Players' Moral Decisions in Virtual Worlds: Morality in Video Games

André Melzer and Elisabeth Holl

Université du Luxembourg

NOTE:

This is a manuscript draft accepted for publication in 2020 in *The Oxford Handbook of Entertainment Theory* (Editors: P. Vorderer & C. Klimmt).

Author Note

André Melzer and Elisabeth Holl, Institute for Health and Behaviour, Media and Experimental Lab, University of Luxembourg.

Correspondence concerning this article should be addressed to André Melzer, Institute of Health and Behaviour, University of Luxembourg, 2, avenue de l'Université, 4365 Esch-sur-Alzette, Luxembourg. Email: andre.melzer@uni.lu

1 Introduction

Meet Alex, who just turned on her console to continue playing her latest video game, *Metro Exodus* (Deep Silver, 2019), a story-driven, post-apocalyptic shooter game. Together with a group of survivors Alex, that is, her character Artyom, is constantly looking for resources in a hostile environment full of mutants and rival bands that would not hesitate to kill. Alex loves this game and she does whatever is needed to protect her character and his allies, including looting and killing without feeling any remorse. In the current mission, however, a member of a rival gang unexpectedly drops his weapon and raises his hands begging for mercy. Alex is flabbergasted. Should she shoot to proceed, even if it means killing someone who has already surrendered?

From casual gaming to complex multiplayers: video games are the most common virtual environment for entertainment. Despite heated discussions about violent content and possible negative consequences, society recognizes the popularity, economic relevance and creative value of this medium. Video games have clearly abandoned their status of a nerdy pastime and became an established mainstream form of entertainment (Quandt & Kowert, 2016).

Although early game titles already featured morality-related topics, implementing meaningful eudaimonic[1] elements based on moral decision making has become increasingly popular. The present chapter describes the role of morality in video games, together with an overview of current theories on psychological processing of moral decision making in virtual game worlds. These theories aim at explaining how games elicit moral processing and the factors modulating the processes once the player is morally engaged. Although all of these

[1] Eudaimonia is defined as a meaningful mediated experience characterized by mixed emotions of contemplation, compassion or feeling moved (Oliver & Raney, 2011; see also Janicke-Bowles, Bartsch, Oliver, & Raney, this volume).

theories make important efforts to explain subsections of moral processing, a unifying model is still missing. Therefore, a novel integrating approach to morality in video games that comprises players' moral engagement as well as their moral decision-making processes and their effects on the player will be presented. First of all, however, we will address why players engage in video games that feature moral elements as a form of entertainment. Why do morally laden situations bring pleasure to gaming?

2 Entertainment and Video Games

Media entertainment can be defined as an affective reaction to media consumption, irrespective of media type (Vorderer, Steen, & Chan, 2013; Vorderer, this volume). In contrast to passive forms of entertainment (e.g., reading a thrilling book; watching a comedy series) active participation in interactive gaming might even bring greater pleasure (Vorderer, Hartmann, & Klimmt, 2003). Although games may also fulfill simple needs for hedonic pleasure, they may go beyond that (Oliver et al., 2016). The paradox that viewers also enjoy dramas or sad movies that do not evoke positive emotional states has led to the distinction between hedonic and eudaimonic entertainment. In line with this differentiation, video games and their expressive and interactive potential are capable and even particularly suited for generating meaningful interaction and eudaimonic experiences. Recently, implementing meaningful eudaimonic gameplay based on moral decision making has become increasingly popular and economically successful. Games featuring moral topics are capable of telling meaningful and touching stories of loneliness, loss, and seemingly hopeless struggles against mighty powers (e.g., *Detroit: Become Human*, Sony Interactive Entertainment, 2018a; *Life is Strange 2*, Square Enix, 2018). It should be stated, however, that neither game titles nor

meaningful entertainment in general have to feature morality or morally laden interactions to be successful.

3 Interactivity

Interactivity unites all video games but distinguishes the medium from other classic forms of entertainment (see Bowman, this volume; Klimmt & Possler, this volume). Users are no longer passive spectators of the mediated narrative, but an active component of the virtual world (Grodal, 2000). In other words, playing a game can be seen as continuous iteration of decision making (Joeckel, Bowman, & Dogruel, 2012). Early video games like, for example, *Pong* (Atari, 1972) offered only a limited range of interaction possibilities (i.e., sliding the bar up and down). Partly due to technological developments, however, more complex narrative patterns allowed for implementing morally relevant themes and, thus, confronted players with more decision making. Recent titles such as *Read Dead Redemption 2* (Rockstar Games, 2018) provide players with a plethora of interactive patterns embedded in a rich narrative within a realistic 3D world that allows free exploration of the environment. More importantly, however, the player has to consider that all actions have consequences. Behaving in opposition to socially shared rules, for example, threatening civilian characters with a gun has the effect that the game character's moral reputation will immediately deteriorate, which, in turn, will affect how other characters will behave.

4 Presence

When playing a video game, *(spatial) presence* is an important feature that describes a sense of non-mediation in a remote environment or the feeling of 'being there' (Lombard & Ditton, 1997; Slater & Steed, 2000; see Hartmann & Fox, this volume). Immersive technology

can elicit degrees of presence that lead to a fading of the medium itself, comparable to perceiving the world through unnoticed glasses (Biocca, 1997). This can lead to behavior that is similar to interacting with real stimuli, including consequences on cognitive, emotional and physiological levels. Presence is mostly defined as a binary state (Slater & Steed, 2000). This is comparable to Huizinga's (1955) magic circle that forms a walled-off safe space for gaming, which is detached from everyday life and without usual real-life consequences (Consalvo, 2008; Consalvo, Busch, & Jong, 2016). In terms of virtual violence or moral dilemmas this 'half-real' (Juul, 2005) characteristic of video games explains why emotions such as anger, disgust, fear or guilt that are otherwise perceived as aversive are voluntarily accepted (Jansz, 2005) and even enjoyed as a eudaimonic experience. Before they get involved in this 'as if' world, players can even show moral flexibility in such a way that they are finally able to abandon moral concerns with very little cognitive effort (Klimmt, Schmid, Nosper, Hartmann, & Vorderer, 2008).

Self-presence is achieved through the bodily representation of the player in the virtual environment (i.e., avatar embodiment) and can therefore be defined as the perceived overlap of the actual and the virtual self, which has an effect on the player's moral agency (Heron & Belford, 2014b). *Social presence* is characterized as the feeling of 'being with another' in a virtual world (Biocca, 1997). Under conditions of social presence, users have the impression to share the same virtual space with other social actors that neither have to be human or human-like nor explicitly visible. Through mediation of even minimal social cues virtual actors can elicit social responses in users (Biocca, Harms, & Burgoon, 2003). As morality is defined through its social component, and moral decisions are often made on the basis of automatic social responses (Haidt & Joseph, 2007; Weaver & Lewis, 2012), social presence is an important prerequisite for moral processes in virtual worlds.

In video games and entertainment research, conceptual alternatives to *social presence* address the same precondition for perceiving and experiencing morality in games as relevant, such as identification (Cohen & Klimmt, this volume) and transportation (Green & Brock, 2000). The shared assumption underlying all these concepts is that players accept a game world, their characters and social situations as 'real', important, and meaningful so that their own reasoning, decision making and behavior in the game world holds moral quality and personally relevant consequences.

5 Morality and Moral Elements in Video Games

Moral thinking is social thinking (Matthews, 2019). Generally, people's moral system guides decision making and evaluates individual and collective conduct in everyday life (Sicart, 2019). Violating shared moral rules in a meaningful social context typically evokes moral concerns (Baumeister, Stillwell, & Heatherton, 1994). Tough decisions and ethical questions are fundamental both in daily life situations and fictional settings. Moral dilemmas have a long history in media reaching back to drama in literature, theater or movies that can have an intellectual as well as emotional impact. Users can feel socially connected to media characters in many ways (see Brown this volume; Lewis, Weber, & Bowman, 2008; Weaver & Lewis, 2012). However, in contrast to non-interactive media forms that present consequences of moral decisions made by someone else, players become moral actors making their own decisions (Weaver & Lewis, 2012). The player is now both passive spectator and active story-teller (Zagal, 2009).

Implementing interpersonal or moral dilemmas in a game can enrich the playing experience (Rollings & Adams, 2003), or may even be a prerequisite for good storytelling (Rhodes & Hamiltion, 2013). A moral dilemma can be defined as a moment of decision

making with at least two moral options in conflict as either option A or B but not both can be chosen (Gowans, 1987). In contrast to frustrating everyday dilemmas, the fictitious world of video games enables players to explore these conflict situations in a relatively safe space without direct real-life consequences (Sicart, 2013). Tracking player decisions is technically easy but does not provide insights into their motivations and intentions. The choice of option A over B could have been unintentional, because the player was confused or distracted and accidentally pressed the wrong button (Heron & Belford, 2014a). Even an obvious immoral decision may have been made just done for fun, for strategic reasons in the game, or to try out actions that would have been taboo in real life (Young, 2013).

Moral elements have a long tradition in video games that reaches back to role-playing games like *Ultima IV* (Origin Systems, 1985). Currently, moral decisions appear in various game genres, including strategy games (e.g., child labor in *Frostpunk*; 11 Bit Studios, 2018), shooters (e.g., using white phosphorus in *Spec Ops: The Line*; 2K Games, 2012), simulations (e.g., handling immigration in *Papers, please*; Pope, 2013), and interactive drama (e.g., caring for younger brother in *Life is Strange 2*; Square Enix, 2018). In contrast to clearly positive morally connoted games like, for example, the management simulation *Project Hospital* (Oxymoron Games, 2018), other games are characterized by conflicting moral standards. In a side mission of *GTA: San Andreas* (Rockstar Games, 2004), for example, the game rewards players for driving patients to the hospital regardless of how many civilians they run over and kill on their way. Other game titles do not offer ambiguous quandary decisions at all as their main game mechanic is simply based on carrying out moral transgressions (e.g., raping a native American in *Custer's Revenge*; Mystique, 1982).

6 Researching Morality in Video Games[2]

Research on games featuring morally relevant content has focused primarily on philosophical and theoretical explanations of virtual behavior (Sicart, 2013; Zagal, 2009). Only a few systematic empirical studies have dealt with the topic, and even less research has been carried out using experimental methods. Unfortunately, scientific analyses of game-related moral decisions mostly revolve around effects of engaging in virtual violence, leading to ongoing heated debates in academia and the general public (e.g., Anderson et al., 2010; Ferguson, 2015; Prescott, Sargent, & Hull, 2018). In video games, moral transgressions often appear as (physically) damaging acts. However, not all of these immoral acts are based on violence, and not all virtual acts of violence are necessarily immoral. To date, only few studies have tried to disentangle the moral aspects of video games from virtual violence (e.g., Joeckel, Bowman, & Dogruel, 2012).

Consalvo, Busch, and Jong (2016) analyzed processes of moral dilemmas using semi-structured interviews with active gamers. The authors found that variations of framing a situation in the game can lead to different approaches and behavioral consequences. Hence, moral gameplay is context dependent (Consalvo et al., 2016). In addition to context, player characteristics are important (see section 13). In their exploratory study Weaver and Lewis (2012) showed that participants' way of playing *Fallout 3* (Bethesda Softworks, 2008) reflected their convictions of morality in real life, including treating non-player characters (NPCs) as 'real persons'. Krcmar and Cingel (2016) collected think aloud protocols from participants playing *Fallout 3*, thereby taking into account decision-making processes. Players followed moral considerations (54%; e.g., helping a city that feels like home) and strategic

[2] We only focus on single-player games in this chapter as multiplayer games add the dynamics of social interactions with other ethical agents (Schreiber et al., 2009)

decisions (46%; e.g., helping a character to gain in-game currency) to an almost equal extent. Furthermore, Hartmann, Toz, and Brandon (2010) tested a shooter game in which they systematically varied moral disengagement (Hartmann & Vorderer, 2010; see section 7). The authors found that participants felt less guilty after engaging in morally justified compared to unjustified violence. Grizzard, Tamborini, Lewis, Wang, and Prabhu (2014) replicated this finding and found that players who felt guilty also became more sensitive to moral issues. In addition, Gollwitzer and Melzer (2012) found that feelings of guilt were even more pronounced for inexperienced (vs. experienced) video game players who inflicted unjustified violence.

7 Moral Disengagement

Originally coined by Bandura (1990), the term moral disengagement describes a conversion of personal agency in situations of moral transgression. Violating socially shared rules of conduct or internalized moral standards typically evoke ethical dissonance and moral concerns (Baumeister et al., 1994). To reduce this aversive state, to cope with guilt and shame, and to avoid self-condemnation, people engage in self-regulatory processes, such as rationalizing, excusing or justifying one's actions (Bandura, 1990, 2002). These processes comprise: moral justification, advantageous comparison, euphemistic labelling, diffusion/displacement of responsibility, disregard/distortion of consequences, dehumanization and attribution of blame. Processes of moral self-regulation have also been demonstrated in the context of gaming (Klimmt et al., 2008), especially with regard to enjoying violent content (Hartmann, Krakowiak, & Tsay-Vogel, 2014). Moral disengagement can be triggered either through specific cues in the game or active moral rationalization processes (Weaver & Lewis, 2012; see section 13). In violent video games players are at risk of experiencing inner conflicts as every violent act bears the potential for moral ruminations, which therefore

challenge game enjoyment (Klimmt et al., 2008). However, most violent games provide sufficient cues for processes of moral disengagement in order to support feelings of enjoyment and entertainment (Hartmann et al., 2014; Hartmann & Vorderer, 2010). Moral management theory (Klimmt et al., 2008) argues that players may either call on these moral disengagement strategies or accentuate the virtual nature of the situation ('this is not real/just pixels', see section 4). As gaming situations typically confront the player with a number of different characters, permanently changing sensory impressions as well as varying moral conflicts, mechanisms of disengagement should be conceived as flexible constructs that may continuously reshape (Hartmann & Vorderer, 2010; Klimmt et al., 2008).

Moral disengagement theory explains mechanisms that prevent players from experiencing feelings of guilt or shame in violent acts. In contrast, cues that reverse these mechanisms might also ensure moral engagement (e.g., child character asking for help). The following models address primarily decision-making processes that occur after moral engagement has been triggered.

8 Dual Process Models of Moral Judgment

Haidt's (2001) social intuitionist model (SIM) claims that moral intuition is irrational and led by affective valence, therefore reflecting an automatic 'gut feeling' without any conscious awareness. Although the decision maker is fully aware of the moral judgment, the processing steps are subconscious. Moreover, rather than seeking moral accuracy or truth, people rationalize and confirm or defend their intuitive decisions (Matthews, 2019). In contrast to the intuitive system, Haidt (2001) defines moral reasoning as a deliberate and controllable post-hoc process that may alter the initial intuition or judgment. Here, processing steps are performed consciously by integrating further information that may lead to an

updated moral judgment (Haidt, 2001). Although the human mind may be prone to an intuitive primacy in moral judgment, the fast and affective system can be overruled by subsequent mechanisms of deliberate reasoning (Haidt, 2007). Findings from cognitive neuroscience confirm that both systems play a role in moral judgment. However, the intuitive component appears to be the driving force, whereas the influence of reasoning may be limited but still significant (Greene & Haidt, 2002).

To date, only little research on intuitive versus reflective moral processing in gaming has been conducted (Krcmar & Eden, 2017). However, increased cognitive load inhibited controlled moral reasoning in dilemmatic situations (Greene, Morelli, Lowenberg, Nystrom, & Cohen, 2008). Alternatively, ultra-sociality, which reflects innate sensitivity to social cues, may trigger social considerations that overcome moral intuition (Matthews, 2019). This preeminence can also be observed in the context of gaming: When players in *Mass Effect* (Microsoft Game Studios, 2007) have to decide whether to kill or spare a begging alien queen, a vast majority of gamers decide to spare her life despite having killed dozens of her people (see Matthews, 2019).

9 Moral Foundations Theory

Due to the prominent role of immediate intuition, Haidt and Joseph (2007) identified five sets of moral intuitions that are evolutionary 'built-in' and later shaped through learning. Thus, humans form moral judgments on the basis of harm/care, fairness/reciprocity, ingroup/loyalty, authority/respect and purity/sanctity (Haidt & Joseph, 2007). Later, an additional sixth foundation on liberty/oppression was suggested (Iyer, Koleva, Graham, Ditto, & Haidt, 2012). Although these sets are represented across all humans, the salience of each foundation might be shaped through the respective culture (Graham, Haidt, & Nosek, 2009).

The *harm/care* foundation is related to emotional and physical harm, compassion and empathy. The foundation of *fairness/reciprocity* describes settings with considerations on justice and honesty. The *ingroup/loyalty* foundation comes into effect when a group (e.g., family, sports team, company) is threatened by a conflict of interest or a loss of commitment *Authority/respect* refers to situations with a possible violation of dominance hierarchies. The foundation of *purity/sanctity* is related to behavior that elicits disgust like bodily contamination and sexual deviancy. The foundation of *liberty/oppression* is related to situations in which freedom of choice is diminished. The different moral foundations further support that moral considerations do not necessarily have to be connected to violent acts, although many games contain harm/care-based scenarios such as classic 'kill or spare' decisions.

Despite the inclusion of intuitive moral processing, MFT does not go beyond moral judgments. Therefore, only indirect assumptions about its influence on actual behavior that follows moral decision making are possible. In contrast, Tamborini's (2013) model of intuitive morality and exemplars (MIME) successfully transferred moral psychology theory to the applied context of gaming behavior (see Eden, Tamborini, Aley & Goble, this volume).

10 Model of Intuitive Morality and Exemplars

As already stated above, gaming scholars have linked moral foundations with decision making (e.g., Joeckel et al., 2012; Krcmar & Cingel, 2016). Their research is based on Tamborini's (2013; Eden et al., this volume) assumption that moral intuitions specified in MFT will also guide people's interactions with media content in general and video gameplay in particular. For example, the possibility to cheat in a video game (i.e., a moral transgression in terms of *fairness*) might lead to negative moral judgments in players with a strong

internalization of this foundation. As a result, these players should be less likely to morally transgress than players with a low level of salience for fairness.

Applying MFT and MIME to interactive media forms like video games is perfectly possible, as interactivity requires users to make decisions in the form of observable actions. With every morally relevant scenario, players can decide whether or not to uphold their moral principles. However, players typically tend to follow their moral principles (Boyan, Grizzard, & Bowman, 2015), transporting their moral values from reality to in-game decisions. Krcmar and Eden (2017) found high salience for the harm/care foundation to predict how guilty participants felt in the infamous 'No Russian' mission of *Call of Duty: Modern Warfare 2* (Activision, 2009), where they had to shoot innocent civilians. In their study, however, moral foundation did not predict how aggressive they played in the game (i.e., number of bullets fired). Other studies (Joeckel et al., 2012; Joeckel, Bowman, & Dogruel, 2013; Tamborini et al., 2018) showed that players with high levels of moral salience were less likely to commit respective moral transgressions. In contrast, players with low moral salience made rather random decisions (Joeckel et al., 2012).

11 Summary

Both theoretical plausibility and existing empirical evidence support the models described here. But although there have been various approaches to morality in games for some time, the respective elements have not yet been integrated into a comprehensive model. Numerous studies on virtual reality and presence show how users are transported into virtual worlds, but no link has been established connecting concepts such as social presence and mechanisms like dehumanization, for example. Moral disengagement theory explains sufficiently why and how immoral acts can still evoke feelings of joy, but applications have

barely gone beyond violent gaming. As a consequence, more effort has been spent on prerequisites that suppress moral concerns than exploring why and how players appreciate eudaimonic entertainment. In contrast, both MFT and MIME have predominantly focused on moral engagement but paid less attention to disengagement and its proven impact on moral processing. Furthermore, dual process model and MFT provide in-depth explanations of moral processing but lack connections to media consumption. The MIME tried to close this gap by mapping moral judgments onto in-game behavior. Unfortunately, research on moral modules and gaming behavior is still sparse.

In summary, each model has its specific virtues in explaining morality in video games. The added value of the integrative model presented here lies in suggesting links between prevailing theories, but also in predicting when players will make a specific moral decision or suppress their moral concerns, and how this may affect their entertainment outcome. A greater understanding of the overall picture of morality in gaming results, also adding predictive value that allows for empirical testing of the model.

12 Integrative Model of Moral Processing in Video Games

In the following section, we propose a model integrating theories mentioned above (see Figure 1).

[insert Melzer Holl-Fig 1 here]

As an exemplary walk through the model, we continue to follow Alex (see section 1), who plays a chapter of her interactive post-apocalyptic shooter *Metro Exodus*. *Interactivity* was already introduced as the core characteristic that separates video games from classic forms of media. Also, interactivity affects most other parts of the model including presence

(see Figure 1)[3]. The degree of (spatial) *presence* that Alex experiences depends on the interactivity and vividness of the virtual space (Steuer, 1992). As the interactive virtual world of *Metro Exodus* features state-of-the-art graphics, which provide her with a vivid playing experience in a 3D world, Alex is likely to perceive a high degree of spatial presence. However, so-called *breaks in presence* will direct her attention away from the virtual stimuli (e.g., lags/glitches or someone entering the room; Slater & Steed, 2000), also causing her engagement to diminish. In *Metro Exodus,* Alex plays the male character Artyom from a first-person perspective. Therefore, a solid level of *self-presence* can be expected compared to more distant views (e.g., a top-down or god-like view[4]). Our model hypothesizes that self-presence is another important factor for moral engagement to that effect that greater levels are related to greater identification and moral agency.

As stated above, we presume *social presence* to be indispensable for moral engagement in video games. This is supported by notions that a lack of empathic concern will lead to lower degrees of social presence (Klimmt & Vorderer, 2003). Although titles like *Metro Exodus* center around animated human characters, socially perceived agents have to be neither human nor explicitly visible. Agents may appear as humanoid robots (e.g., Claptrap, a robot with overexaggerated human traits in *Borderlands* (2K Games, 2009), but also simple agentic representations may successfully induce perceptions of social presence (e.g., inanimate companion cube in *Portal* (Valve Software, 2007). At the same time, moral disengagement mechanisms can explain why not all human agents elicit social presence to the same degree. In the *Metro Exodus* chapter 'The Volga', for instance, Alex/Artyom meets a

[3] Although many gaming titles also feature non-interactive cut-scenes that contain moral dilemmas including their solution, this model should only be applied to scenarios with an active player choice.

[4] Self-presence and avatar identification would even be higher if Alex would have been given the possibility to customize her avatar according to her preferences (Christy & Fox, 2016).

church community, whose members are introduced as armed evil fanatics with gear covering most of their faces. According to our model, Alex perceives these community members as faceless hostiles lacking recognizable individual characteristics. She now has to decide whether “it’s okay to shoot a character” (Hartmann & Vorderer, 2010, p. 94). Both perceived presence and distinct cues suggesting disengagement mechanisms of dehumanization and attribution of blame support this option and allow her to kill without experiencing moral concerns (see section 13).

As this example indicates, not every moral situation will be perceived as a eudaimonic dilemmatic situation. Many moral choices built in video games have been criticized as shallow and flat (Heron & Belford, 2014a; Schulzke, 2009). As a consequence, game creators aim at implementing deep and meaningful dilemmas to ensure eudaimonic experiences. The game must be able to create a moral tension for the player rather than for the character (Zagal, 2009). What could a true eudaimonic experience in a moral dilemma look like according to our model? As mentioned above, moral (dis)engagement may change quickly with new and unexpected stimuli appearing: All of a sudden, the fanatics that the game had previously introduced to Alex as ruthless barbarians surrender—they raise their hands and beg for mercy. With this salient appeal to ultra-sociality that will likely elicit social responses (Biocca et al., 2003), our model claims moral disengagement to be reversed. As a consequence, Alex might refrain from fighting the opponents in order to prevent feelings of guilt. A true dilemma has no clear-cut answer, as at least two moral principles compete with each other (Schreiber et al., 2009). In our example, Alex’ conflict consists of either killing a former hostile that had threatened her or avoiding killing a now unarmed, surrendering human being, but at the same time risking death of her character or failing the mission. Furthermore, a true dilemma requires awareness of information about options and consequences in order to feel

responsible (Schreiber et al., 2009). However, consequences can only be anticipated, as the decision has not yet been made (see Figure 1). Anticipated consequences can be influenced by (known) mechanics of the game (e.g., *If I kill enemies, I will get 50 points* vs. *If I spare unarmed opponents, my character's honor level rises*), the game narrative (e.g., *If I kill the opponent, I won't be able to talk to him later*), or considerations within the player (e.g., *If I kill the opponent, I will feel pleased/guilty*). At the next stage, the present model postulates a crucial transition passage between moral engagement and moral disengagement. Depending on the influencing factors (see section 13) Alex will either follow the route of moral or strategic processing. Although the model depicts two separate and distinct paths, it is important to note that with every new incoming stimulus a new evaluation will occur. This temporal variation and flexibility in switching between moral engagement and disengagement is in line with both moral management theory (Klimmt et al., 2008) and MIME, which postulates short terms fluctuations in moral salience (see Eden et al., this volume).

If the assessment of the situation is in favor of moral processing, an initial moral 'gut-feeling' or an intuitive judgement occurs. In line with the SIM model, Alex' intuition and individual level of salience for the different moral foundations will shape her automatic and unconscious judgment. With opponents raising their hands, the game increases the salience for the foundation of harm/care. As a consequence, Alex' initial judgment may be based on feelings of empathy. Subsequently, the reasoning system is activated to support the judgment post-hoc (see Figure 1). However, reasoning may substantially alter the judgment, depending on the strength of the intuition and the remaining cognitive capacities, potentially activating a different foundation (Greene et al., 2008). In our *Metro Exodus* example, Alex could conclude that *fairness* is a more important moral value than *harm/care,* as it is unjust to attack an unarmed person. Finally, her moral processing is put into action by choosing one of the

available options (e.g., sparing opponent). The actual consequences of her action will then be integrated in Alex' future understanding of the game's concept of morality.

All constructs and processing paths in the model are thought to be highly flexible, with processing being able to change within fractions of a second, depending on the internal state of the player and new entering information continuously provided by the game. For example, while Alex is still browsing her options in the former-enemy-now-unarmed-person dilemma, defective game physics could deform the social expression of a character, leading to lower social presence or even moral disengagement.

13 Influencing Factors

As the branching point to eudaimonic or hedonic entertainment experience is crucial to both our model and a general understanding of medial moral processing, identifying the factors contributing to the adoption of these entertainment paths is important. Moral (dis)engagement depends on characteristics within the gaming environment and in the player (i.e., processes of rationalization; Weaver & Lewis, 2012). Therefore, both game specifications and player characteristics represent two major influencing factors within a "moral situation" (see Figure 1). As previously mentioned, some game-related aspects (e.g., interactivity and presence) contribute to a richer entertainment experience irrespective of whether this experience is eudaimonic or hedonistic in nature. In contrast, other factors within the game may determine the specific entertainment experience. In this regard, moral disengagement cues embedded in the gameplay (e.g., anthropomorphic versus dehumanized portrayal of characters) as well as other framing elements are known to make dilemmas more 'enjoyable'. The contact principle, for example, denotes the fact that moral transgressions make people feel uncomfortable if physical contact is required. In virtual dilemma situations, increasing

time pressure and therefore limiting cognitive capacities was linked to altered moral processing and behavior (Tinghög et al., 2016; see section 8).

However, elements of the game are merely a framework to moral (dis)engagement. Ultimately, players themselves determine the degree of perceived morality. Not surprisingly, they may differ substantially regarding their moral perceptions (Sicart, 2013). Moral engagement may even drastically change within the same player comparing first and subsequent playthroughs (Consalvo et al., 2016). Furthermore, the multidimensionality of media gratifications in entertainment supports user motivations that include not only classic hedonic, but also eudaimonic needs (Oliver & Bartsch, 2010). Depending on the situation players may be motivated to pick a game which they expect to satisfy their respective needs. To maintain the desired entertainment gratification, players may retain their hedonic status even when in-game framing changes to eudaimonic (and vice versa). This may be achieved through the degree of immersion (see section 4), rationalization of (dis)engagement cues (see section 7), or actualization of the playing motive (e.g., “I [only] play for fun/competition/an engaging story”).

In addition to players’ active motivational influence other personal characteristics will likely modulate the experience. These can be directly linked to other parts of the model. For example, the ability to immerse depends on individual factors, such as domain specific experience and spatial visual abilities (Sacau, Laarni, & Hartmann, 2008), but also personality traits (Weibel, Wissmath, & Mast, 2010). In terms of social presence and moral engagement empathic skills are expected to play an important role when processing moral game situations, including both trait empathy (Hartmann & Vorderer, 2010) as well as state empathy (Happ, Melzer, & Steffgen, 2015). Additionally, moral sensitivity and moral blindness, respectively, is connected to moral behavior (Katsarov, Christen, Mauerhofer, Schmocker, &

Tanner, 2017). In the case of moral engagement, real-life moral beliefs will affect the decision-making process. Evidence was found for a transfer effect of real-world moral values being carried over to the game setting and manifested in decision-making behavior (see section 10; Boyan et al., 2015). In addition, factors such as age, gender or cultural background clearly moderate moral beliefs, as do other predictive parameters within the model. The factors listed here represent a first and rather broad collection of possible independent variables that can predict the entertainment outcome and decision behavior. Although theoretical assumptions and empirical findings from neighboring fields of research support our proposed linkages, our model requires further empirical scrutiny.

14 Conclusion and Future Research

Video games have become an established mainstream form of interactive entertainment and implementing meaningful eudaimonic elements based on moral decision making has become increasingly popular. As moral actors, players can make their own decisions in a safe 'as-if' space without direct real-life consequences. Interestingly, their moral decisions oftentimes follow real-life convictions, that is, morality means thinking in terms of social interactions (Haidt & Joseph, 2007; Matthews, 2019; Weaver & Lewis, 2012). Under conditions of social presence, thus, players treat virtual characters in video games as partners in non-virtual social interactions. It is not surprising that current theories of moral psychology have been extended and adapted for the video game medium. To cope with guilt and shame and to avoid self-condemnation in situations of moral transgression, for example, gamers use self-regulatory cognitive processes of moral disengagement similar to their everyday lives.

Moral decisions reflect processes of a conscious reasoning system and a strong intuitive system. Five moral foundations (e.g., harm/care) that are evolutionary 'built-in' and

later shaped through learning serve as the basis of moral concerns. The MIME successfully transfers moral psychology theory to gaming behavior, postulating a reciprocal relationship between morality of the player and gaming content. Predictions form MFT and MIME have been successfully applied to actual behavior of gamers found in morally-related situations (Boyan et al., 2015; Joeckel et al., 2012, 2013; Krcmar & Cingel, 2016).

The present integrative model unites these leading theoretical assumptions of morality in video games. Considered individually, each model relies on a firm groundwork providing detailed explanations of specific parts of moral considerations and/or virtuality. Therefore, the added value of this integrative model lies in emphasizing the apparent inter-relations that form an overarching model aimed at explaining moral processing in video games as a whole. Although empirical studies have already been conducted for most of its sub-parts, validation of the integrative model is subject to future research. More specifically, a number of research questions need to be addressed empirically: How does social presence link to dehumanization and moral disengagement? Which presence factors contribute to moral engagement and later moral processing, and to what extent? How does the number of options in the game affect cognitive capacities and, thus, moral judgments? How do player characteristics influence the different phases of moral processing? Addressing these and other unanswered questions will further our understanding of morality in general and the role of morality in gaming in particular.

In conclusion, we believe both disciplines of moral psychology and game studies will benefit from the present model. Through this integrated framework moral psychologists may better understand how interactive, vivid and socially credible environments trigger moral processing. Likewise, gaming scholars gain further insights into the different entertainment outcomes and the player perceptions of a virtual ‘as if’ game setting.

References

2K Games (Publisher). (2009). *Borderlands* [video game]. New York, NY: Take-Two Interactive Software, Inc.

2K Games (Publisher). (2012). *Spec Ops: The Line* [video game]. New York, NY: Take-Two Interactive Software, Inc.

11 Bit Studios (Developer and Publisher). (2018). *Frostpunk* [video game]. Warsaw: 11 Bit Studios S.A.

Activision (Publisher). (2009). *Call of Duty: Modern Warfare 2* [video game]. Santa Monica, CA: Activision Blizzard, Inc.

Anderson, C. A., Shibuya, A., Ihori, N., Swing, E. L., Bushman, B. J., Sakamoto, A., … 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. doi:10.1037/a0018251

Atari (Developer and Publisher). (1972). *Pong* [video game]. Sunnyvale, CA: Atari, Inc.

Bandura, A. (1990). Mechanisms of moral disengagement. In W. Reich (Ed.), *Origins of terrorism: Psychologies, ideologies, theologies, states of mind* (pp. 161–191). New York, NY: Cambridge University Press.

Bandura, A. (2002). Selective moral disengagement in the exercise of moral agency. *Journal of Moral Education*, *31*(2), 101–119. doi:10.1080/0305724022014322

Baumeister, R. F., Stillwell, A. M., & Heatherton, T. F. (1994). Guilt: An interpersonal approach. *Psychological Bulletin*, *115*(2), 243–267. doi:10.1037/0033-2909.115.2.243

Bethesda Softworks (Publisher). (2008). *Fallout 3* [video game]. Rockville, MD: Bethesda Softworks LLC.

Biocca, F. (1997). The cyborg's dilemma: Progressive embodiment in virtual environments. *Journal of Computer-Mediated Communication*, *3*(2). doi:10.1111/j.1083-6101.1997.tb00070.x

Biocca, F., Harms, C., & Burgoon, J. K. (2003). Toward a more robust theory and measure of social presence: Review and suggested criteria. *Presence: Teleoperators & Virtual Environments*, *12*(5), 456–480. doi:10.1162/105474603322761270

Boyan, A., Grizzard, M., & Bowman, N. (2015). A massively moral game? Mass Effect as a case study to understand the influence of players' moral intuitions on adherence to hero or antihero play styles. *Journal of Gaming & Virtual Worlds*, *7*(1), 41–57. doi:10.1386/jgvw.7.1.41_1

Christy, K. R., & Fox, J. (2016). Transportability and Presence as Predictors of Avatar Identification Within Narrative Video Games. *Cyberpsychology, Behavior And Social Networking*, *19*(4), 283–287. doi:10.1089/cyber.2015.0474

Consalvo, M. (2008). There is no magic circle. *Games and Culture*, *4*(4), 408–417. doi:10.1177/1555412009343575

Consalvo, M., Busch, T., & Jong, C. (2016). Playing a better me: How players rehearse their ethos via moral choices. *Games and Culture*. Advance online publication. doi:10.1177/1555412016677449

Deep Silver (Publisher). (2019). *Metro Exodus* [video game]. Höfen: Koch Media, GmbH.

Ferguson, C. J. (2015). Do angry birds make for angry children? A meta-analysis of video game influences on children's and adolescents' aggression, mental health, prosocial behavior, and academic performance. *Perspectives on Psychological Science*, *10*(5), 646–666. doi:10.1177/1745691615592234

Gollwitzer, M., & Melzer, A. (2012). Macbeth and the joystick: Evidence for moral cleansing after playing a violent video game. *Journal of Experimental Social Psychology*, *48*(6), 1356–1360. doi:10.1016/j.jesp.2012.07.001

Gowans, C. W. (1987). Introduction: The debate on moral dilemmas. In C. W. Gowans (Ed.), *Moral Dilemmas* (pp. 3–33). New York, NY: Oxford University Press.

Graham, J., Haidt, J., & Nosek, B. A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology*, *96*(5), 1029–1046. doi:10.1037/a0015141

Green, M. C., & Brock, T. C. (2000). The role of transportation in the persuasiveness of public narratives. *Journal of Personality and Social Psychology*, *79*(5), 701–721. doi:10.1037/0022-3514.79.5.701

Greene, J., & Haidt, J. (2002). How (and where) does moral judgment work? *Trends in Cognitive Sciences*, *6*(12), 517–523. doi:10.1016/S1364-6613(02)02011-9

Greene, J., Morelli, S. A., Lowenberg, K., Nystrom, L. E., & Cohen, J. D. (2008). Cognitive load selectively interferes with utilitarian moral judgment. *Cognition*, *107*(3), 1144–1154. doi:10.1016/j.cognition.2007.11.004

Grizzard, M., Tamborini, R., Lewis, R. J., Wang, L., & Prabhu, S. (2014). Being bad in a video game can make us more morally sensitive. *Cyberpsychology, Behavior And Social Networking*, *17*(8), 499–504. doi:10.1089/cyber.2013.0658

Grodal, T. (2000). Video games and the pleasure of control. In D. Zillmann & P. Vorderer (Eds.), *Media entertainment. The psychology of its appeal* (pp. 197–212). Mahwah, NJ: Erlbaum.

Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychological Review*, *108*(4), 814–834. doi:10.1037//0033-295X.108.4.814

Haidt, J. (2007). The new synthesis in moral psychology. *Science*, *316*(5827), 998–1002. doi:10.1126/science.1137651

Haidt, J., & Joseph, C. (2007). The moral mind: How five sets of innate intuitions guide the development of many culture-specific virtues, and perhaps even modules. In P. Carruthers, S. Laurence, & S. Stich (Eds.), *The innate mind* (Vol. 3, pp. 367–391). New York, NY: Oxford University Press.

Happ, C., Melzer, A., & Steffgen, G. (2015). Like the good or bad guy—Empathy in antisocial and prosocial games. *Psychology of Popular Media Culture*, *4*(2), 80–96. doi:10.1037/ppm0000021

Hartmann, T., Krakowiak, K. M., & Tsay-Vogel, M. (2014). How violent video games communicate violence: A literature review and content analysis of moral disengagement factors. *Communication Monographs*, *81*(3), 310–332. doi:10.1080/03637751.2014.922206

Hartmann, T., Toz, E., & Brandon, M. (2010). Just a game? Unjustified virtual violence produces guilt in empathetic players. *Media Psychology*, *13*(4), 339–363. doi:10.1080/15213269.2010.524912

Hartmann, T., & Vorderer, P. (2010). It's okay to shoot a character: Moral disengagement in violent video games. *Journal of Communication*, *60*(1), 94–119. doi:10.1111/j.1460-2466.2009.01459.x

Heron, M. J., & Belford, P. H. (2014a). Do you feel like a hero yet? Externalized morality in video games. *Journal of Games Criticism*, *1*(2), 1–25. Retrieved from: http://gamescriticism.org/articles/heronbelford-1-2

Heron, M. J., & Belford, P. H. (2014b). 'It's only a game'—Ethics, empathy and identification in game morality systems. *The Computer Games Journal*, *3*(1), 34–53. doi:10.1007/BF03392356

Huizinga, J. (1955). *Homo ludens: A study of the play element in culture*. Boston, MA: The Beacon Press.

Iyer, R., Koleva, S., Graham, J., Ditto, P., & Haidt, J. (2012). Understanding libertarian morality: The psychological dispositions of self-identified libertarians. *PLoS ONE*, *7*(8), e42366. doi:10.1371/journal.pone.0042366

Jansz, J. (2005). The emotional appeal of violent video games for adolescent males. *Communication Theory*, *15*(3), 219–241. doi:10.1111/j.1468-2885.2005.tb00334.x

Joeckel, S., Bowman, N. D., & Dogruel, L. (2012). Gut or game? The influence of moral intuitions on decisions in video games. *Media Psychology*, *15*(4), 460–485. doi:10.1080/15213269.2012.727218

Joeckel, S., Bowman, N. D., & Dogruel, L. (2013). The influence of adolescents' moral salience on actions and entertainment experience in interactive media. *Journal of Children and Media*, *7*(4), 480–506. doi:10.1080/17482798.2013.781513

Juul, J. (2005). *Half-real: Video games between real rules and fictional worlds*. Cambridge, MA: MIT Press.

Katsarov, J., Christen, M., Mauerhofer, R., Schmocker, D., & Tanner, C. (2017). Training moral sensitivity through video games: A review of suitable game mechanisms. *Games and Culture*, 155541201771934. doi:10.1177/1555412017719344

Klimmt, C., Schmid, H., Nosper, A., Hartmann, T., & Vorderer, P. (2008). 'Moral management': Dealing with moral concerns to maintain enjoyment of violent video games. In A. Jahn-Sudmann & R. Stockmann (Eds.), *Computer games as a sociocultural phenomenon:*

Games without frontiers war without tears (pp. 108–118). doi:10.1057/9780230583306_11

Klimmt, C., & Vorderer, P. (2003). Media psychology "is not yet there": Introducing theories on media entertainment to the presence debate. *Presence: Teleoperators and Virtual Environments*, *12*(4), 346–359. doi:10.1162/105474603322391596

Krcmar, M., & Cingel, D. P. (2016). Moral foundations theory and moral reasoning in video game play: Using real-life morality in a game context. *Journal of Broadcasting & Electronic Media*, *60*(1), 87–103. doi:10.1080/08838151.2015.1127246

Krcmar, M., & Eden, A. (2017). Rational versus intuitive processing: The impact of cognitive load and moral salience on in-game aggression and feelings of guilt. *Journal of Media Psychology*, (0), 1–10. doi:10.1027/1864-1105/a000215

Lewis, M. L., Weber, R., & Bowman, N. D. (2008). "They may be pixels, but they're MY pixels:" Developing a metric of character attachment in role-playing video games. *CyberPsychology & Behavior*, *11*(4), 515–518. doi:10.1089/cpb.2007.0137

Lombard, M., & Ditton, T. (1997). At the heart of it all: The concept of presence. *Journal of Computer-Mediated Communication*, *3*(2). doi:10.1111/j.1083-6101.1997.tb00072.x

Matthews, N. (2019). The interplay between morality and video games. In J. Breuer, D. Pietschmann, B. Liebold, & B. P. Lange (Eds.), *Evolutionary psychology and digital games: Digital hunter-gatherers* (pp. 106–117). New York, NY: Routledge.

Microsoft Game Studios (Publisher). (2007). *Mass Effect* [video game]. Redmond, WA: Microsoft Corporation.

Mystique (Developer and Publisher). (1982). *Custer's Revenge* [video game]. (n.p.).

Oliver, M. B., & Bartsch, A. (2010). Appreciation as Audience Response: Exploring Entertainment Gratifications Beyond Hedonism. *Human Communication Research*, *36*(1), 53–81. doi:10.1111/j.1468-2958.2009.01368.x

Oliver, M. B., Bowman, N. D., Woolley, J. K., Rogers, R., Sherrick, B. I., & Chung, M.-Y. (2016). Video games as meaningful entertainment experiences. *Psychology of Popular Media Culture*, *5*(4), 390–405. doi:10.1037/ppm0000066

Oliver, M. B., & Raney, A. A. (2011). Entertainment as pleasurable and meaningful: Identifying hedonic and eudaimonic motivations for entertainment consumption. *Journal of Communication*, *61*(5), 984–1004. doi:10.1111/j.1460-2466.2011.01585.x

Origin Systems (Developer and Publisher). (1985). *Ultima IV: Quest of the Avatar* [video game]. Redwood City, CA: Electronic Arts, Inc.

Oxymoron Games (Developer and Publisher). (2018). *Project Hospital* [video game]. Prague: Oxymoron games s.r.o.

Pope, L. (2013). *Papers, please* [video game]. (n.p.).

Prescott, A. T., Sargent, J. D., & Hull, J. G. (2018). Metaanalysis of the relationship between violent video game play and physical aggression over time. *Proceedings of the National Academy of Sciences*, *115*(40), 9882–9888. doi:10.1073/pnas.1611617114

Quandt, T., & Kowert, R. (2016). No black and white in video game land! Why we need to move beyond simple explanations in the video game debate. In R. Kowert & T. Quandt (Eds.), *The video game debate: Unravelling the physical, social, and psychological effects of video games* (pp. 176–189). New York, NY: Routledge.

Rhodes, N., & Hamiltion, J. C. (2013). Attribution and entertainment: It's not who dunnit, it's why. In J. Bryant & P. Vorderer (Eds.), *Psychology of Entertainment* (pp. 119–136). New York, NY: Routledge.

Rockstar Games (Publisher). (2004). *Grand Theft Auto: San Andreas* [video game]. New York, NY: Rockstar Games, Inc.

Rockstar Games (Publisher). (2018). *Red Dead Redemption 2* [video game]. New York, NY: Rockstar Games, Inc.

Rollings, A., & Adams, E. (2003). *Andrew rollings and Ernest Adams on game design*. Indianapolis, IN: New Riders.

Sacau, A., Laarni, J., & Hartmann, T. (2008). Influence of individual factors on presence. *Computers in Human Behavior*, *24*(5), 2255–2273. doi:10.1016/j.chb.2007.11.001

Schreiber, I., Seifert, C., Pineda, C., Preston, J., Hughes, L., Cash, B., & Robertson, T. (2009). Choosing between right and right: Creating meaningful ethical dilemmas in games. *Project Horseshoe Conference*, 2010. San Antonio, TX.

Schulzke, M. (2009). Moral decision making in Fallout. *Game Studies*, *9*(2). Retrieved from: http://gamestudies.org/0902/articles/schulzke/

Sicart, M. (2013). *Beyond choices: The design of ethical gameplay*. Cambridge, MA: MIT Press.

Sicart, M. (2019). Papers, please. In M. T. Payne & N. B. Huntemann (Eds.), *How to Play Video Games* (pp. 149–156). New York, NY: NYU Press.

Slater, M., & Steed, A. (2000). A Virtual Presence Counter. *Presence: Teleoperators and Virtual Environments*, *9*(5), 413–434. doi:10.1162/105474600566925

Sony Interactive Entertainment (Publisher). (2018). *Detroit: Become Human* [video game]. San Mateo, CA.

Square Enix (Publisher). (2018). *Life is Strange 2* [video game]. Tokyo: Square Enix Holdings Co., Ltd.

Steuer, J. (1992). Defining virtual reality: Dimensions determining telepresence. *Journal of Communication*, *42*(4), 73–93. doi:10.1111/j.1460-2466.1992.tb00812.x

Tamborini, R. (2013). A model of intuitive morality and exemplar. In R. Tamborini (Ed.), *Media and the moral mind* (pp. 43–74). New York, NY: Routledge.

Tamborini, R., Bowman, N. D., Prabhu, S., Hahn, L., Klebig, B., Grall, C., & Novotny, E. (2018). The effect of moral intuitions on decisions in video game play: The impact of chronic and temporary intuition accessibility. *New Media & Society*, *20*(2), 564–580. doi:10.1177/1461444816664356

Tinghög, G., Andersson, D., Bonn, C., Johannesson, M., Kirchler, M., Koppel, L., & Västfjäll, D. (2016). Intuition and moral decision-making – The effect of time pressure and cognitive load on moral judgment and altruistic behavior. *PLOS ONE*, *11*(10), e0164012. doi:10.1371/journal.pone.0164012

Valve Software (Developer and Publisher). (2007). *Portal* [video game]. Bellevue, WA: Valve Corporation.

Vorderer, P., Hartmann, T., & Klimmt, C. (2003). Explaining the enjoyment of playing video games: The role of competition. *Proceedings of the Second International Conference on Entertainment Computing*, 1–9. Pittsburgh, PA.

Vorderer, P., Steen, F. F., & Chan, E. (2013). Motivation. In J. Bryant & P. Vorderer (Eds.), *Psychology of Entertainment* (pp. 3–18). New York, NY: Routledge.

Weaver, A. J., & Lewis, N. (2012). Mirrored morality: An exploration of moral choice in video games. *Cyberpsychology, Behavior, and Social Networking*, *15*(11), 610–614. doi:10.1089/cyber.2012.0235

Weibel, D., Wissmath, B., & Mast, F. W. (2010). Immersion in mediated environments: The role of personality traits. *Cyberpsychology, Behavior, and Social Networking*, *13*(3), 251–256. doi:10.1089/cyber.2009.0171

Young, G. (2013). Enacting taboos as a means to an end; but what end? On the morality of motivations for child murder and paedophilia within gamespace. *Ethics and Information Technology*, *15*(1), 13–23. doi:10.1007/s10676-012-9306-x

Zagal, J. P. (2009). Ethically notable videogames: Moral dilemmas and gameplay. *Breaking New Ground: Innovation in Games, Play, Practice and Theory, Proceedings of DiGRA 2009*. Retrieved from: https://pubweb.eng.utah.edu/~zagal/Papers/Zagal-EthicallyNotableVideogames.pdf

Figures

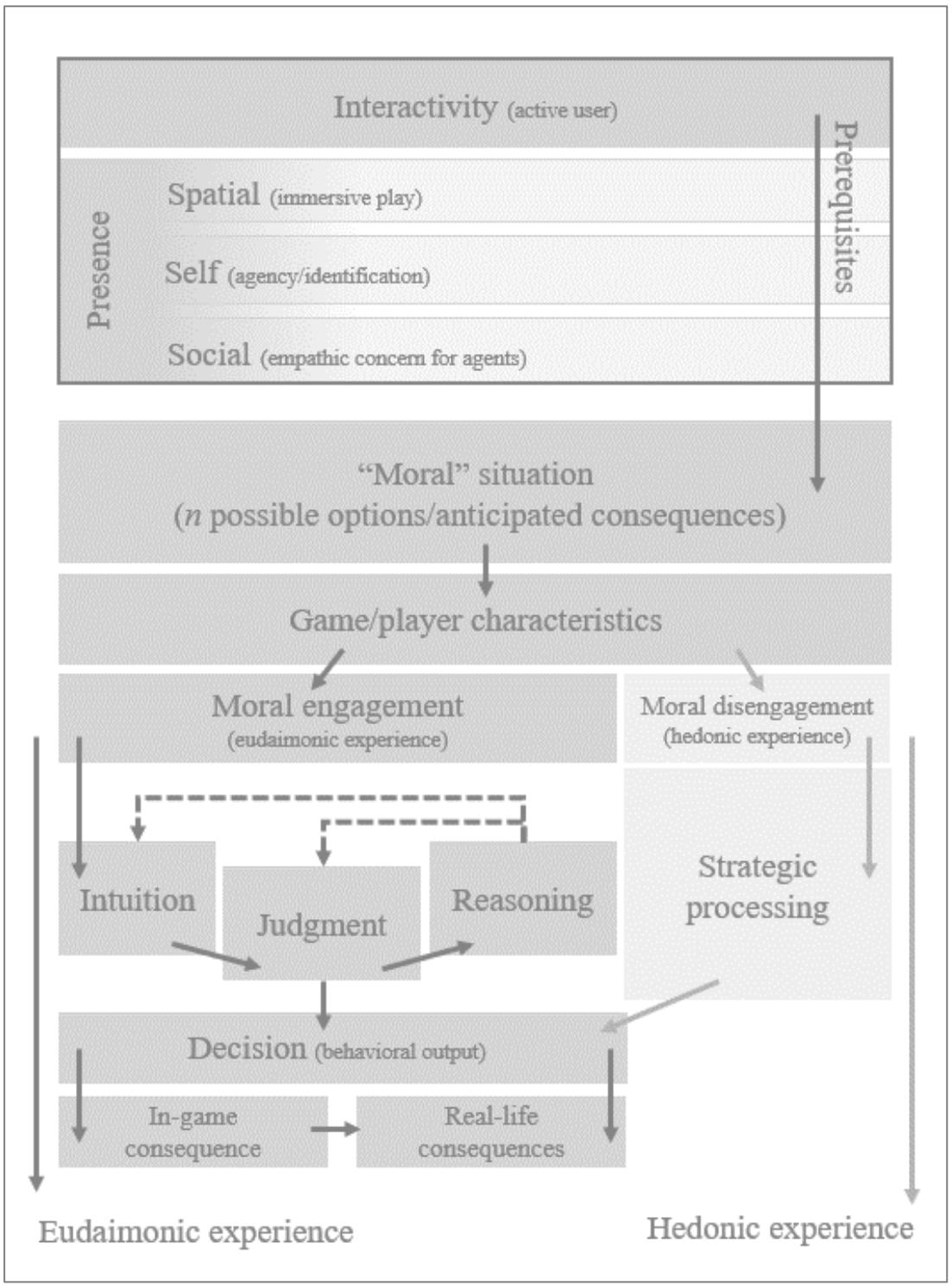

Figure 1: Integrative model of moral processing