An Integrative Model of Moral Processing for the Video Game Medium

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Despite heated discussions about violent content and its potentially negative consequences, society recognizes the popularity, economic relevance, and creative value of the video game medium—it has become an established mainstream form of entertainment (Quandt & Kowert, 2016). Although they can fulfill simple hedonic needs, numerous video games feature meaningful moral decision-making. Morally relevant gameplay is capable of telling deep and touching stories of loneliness, loss, and seemingly hopeless struggles against mighty powers, which can lead to eudaimonic experiences (Oliver et al., 2015), that is, meaningful experiences characterized by mixed emotions of contemplation, compassion, or feeling moved (Janicke-Bowles et al., 2021; Oliver & Raney, 2011).

How do players process morally relevant events in video games? Which factors influence these processes? Several theoretical approaches have been proposed explaining how games trigger moral processing and what factors modulate morally engagement. Theoretical concepts include Bandura's (1990) moral disengagement theory (applied to gaming by, e.g., Klimmt et al., 2008) and Haidt and Joseph's (2007) moral foundations theory (applied to gaming by the model of intuitive morality and exemplars; Tamborini, 2013). Furthermore, presence and immersion have been identified to influence players' perceptions of video games in general.

While there is empirical evidence for each of these approaches to influence moral perception directly or indirectly, and although these theories make efforts to explain subsections of moral processing, a comprehensive model integrating the respective elements has been lacking. Thus, we propose an *integrative model of moral processing* whose added value is to show connections between prevailing theories, but which also

helps to understand when and how players make a moral decision, and how this affects their entertainment experience.

Our model rests on the concept of the active user experiencing the *interactivity* of a video game, the core characteristic that separates games from classic forms of media. Interactivity and vividness of the virtual space lead to perceptions of *spatial presence* (Steuer, 1992). Different perspectives and avatars can support perceptions of *self-presence* and, thus, greater identification and moral agency, which increases moral engagement. *Social presence*, the feeling of "being with another" (Biocca, 1997), reflects players' impression of sharing the same virtual space with other social actors. Research has shown that players treat virtual characters the same as partners in nonvirtual social interactions (e.g., Matthews, 2019; Weaver & Lewis, 2012). As morality is a social construct, social presence is a prerequisite for perceiving and experiencing morality in games. Only then do 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. However, moral disengagement mechanisms can explain why not all players elicit moral engagement to the same degree. For example, the game narrative or distinct cues in a game situation may promote disengagement mechanisms like dehumanization or attribution of blame, which suggest "it's okay to shoot a character" (Hartmann & Vorderer, 2010 p. 94), thus suppressing moral concerns and ensuring a hedonic experience. However, processes of moral (dis)engagement may change quickly with new stimuli or twists in the game narrative. According to our model, with every new incoming stimulus a new evaluation will occur causing temporal variations and flexibility in switching between moral engagement and disengagement postulating short-term fluctuations in moral salience (see Eden et al., 2021). In line with the

MIME model, moral processing produces an initial moral “gut-feeling” or intuitive judgment. However, this automatic and unconscious judgment might be shaped by the reasoning system that supports or alters the initial judgment post hoc. Our model proposes that further characteristics of the player including their motivation and needs, level of trait empathy, their individual salience for different moral foundations, their real-life moral beliefs, as well as their domain specific experiences influence moral processing. Eventually, player’s moral processes will be put into action by choosing one of the available options in the game situation. The consequences of their actions can significantly influence not only subsequent events in the game, but also the player’s internal state (e.g., the experience of guilt) as well as the player’s future understanding of the concept of morality in the game.

The added value of our integrative model lies in emphasizing the apparent interrelations that form an overarching model aimed at explaining moral processing in video games as a whole. Although theoretical assumptions and empirical findings from neighboring fields of research support our proposed linkages, the model requires further empirical scrutiny. It is a particular strength of our model that the decisive factors for either eudaimonic or hedonic entertainment experience can be tested. This includes characteristics within the gaming environment and in the player known to be related to the self-regulatory cognitive processes of moral (dis)engagement, for example. Additionally, game-related aspects like interactivity and presence, but also game mechanics like time pressure that limit cognitive resources for moral reasoning have already been shown to alter moral processing and behavior. Whereas some of these questions may be addressed in focus group discussions with gamers (e.g., gaming motivation and needs), others can be tested in experimental studies conducted in laboratory environments. With the integrative

model, gaming scholars gain further insights into the different entertainment outcomes and the player perceptions of a virtual “as if” game setting.

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