-playing games). Therefore, moral disengagement factors on a narrative level may indeed differ depending on how individual players proceed through a game. However, the prevalence of moral disengagement factors on the level of actual game play (e.g., general response of other character if being harmed) may vary less between individual users, because they may be more determined by the underlying *game engine*.

Furthermore, the present study examined whether moral disengagement factors were absent or present in the actual game play of FPS games, but the frequency of occurrence was not coded. Future studies may advance the present findings by examining whether moral disengagement cues occur only sporadically or frequently in violent video games.

These limitations aside, the present approach is the first to provide systematical insights into the prevalence of moral disengagement factors embedded in FPS games, a very popular and highly debated violent video game genre. Both the literature review and the present content analysis suggest that moral disengagement cues are, overall, frequently embedded in the narratives and game play of violent video games, including FPS games. Distortion of consequences, dehumanization, and moral justification seem to be particularly prevalent factors in FPS games.

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Notes

[1] The sample size was defined ex ante, based on economical considerations. Because we planned to analyze not only the general narrative (macro-level), but also 2 five-minute segments of the actual game-play (micro-level) of each sampled game, we decided that—given the resources that were available—a smaller sample of 17 games was feasible.

[2] However, it remains unclear if this aspect affected the results of our content analysis, as it is difficult to say if or how a user's playing skill may affect the presence or absence of moral disengagement factors in actual game play.

[3] When developing the codebook based on the eight moral disengagement factors suggested by Bandura et al. (1996), we decided to merge two closely related factors respectively, namely justification of violence and advantageous comparison, and displacement of responsibility and diffusion of responsibility. This strategy resulted in the coding of six moral disengagement factors on the micro-level. The codebook can be freely retrieved (as a Microsoft Excel file) from the website of the first author, http://www.tinyurl.com/tilohartmann.

[4] For binary categories that are very prevalent (almost always coded as present) or binary categories that are very rare (almost always coded as absent), Krippendorff's alpha can be very low even with very few mistakes of the coders. This effect also occurred in the present study. In the present study, dead opponents remained on the ground in virtually all coded cases, whereas enemies virtually never showed fear. In addition, the examined game play barely ever included any euphemistic responses.

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