

Philosophical Psychology



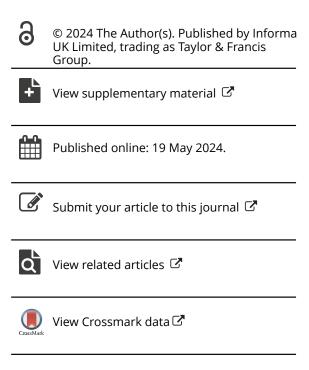
ISSN: (Print) (Online) Journal homepage: www.tandfonline.com/journals/cphp20

Extending the Gamer's Dilemma: empirically investigating the paradox of fictionally going too far across media

Thomas Montefiore, Paul Formosa & Vince Polito

To cite this article: Thomas Montefiore, Paul Formosa & Vince Polito (19 May 2024): Extending the Gamer's Dilemma: empirically investigating the paradox of fictionally going too far across media, Philosophical Psychology, DOI: <u>10.1080/09515089.2024.2354432</u>

To link to this article: https://doi.org/10.1080/09515089.2024.2354432









Extending the Gamer's Dilemma: empirically investigating the paradox of fictionally going too far across media

Thomas Montefiore^a, Paul Formosa^a and Vince Polito^b

^aDepartment of Philosophy, Macquarie University, Sydney, Australia; ^bSchool of Psychological Sciences, Macquarie University, Sydney, Australia

ABSTRACT

The Gamer's Dilemma is based on the intuitions that in single-player video games fictional acts of murder are seen as morally acceptable whereas fictional acts of sexual assault are seen as morally unacceptable. Recently, it has been suggested that these intuitions may apply across different forms of media as part of a broader Paradox of Fictionally Going Too Far. This study aims to empirically explore this issue by determining whether fictional murder is seen as more morally acceptable than fictional sexual assault across different media types, and whether audio-visuality and the degree of agency afforded by the medium influences these judgments. An experimental survey study was developed where participants responded to imaginary fictional scenarios as part of a 2 (engages with fictional murder or fictional sexual assault) X 2 (in a high or low agency) X 2 (audio-visual or nonaudio-visual medium) factorial design. It was found that fictional murder was seen to be more morally acceptable than fictional sexual assault across all media types, providing empirical support for the Paradox of Fictionally Going Too Far. It was also found that the audio-visuality and degree of agency influenced judgments of moral acceptability.

ARTICLE HISTORY

Received 12 March 2024 Accepted 7 May 2024

KEYWORDS

Fictional immorality: Gamer's Dilemma; ethics; virtual reality; video game ethics

1. Introduction¹

The Gamer's Dilemma (Luck, 2009) challenges those who accept the moral permissibility of fictional murder in single-player video games, such as running over an innocent NPC in Grand Theft Auto IV, to account for the moral impermissibility of other "off-limits" fictional wrongdoings, such as sexually assaulting an innocent NPC in RapeLay. This is a dilemma because fictional murder seems, intuitively, morally permissible, whereas fictional

CONTACT Thomas Montefiore 🔯 thomas.montefiore@mq.edu.au 🗊 Department of Philosophy, Macquarie University, Sydney, Australia

Supplemental data for this article can be accessed online at https://doi.org/10.1080/09515089.2024.2354432 © 2024 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (http://creativecommons.org/licenses/by-nc-nd/4.0/), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

sexual assault seems, intuitively, morally impermissible. However, offering a morally relevant distinction that justifies the moral permissibility of the former and the moral impermissibility of the latter remains an ongoing challenge. Recent literature on the Gamer's Dilemma has suggested that this dilemma might be an instance of a much wider moral issue, called the "Paradox of Fictionally Going Too Far" (Montefiore & Formosa, 2023a, 2023b), which is a paradox that applies to fictional wrongdoings in general, such as film or literature, rather than something that applies only to video games (see also Davnall, 2021; Luck, 2022). While there is some recent empirical work exploring the Gamer's Dilemma specifically (Formosa et al., 2023), there is at present no empirical work exploring the broader Paradox of Fictionally Going Too Far and whether relevant factors, such as the degrees of realism and agency afforded to consumers of different types of media, impact these judgments.

To address this gap, this study aims to determine whether fictional murder is seen to be more morally acceptable than fictional sexual assault across media, and whether other features of fictional wrongdoings across media, namely, audio-visuality and the degree of agency afforded by the medium, influence judgements of moral acceptability. To determine this, we developed an experimental survey study where we asked participants to respond to imaginary fictional scenarios as part of a 2 (engages with fictional murder or fictional sexual assault) X 2 (in a high or low agency) X 2 (audio-visual or non-audio-visual medium) factorial design. In a large, demographically representative sample, we found that fictional murder was seen to be more morally acceptable than fictional sexual assault across all media types, providing empirical support for the Paradox of Fictionally Going Too Far. We also found that the audio-visuality and degree of agency afforded by the medium influenced judgments of moral acceptability.

2. Literature review

There are two seemingly incompatible positions held toward the moral status of fictional wrongdoings. The first position, known as amoralism (Ostritsch, 2017; Young, 2017a, 2017b) understands fictional wrongdoings to occur within a form of Huizinga's "magic circle" (Huizinga, 1944; Juul, 2008; Salen & Zimmerman, 2003). Fictional wrongdoings that take place within the magic circle of a fiction are normatively distinct from their nonfictional counterparts because they amount to fictional acts of play. When we commit a fictional wrongdoing in a video game, we are really just playing with pixels on a screen. As a result, fictional wrongdoings are not really wrongdoings at all and are therefore immune from moral criticism. This position is intuitively powerful as it can account for the permissible stance individuals are said to have toward grave fictional wrongdoings, such as

fictional murder (see Luck (2009) and Young (2016) who make this theoretical claim, and Formosa et al. (2023) for empirical confirmation). The second position, known as moralism, accepts a moral asymmetry between fictional wrongdoings and their non-fictional counterparts, but holds nonetheless that some fictional wrongdoings are morally impermissible to enact. The moralist may appeal, for example, to the supposed instrumental harms caused to the player and their community that are generated from video game engagement with intense violence. The moralist position is also intuitively powerful. For example, enacting fictional sexual assault is an intuitively repugnant act which does not seem beyond the reach of moral criticism even though it is a fictional wrongdoing.

The incompatibility of the moralist and amoralist positions, and the desire to not abandon the intuitive thrust of each position, leads to a moral dilemma, articulated by Luck (2009) as the Gamer's Dilemma. The Gamer's Dilemma captures the difficulty of identifying a morally relevant difference between intuitively morally permissible fictional wrongdoings, such as fictional murder, and intuitively morally impermissible fictional wrongdoings, such as fictional sexual assault. Solving the Gamer's Dilemma has historically taken the form of a resolution, a dissolution, or a resistance. Resolving the Gamer's Dilemma defends the intuitions that ground it, for example, the intuitive permissibility of fictional murder and the intuitive impermissibility of fictional sexual assault, and argues for a morally relevant justification to distinguish between these actions (Bartel, 2020; Coghlan & Cox, 2023; Patridge, 2013; Young, 2016). For example, by arguing that engaging with fictional sexual assault is more likely to result in "real-world" instances of immorality than engaging with fictional murder. Dissolving the Gamer's dilemma rejects the intuitions that ground it, and argues that, rather than the action type, it is instead contextual features of fictional actions that justify their moral status, such as the degree of realism of the act or the degree of agency afforded the player (Ali, 2015; Öhman, 2020; Ramirez, 2020). Resisting the Gamer's Dilemma involves interrogating the intuitions that ground the dilemma to the extent that they are unable to express a *morally* intuitive distinction that motivates a resolution or dissolution (Montefiore & Formosa, 2022, 2023b). For example, by highlighting the role that taste plays in guiding the intuitive permissibility of fictional acts (see Young, 2017a).

In recent literature, primarily in response to dissolving and resisting attempts, the Gamer's Dilemma has been both narrowed and expanded. It has been narrowed to show the Gamer's Dilemma survives within a particular range of contexts that are neither too unrealistic nor realistic, and where virtual murder and virtual sexual assault are held contextually stable (Luck, 2018, 2022; Montefiore & Formosa, 2022). It has been expanded to show the Gamer's Dilemma may be an instance of a broader dilemma (or paradox) which applies, in a similarly narrowed formulation (in stable contexts that are neither too realistic nor unrealistic), to a range of fictional domains outside of video game environments (Davnall, 2021; Ekdahl, 2023; Luck, 2022; Montefiore & Formosa, 2023a, 2023b). This more general dilemma, called the "Paradox of Fictionally Going Too Far" (Montefiore & Formosa, 2023a), applies the thrust of the challenge posed by the Gamer's dilemma and extends it to a range of media beyond video games, such as film and literature. For example, what, if anything, makes watching fictional murder in a film morally permissible but watching fictional sexual assault in a film morally impermissible. Further, if the Gamer's Dilemma is indeed an instance of the broader Paradox of Fictionally Going Too Far, is there anything morally distinct about fictional wrongdoing in video games compared to other media. Montefiore and Formosa (2023a) have speculated that it may be intrinsic features of video games, such as the higher degree of agency or audio-visuality (or both) afforded to video game players, which make fictional wrongdoings intuitively morally distinct in video games, compared to that same wrongdoing when placed in other fictional contexts, such as literature, which lacks those features or have lower degrees of agency and/or audio-visuality. Alternatively, it may be historically contingent associations with different media forms which lead to a heightened degree of moralizing in some media contexts over others.

Recent empirical work on the Gamer's Dilemma (Formosa et al., 2023) has provided, among other things, two philosophical insights. First, that the Gamer's Dilemma empirically exists, as the intuitions that are alleged to ground it are indeed held (with qualifications). Second, that contextual features play a significant role in the intuitive permissibility of fictional wrongdoings in video games. However, there is currently no empirical evidence to show that the Paradox of Fictionally Going Too Far exists, and given the recent theoretical work, there is a need to turn an empirical eye in this direction.³

Bringing this literature together generates several hypotheses that arise from the claim that the Paradox of Fictionally Going Too Far exists (i.e., there is an intuited moral difference between fictional murder and fictional sexual assault across different media types), and that it will be impacted by the degree of agency and the audio-visuality afforded by a medium. We developed three hypotheses:

H1: People will rate fictional wrongdoings involving murder as more morally acceptable than fictional wrongdoings involving sexual assault across all media forms.



H2: People will rate fictional wrongdoings in non-audio-visual media (such as novels) as more morally acceptable than fictional wrongdoings in audio-visual media (such as films or video games).

H3: People will rate fictional wrongdoings in media involving a low degree of agency (such as films) as more morally acceptable than fictional wrongdoings in media involving a high degree of agency (such as interactive video games).

In addition, previous theoretical and empirical literature has suggested that familiarity with a medium may influence attitudes toward the moral acceptability of fictional actions that are enacted within that medium (Formosa et al., 2023; McEwan, 2017). We therefore aimed to control for the impact of previous experience with a media type on our results.

3. Methods

3.1. Participants

We recruited a US demographically representative sample of 687 participants. The sample was demographically representative of the US as the sample closely reflected the age, sex, and ethnic distribution of the US, as determined by Prolific (based on the 2015 US census Bureau). The sample was made up of 344 females (50.4%), 328 males (48.1%) and 10 non-binary (1.5%) people and the average age was 45.8 years old (SD = 16.2). The ethnic distribution of the sample was White (78%), Black (13%), Asian (6%), Mixed (2%) and Other (2%). Following a pre-registered exclusion criterion, five participants were removed for failing two out of two attention checks. A sample of an attention check reads: "Please select 'Very morally acceptable' for this question to indicate that you are paying attention." This resulted in a final sample size of 682 valid participants (n = 682).

3.2. Research design

This project, including hypotheses and analysis plan, was pre-registered at OSF (see https://osf.io/9zg5r).

An experimental survey method was chosen as it is effective at exploring features of a hypothetical scenario that are hypothesized to influence responses (Wallander, 2009). Participants were asked to reflect on imaginary fictional scenarios across four media forms (a film, novel, video game, and choose-your-own-adventure novel). In each scenario, participants engaged with a media form involving a fictional character - Casey - who commits a morally wrong act. Scenarios were manipulated across three

Table 1. Description of the 8 vignettes.

Scenario Description	Action	Medium	Agency	n
Video Game Murder	Murder	Audio-visual	High	87
Video Game Sexual Assault	Sexual assault	Audio-visual	High	84
Film Murder	Murder	Audio-visual	Low	87
Film Sexual Assault	Sexual assault	Audio-visual	Low	85
Choose-Your-Own-Adventure Murder	Murder	Non-audio-visual	High	83
Choose-Your-Own-Adventure Sexual Assault	Sexual assault	Non-audio-visual	High	87
Novel Murder	Murder	Non-audio-visual	Low	85
Novel Sexual Assault	Sexual assault	Non-audio-visual	Low	84

domains: 1) *Action type*: murder or sexual assault; 2) *Medium type*: audiovisual (i.e., films and video games) or non-audio-visual (i.e., novels and Choose-Your-Own-Adventure books); and 3) *Agency*: high agency (i.e., video games and Choose-Your-Own-Adventure books) or low agency (i.e., films and novels). This resulted in a 2 (Action type) x 2 (Medium type) x 2 (Agency level) factorial design, with 8 unique experimental vignette scenarios as summarized in Table 1. Each participant completed only one vignette, resulting in a range of between 83 and 87 participants per vignette. While the action and medium type were directly stated in the vignettes, the degree of agency had to be partly inferred, and so we measured degree of control (as outlined below) to explore this aspect.

3.3. Materials

The text of all eight vignettes were identical, except when indicating the medium or language appropriate to the medium (flick on the video game/ flick open the novel), the audio-visuality of the medium (highly realistic graphics and sound/highly realistic language and descriptions/highly realistic cinematography and sound), the fictional action type (murder/sexual assault), and the degree of agency afforded by the medium (you watch Casey/you make Casey). All vignettes were similar in terms of structure and length and followed a consistent pattern in describing the degree of agency each medium afforded and the audio-visual characteristics of the medium. In line with best practice vignette design (Aguinis & Bradley, 2014), the degree of immersion for each vignette was designed to mirror the degree of immersion of vignettes from a previously published empirical study on the Gamer's Dilemma (Formosa et al., 2023). Prior to reading the scenario, each participant was told that the scenario was fictional, and to morally assess the action happening fictionally and not the real-world equivalent of that fictional action. Below is an example of a video game vignette where boldened square brackets indicates manipulated components and bolded text indicates fictional action type, audio-visuality and degree of agency:

You are in your living room and decide to play a new video game you have never played before called "Casey's World". You flick on the video game and begin to play. Playing as the character Casey, you direct Casey to freely explore and interact with the world of the game, via the buttons you press. The video game takes place in a large fictional city in the year 2023. The game has highly realistic graphics and sound, making the world of the game, and Casey's actions in it, seem like they are really happening. For example, there is a moment where Casey runs for too long and needs to stop to catch their breath. You watch their chest thumping up and down while you hear them gasp for air. You make Casey do various things throughout the game while you play via the buttons you press on your controller. By pressing a particular button, for example, you make Casey jump. How the game unfolds is largely in your control. At one point in the video game, you make Casey [murder/sexually assault] an adult stranger. The stranger screams out and begs Casey to stop as they try to push away. By holding down a button on your controller, you make Casey hold down the stranger and [murder/sexually assault] them. It is shocking and gruesome.

The full text of all vignettes is available in the Supplementary Materials.

3.4. Procedure

Participants were recruited through Prolific, which is an online data collection service that can provide demographically representative samples for the U.S.A. and UK. Online data providers such as Prolific reliably access diverse samples, providing an advantage over undergraduate student pools (Douglas et al., 2023), and when embedded with attention checks (as our study was) can be comparable to an unpaid random sample (Behrend et al., 2011). Prolific has also been shown to replicate results and provide similar, if not higher quality, data to the dominant online data provider MTurk (Douglas et al., 2023; Palan & Schitter, 2018; Peer et al., 2022). Ethics approval was received from our University's Human Research Ethics Committee (ref no. 520231089852298). Participants, before engaging with the study, provided informed consent to participate after being notified of the potentially disturbing content of the vignettes, and were provided with the contact information for relevant US-based support services. Participants then provided a range of demographic information, and following a between-subjects design, were each randomly assigned a single vignette out of our pool of 8 vignettes (see Table 1). Participants were then asked to respond to a range of survey measures concerning the vignette they were given, followed by several general measures not related to their specific vignette, as outlined below.

3.5. Measures

After participants read their scenario, the following measures were used to sample their response.

Moral acceptability was measured via a single item Likert-scale created by the authors and adapted from Formosa et al. (2023) and Patil and Silani (2014). The item was customized to match each participant's vignette and reads: "How morally acceptable is it for you to have [made/watched/read about] Casey [murder(ing)/sexually assault(ing)] the stranger in this [video game/film/choose-your-own-adventure book/novel]?" Participants provided responses ranging from 1 "Very morally unacceptable" to 7 "Very morally acceptable".

Degree of control was measured via a direct single item Likert-scale: "How much control did you have over Casey in this scenario?". Participants provided responses ranging from "1 = No control at all" to "7 = A great deal of control".

Participants were next asked to provide an open-ended qualitative answer in response to their assigned vignette. The qualitative question read: "Can you explain why you thought it was morally acceptable or morally unacceptable to [make/watch/read about] Casey [sexually assaulting/murdering] and adult stranger while [viewing/reading/playing] this [video game/novel/film/choose-your-own-adventure book]?".

General moral acceptability of media was measured with an 8-item scale based on a previous study (Formosa et al., 2023). Questions took the form: "How morally acceptable is it to [watch/read about/enact] [murder/sexual assault] in a fictional [film/novel/video game/'choose-your-own-adventure' book]?". Before answering this question, all participants were informed that the questions were about fictional actions in media generally, and not about the scenario they had responded to earlier. Each item was rated on a 7-point Likert scale from 1 "Very morally unacceptable" to 7 "Very morally acceptable".

Media experience was measured using a variation of the Game Technology Familiarity (GTF) scale (McEwan et al., 2020). Participants completed a 4-item scale, rating their level of experience with each form of media (video games, films, novels, and "choose-your-own-adventure" books). Each item was rated on a 7-point Likert-scale ranging from 1 = "Very little experience" to 7 = "Very experienced", with an additional option of 0 = "No experience". The full text for all general moral acceptability and media experience questions is included in the Supplementary Materials.

4. Results

4.1. Moral acceptability

Participants' mean ratings of moral acceptability in each vignette are shown in Figure 1. To investigate characteristics that may influence

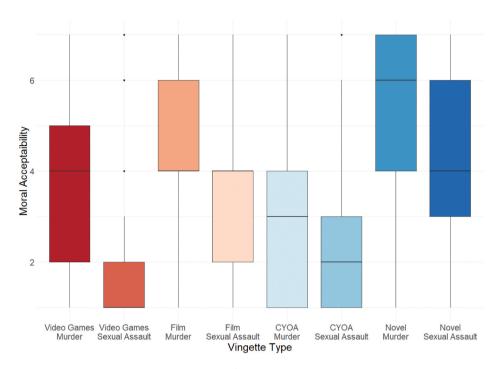


Figure 1. Mean moral acceptability ratings for each vignette.

moral acceptability we ran a 3-way ANOVA with Action Type (murder vs sexual assault), Medium (audio-visual vs non-audio-visual) and Agency (high vs low) as factors. There was a main effect of Action Type, F(1, 674) = 91.15, p < .001; $\eta_p^2 = 0.12$, 95% CI [0.08, 1.00], such that overall, scenarios involving murder (m = 4.14, sd = 1.90) were more morally acceptable than scenarios involving sexual abuse (m = 2.90, sd = 1.85). This finding supports H1. There was a main effect of Medium, F(1, 674) = 4.80, p = .029; $\eta_p^2 = 0.01$, 95% CI [0.00, 1.00], such that overall, scenarios involving non-audio-visual content (m = 3.66, sd = 2.07) were more morally acceptable than scenarios involving audio-visual content (m = 3.39, sd = 1.88). This finding supports H2. There was a main effect of Agency, F(1, 674) = 143.02, p < .001; $\eta_p^2 = 0.18$, 95% CI [0.13, 1.00], such that overall, scenarios involving low agency (m = 4.30, sd = 1.84) were more morally acceptable than scenarios involving high agency (m = 2.74, sd = 1.80). This finding supports H3.

There was also an interaction between Medium and Agency, F(1, 674) = 7.17, p = .008; $\eta_p^2 = 0.01$, 95% CI [0.00, 1.00]. Post-hoc follow up tests, with Tukey correction for multiple comparisons, revealed that all pairwise combinations were statistically significant (all $t \ge 0.64$, all p < .003), with the exception of the audio-visual + high agency vs non-audio-visual + high agency comparison (t = -.06, p = 0.988). This pattern of results is shown in Figure 2. This interaction indicates that non-audio-visual vignettes were more morally acceptable

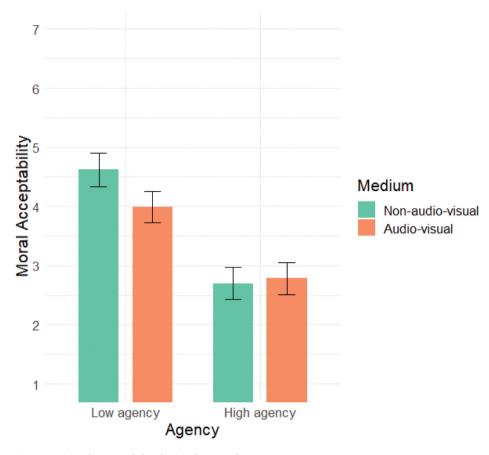


Figure 2. Moral acceptability by Medium and Agency.

than audio-visual vignettes in low agency scenarios, but when agency was high, the level of audio-visuality did not make a difference to moral acceptability. In other words, fictional wrongdoings in novels were more morally acceptable than in films, but there was no statistical difference between fictional wrongdoings in video games and choose-your-own-adventure stories.

4.2. Impact of action type, medium, and agency on control

We next investigated whether our manipulated variables influenced participants feelings of control in each vignette. We ran a 3-way ANOVA with Degree of Control ratings as the DV, and Action Type (murder vs sexual assault), Medium (audio-visual vs non-audio-visual) and Agency (high vs low) as factors. There was no main effect of Action Type, F(1, 674) = 0.41, p = .522; $\eta_p^2 < 0.01$, 95% CI [0.00, 1.00] and no main effect of Medium, F(1, 674) = 2.95, p = .087; $\eta_p^2 < .01$, 95% CI [0.00, 1.00]. Unsurprisingly, there was a main effect of Agency, F(1, 674) = 2461.13, p < .001; $\eta_p^2 = 0.79$, 95% CI [0.76, 1.00], such that overall, scenarios involving high agency

(m = 6.41, sd = 1.34) led to higher ratings of control than scenarios involving low agency (m = 1.45, sd = 1.31). There was also an interaction between Medium and Agency, F(1, 674) = 14.04, p < .001; $\eta_p^2 = 0.02$, 95% CI [0.01, 1.00]. Post-hoc follow up tests, with Tukey correction for multiple comparisons, revealed that all pairwise combinations were statistically significant (all $t \ge 0.56$, all p < .001) with the exception of the audio-visual + low agency vs non-audio-visual + low agency comparison (t = -0.19, p = 0.541). This interaction indicates that audio-visual vignettes were associated with higher levels of subjective control than nonaudio-visual vignettes in high agency scenarios, but when agency was low, the level of audio-visuality did not make a difference to subjective control. In other words, participants felt more in control in video games than in choose-your-own adventure stories, but there was no statistical difference in subjective control between films and novels.

4.3. General moral acceptability

We next investigated general ratings of moral acceptability. The DV for this analysis was participants' general ratings of the moral acceptability of different kinds of fictional wrongdoing; for example, "How morally acceptable is it to read about murder in a fictional novel" (rather than their judgment of the moral acceptability of their own personal involvement in the previous detailed vignettes). We ran a 3-way ANOVA with Action Type (murder vs sexual assault), Medium (audio-visual vs non-audio-visual) and Agency (high vs low) as factors. There was a main effect of Action Type, F(1, 5448) = 245.04, p < .001; $\eta_p^2 = 0.04$, 95% CI [0.03, 1.00], such that overall, scenarios involving murder (m = 4.47, sd = 1.75) were more morally acceptable than scenarios involving sexual abuse (m = 3.76, sd = 1.87). There was a main effect of Medium, F(1, 5448) = 14.07, p < .001; $\eta_{D}^{2} < 0.01$, 95% CI [0.00, 1.00], such that overall, scenarios involving non-audio-visual content (m = 4.20, sd = 1.85) were more morally acceptable than scenarios involving audio-visual content (m = 4.03, sd = 1.84). There was a main effect of Agency, F(1, 5884) = 952.91, p < .001; $\eta_p^2 = 0.15$, 95% CI [0.13, 1.00], such that overall, scenarios involving low agency (m = 4.81, sd = 1.60) were more morally acceptable than scenarios involving high agency (m = 3.42, sd = 1.81).

There was an interaction between Action Type and Medium, F(1, 5448)= 4.88, p = .027; $\eta_p^2 < 0.01$, 95% CI [0.00, 1.00]. Post-hoc follow up tests, with Tukey correction for multiple comparisons, revealed that all pairwise combinations were statistically significant (all $|t| \ge 0.27$, all p < .001) with the exception of the audio-visual + murder vs non-audio-visual + murder comparison (t = -.07, p = 0.695). This pattern of results is shown in Figure 3a. This interaction indicates that non-audio-visual vignettes were more morally acceptable than audio-visual vignettes when the fictional

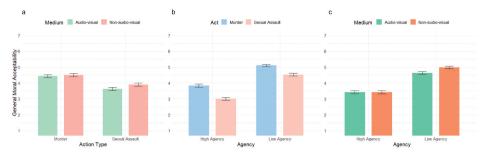


Figure 3. Significant interactions in analysis of general moral acceptability. (a) Action Type x Medium. (b) Agency x Action Type. (c) Agency x Medium.

wrongdoing was sexual assault, but when the fictional wrongdoing was murder, the level of audio-visuality did not make a difference to moral acceptability. In other words, books and choose-your-own adventure stories about sexual assault were more morally acceptable than films and video games about sexual assault, but there were no statistical differences in moral acceptability across any media forms when the fictional wrongdoing was murder.

There was also an interaction between Action Type and Agency, F(1, 5448) = 8.35, p = .004; $\eta_p^2 < 0.01$, 95% CI [0.00, 1.00]. Post-hoc follow up tests, with Tukey correction for multiple comparisons, revealed that all pairwise combinations were statistically significant (all $|t| \ge 0.58$, all p < .001). This pattern of results is shown in Figure 3b. This interaction indicates that although murder was always more morally acceptable than sexual assault, this difference was greater in high agency scenarios (t = 0.84, p < .001) than in low agency scenarios (t = 0.58, p < .001). In other words, the difference in moral acceptability between murder and sexual assault was more pronounced in video games and choose-your-own-adventure stories than it was in films and novels.

Finally, there was an interaction between Medium and Agency, F(1, 5448) = 15.83, p < .001; $\eta_p^2 < 0.01$, 95% CI [0.00, 1.00]. Post-hoc follow up tests, with Tukey correction for multiple comparisons, revealed that all pairwise combinations were statistically significant (all $t \ge 0.35$, all p < .001) with the exception of the audio-visual + high agency vs non-audio-visual + high agency comparison (t = -.01, p = 0.988). This pattern of results is shown in Figure 3c and is identical to the findings for personal moral responsibility reported above. This interaction indicates that non-audio-visual vignettes were more morally acceptable than audio-visual vignettes in low agency scenarios, but when agency was high, the level of audio-visuality did make a difference to moral acceptability. In other words, wrongdoing in novels was more morally acceptable than



in films, but there was no statistical difference between wrongdoings in video games and choose-your-own-adventure stories.

4.4. Impact of previous media experience on moral acceptability judgments

To investigate the impact of previous media experience on moral acceptability judgments, we repeated the ANOVA from 4.1 with additional covariates, taken from the from the Media Experiences Questionnaire, representing participants' previous experience with a) video games, b) films, c) novels and d) CYOA stories. Consistent with 4.1, there were main effects of Action Type $(F(1, 670) = 93.86, p < .001; \eta_p^2 = 0.12, 95\% \text{ CI } [0.09, 1.00]), \text{ Medium}$ $F(1,670) = 4.94, p = .027; \eta_p^2 < 0.01, 95\% \text{ CI } [0.00, 1.00] \text{ and Agency } (F(1,670))$ = 147.27, p < .001; $\eta_p^2 = 0.18$, 95% CI [0.14, 1.00]). Also, consistent with 4.1, there was an interaction between Medium and Agency, F(1, 670) = 6.75, p = .010; η_n^2 = 0.01, 95% CI [0.00, 1.00]. The only significant covariate was prior experience with video games $(F(1, 670) = 19.02, p < .001; \eta_p^2 = 0.03, 95\%$ CI [0.01, 1.00]). Follow-up correlational analysis showed that individuals with greater levels of video game experience were more likely to rate fictional wrongdoings as morally acceptable across all scenarios (r = 0.16, p < .001).

4.5. Qualitative results

A thematic analysis was employed to code qualitative responses, from which a bottom-up "inductive analysis" approach was used to allow themes to emerge organically (Braun & Clarke, 2006). To ensure consistency, coding was conducted by two researchers, whereby the coding scheme was generated collaboratively after reading a subset of responses, followed by one researcher independently coding the remaining data which was then independently verified by the second researcher (see Carter et al., 2014). The coding process was recorded in a coding diary, and any discrepancies in coding were resolved through dialogue between the researchers.

Qualitative responses that emerged in response to the vignettes were coded under three major themes. These were either negative, where participants were generally against the action they were being asked to respond to; positive, where participants were generally not against the action; or other, where participants were neither clearly against nor in favor of the action. Under these three major themes, other minor themes emerged. Each major and minor theme is listed in Table 2, accompanied by illustrative examples (with the reference vignette listed in square brackets), and each theme's relative frequency.

Negative themes (44%) and positive themes (44%) were about equally common. The two most common positive minor themes that



Table 2. Themes that emerged from participant responses to vignettes. Major themes of positive, negative, and other in bold followed by associated minor themes. Themes with less than 1% frequency not reported.

Theme Name: Description	Illustrative Quotes	Theme Freq.	
Negative themes: Themes generally against the action		44%	
It's immoral, feels wrong or bad	"Sexually assault is never acceptable even in fiction scenarios." [FSA]	7%	
	"Just because it is fictional doesn't make it right." [VGM]		
Wrong to enjoy, support or endorse; wrong to 'get in the mindset' or 'imagine' the act; indicates a desire to do the act in the 'real-world'	"Choosing to have a character sexually assault someone is a reflection of yourself" [CYOASA]	6%	
	"I think I feel like I'm condoning it, even though it is a film (not real) and not something I specifically had control over." [FSA]		
	"It is morally unacceptable because it glorifies sexual assault" [FSA]		
You cause the action;	"I feel that it was somewhat morally	6%	
Somehow responsible for the action	unacceptable because, while none of it was		
	real, I could have fast forwarded past it"[FSA]		
	"Since I have total control and I was asked to do		
Disgusting, sickening or hard to engage with	it, it's morally unacceptable for me." [VGM] "It's simply repulsive. It's not acceptable to watch	4%	
Disgusting, statening of nata to engage with	and be okay with it." [FSA]	170	
	"Honestly even if this is happening in a video		
	game I find it very repulsive and disgusting		
Normalises or encourages the urrens, makes the real	and very morally unacceptable" [VGSA] "I think we should not watch murders, even	4%	
Normalises or encourages the wrong; makes the real- world wrong more acceptable	fictional ones, because we become	4%	
	desensitized to things too easily." [FM]		
	"I would be concerned that this type of game		
	could make it appear that this behavior would		
Foole too week	be acceptable in real life" [VGSA]	20/	
Feels too real	"I mean it's not fully morally unacceptable because it is fiction, but they make it feel as	3%	
	real as possible, so it's kind of messed up" [CYOAM]		
	"Because it feels real, like you are really making		
	someone commit murder and it feels		
	absolutely wrong and criminal" [VGM]		
Not the sort of media I would engage with or should be	"Because this is something that I would have	3%	
made	normally tuned out of. I do not like these immoral, violent movies" [FSA]		
	"I don't want to read about that. It is		
	unacceptable to ever do that to someone.		
	Completely changed my mood" [NSA]		
Not good for you or negative emotional reaction;	"I think it is morally unacceptable to make Casey	3%	
	do this because what we choose to read about and take into our minds can have an effect on		
	our mental health and lessen our overall		
	sensitivity to this type of behavior" [CYOASA]		
	"Because it is so realistic, it feels like you are in the		
No justification or rogson for it	scenario and is not good for your mind" [FM]	2%	
No justification or reason for it	"In the absence of a compelling reason within the book's narrative, this action cannot be morally	۷%0	
	justified" [CYOAM]		
	"It is not an action that is necessary for the game" [VGSA]"	ıe"	
Children shouldn't engage with it	"If a young child is playing this could do terrible	2%	
	things to their development" [VGM]		
	"Some are not able to separate TV from reality and can greatly influence and is		

(Continued)

Table 2. (Continued).

Theme Name: Description	Illustrative Quotes	Theme Freq.
Positive themes: Themes generally not against the action		44%
'Just a fiction' or art or creative work or game	"It's fictional. There is nothing right or wrong about it" [CYOASA]	18%
	"It's a movie, and while the actions may seem realistic, it is only fiction" [FSA] "It's fiction, and I'm just reading it" [NM]	
Not harming real person or no real-world impact	"Even though it is realistic, it is not real. Nobody is actually being hurt" [FM]	9%
["Its morally acceptable because it does not have any impact on people in the real world" [VGM]	7%
Engagement with representations of wrongs is permissible	"I think it's morally acceptable because I'm simply just reading about it" [NM] "There is not really a moral issue with watching	7%
	a fictional assault" [FSA]	
Not in control, didn't see coming, not responsible	"It's morally acceptable because it is part of the plot. We have no idea that is what is coming. We are not the ones committing those awful acts" [FSA]	6%
	"The reader has done nothing wrong by reading this It is out of the readers control and therefore it is not immoral" [NM]	
There was a reason or justification; It is important to engage with these issues, there was a reason to engage in the fictional act.	"Watching is a possibility that one can learn from such a scenario or what one can do to avoid such a situation" [FSA] "Fictional stories are the perfect medium for exploring morally grey activities, such as	3%
	murder" [NM]	
	"While it might be distasteful or upsetting to perform the action in the game, it may be part of a larger commentary or purpose within the game" [VGM]	
Other themes: Themes neither generally against the action or not against the action	game (vam)	13%
Act itself is wrong; the act in the fiction is wrong (not the act of engaging with the fictional act by reading, watching, playing, etc.)	"Murder is just wrong" [CYOAM] "Rape is horrible and illegal" [VGSA]	6%
It depends on plot and context; need more information	"I don't feel either way about it I know nothing about the motivations of the author to include this in the novel. That is something that could possible change my mind" [NSA] "It depends. One has to decide if the presentation was to make some point, and whether or not	3%
	the point being made was worthwhile" [NSA]	

[FA] = Film Sexual Assault, [VGM] = Video Game Murder, [VGSA] = Video Game Sexual Assault, [FM] = Film Murder, [CYOAM] = Choose-Your-Own-Adventure Murder, [CYOASA] = Choose-Your-Own-Adventure Sexual Assault, [NM] = Novel Murder, [NSA] = Novel Sexual Assault.

emerged were that fictional wrongdoings were acceptable to engage with because they were just fictional (18%), and they had no realworld impact (9%). Appealing to the fictionality of fictional wrongdoings to explain their moral acceptability was thus the most appealed to positive minor themes by a large margin. The negative minor themes that explained the moral unacceptability of fictional

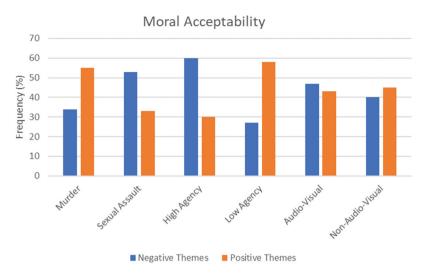


Figure 4. Comparing the frequency of positive and negative themes reported by participants for different vignette types.

wrongdoings were more diverse, with several negative minor themes emerging. The most common negative minor themes were that it was immoral or would feel bad or wrong (7%) to engage with fictional wrongdoings, followed by it being wrong to engage with fictional wrongdoings if one's doing so involved enjoying or endorsing the fictional wrongdoing or its real-world counterpart (6%), or if the fictional wrongdoing was caused by the person engaging with it (6%).

In Figure 4 we compare the ratio of positive and negative major themes reported by participants responding to scenarios involving murder vs. sexual assault; scenarios with high agency (i.e., video games and CYOA stories) vs. low agency (i.e., films and novels); and scenarios with audiovisual media (video games and films) vs. non-audio-visual media (novels and CYOA stories).

Murder vignette types produced a higher proportion of positive (55%) over negative themes (34%). By contrast, sexual assault vignette types generated a roughly inverse ratio, with negative themes (53%) outweighing positive themes (33%). The starkest contrast was between high and low agency vignette types, whereby high agency vignettes generated a clear ratio of negative (60%) over positive themes (30%), and low agency vignettes generated a clear ratio of positive (58%) over negative themes (27%). The least clear difference between positive and negative themes was between the audio-visual and the non-audio-visual vignette types, where across both vignette types a similar proportion of positive and negative themes arose.



5. Discussion

This study explored whether attitudes about the differing moral acceptability of fictional engagement with murder versus sexual assault, that has been shown to hold in the context of video games (Formosa et al., 2023), also hold across different media types, and whether agential or audio-visual features of these different media types plays a role in shaping these attitudes.

Our first hypothesis (H1), that people would find fictional murder more morally acceptable than fictional sexual assault across all media forms, was confirmed by our data. In both the vignettes and in response to our general questions, fictional murder was seen as significantly more morally acceptable than fictional sexual assault across all media types examined. Our qualitative data provides further support for H1, with negative themes far outweighing positive themes in fictional sexual assault vignettes, whereas positive themes far outweighed negative themes in fictional murder vignettes. Overall, this provides empirical support for recent claims in the literature that the Gamer's Dilemma is an instance of a broader dilemma concerning the greater moral acceptability of fictional murder over fictional sexual assault in general across different media types (not just in video games), also called the Paradox of Fictionally Going Too Far (Davnall, 2021; Luck, 2022; Montefiore & Formosa, 2023a).

Further, our qualitative results extend on the findings from Formosa et al. (2023) insofar as participants struggled to clearly articulate what it was about fictional wrongdoings that made them wrong. For example, some of the most common minor negative themes appealed to the fictional wrongdoings being "just wrong", "feeling bad" to enact, or being "disgusting". While this doesn't establish that participants didn't have genuine moral reasons to support their moral disapproval of fictional wrongdoings, it does indicate that they did not seem able to readily articulate one, which may suggest a case of "moral dumbfounding" whereby a moral judgment is maintained in the absence of supporting moral reasons (McHugh et al., 2017). By contrast, the most common positive minor themes that emerged in defense of fictional wrongdoings, namely that fictional wrongdoings are "just a fiction" and have "no real-world impact", seem to provide genuine moral reasons to support these positive moral assessments. This suggests that "moral dumbfounding" might be more of a problem for those that rate the moral acceptability of virtual wrongdoings as low, although this would require further research to establish.

Our second hypothesis (H2), that people would find fictional wrongdoings in non-audio-visual media as more morally acceptable than fictional wrongdoings in audio-visual media, was also confirmed by our data. In both the vignettes and in response to our general questions, fictional wrongdoings in audio-visual media, such as film and video games, were seen as less moral acceptable than the same acts occurring in non-audio-visual media, such as novels and choose-your-own-adventure books. However, the relative frequency of positive and negative qualitative themes for audiovisual and non-audio-visual mediums provides little further support for this hypothesis. Overall, these results extend the work of Ramirez (2020) and Öhman (2020) who focus on the contextual feature of realism in justifying the moral permissibility of fictional wrongdoings. Ramirez argues that when a fictional wrongdoing results in a fictionally real experience (understood to be a fictional experience that, while epistemically distinct from its nonfictional counterpart, is indistinguishable from it in terms of its psychological and physiological effects) then it may become morally objectionable as a result. While our results do not indicate that an experience needs to be fictionally real to be seen as morally unacceptable, we did find that the audio-visuality of the medium played a role in shaping perceived moral acceptability (see also Polito & Hitchens, 2021).

Our third hypothesis (H3), that people would find fictional wrongdoings in media involving a low degree of agency as more morally acceptable than fictional wrongdoings in media involving a high degree of agency, was again confirmed by our data. In both the vignettes and in response to our general questions, fictional wrongdoings in high agency mediums, such as video games and choose-your-own-adventure books, were less morally acceptable than in low agency mediums, such as films and novels. We also found a significant difference, as expected, between our high and low agency vignettes in terms of our degree of control, indicating that our agency manipulation worked as expected. Our qualitative data provides further support for H3, with negative themes far outweighing positive themes in high agency vignettes, whereas positive themes far outweighed negative themes in low agency vignettes.

This finding extends Ali's (2015) dissolving approach toward the Gamer's Dilemma which focuses on the moral relevance of the contextual feature of agency toward the moral permissibility of fictional wrongdoings. For Ali, fictional wrongdoings which take place in simulation games such as GTA, where a player is afforded a high degree of agency, will be morally distinct from fictional wrongdoings which occur in storytelling games, where a player is not clearly responsible for the fictional wrongdoings which occur (see also Formosa et al., 2016). Our results show that participants were sensitive to the degree of agency they had across varying media, and the degree of agency participants had influenced their view of the moral acceptability of fictional wrongdoings. Our qualitative data helps us to understand this result as one of the most common negative minor themes that arose was a concern with being the cause of the fictional wrongdoing. As one participant stated: "It's one thing if a fictional character does it when it is written by an author, and another entirely that I myself would have to choose that." Interestingly, some participants indicated that they felt morally responsible for fictional wrongdoings in media such as film and novels by commenting on the agential dimension of this media, insofar as they could choose to stop watching the film or reading the novel and, by not doing that, they may be seen to condone the act in question.

6. Limitations and future research directions

This study points to several future research directions. First, one common qualitative theme that emerged was the extent to which engagement with fictional wrongdoings are repugnant or disgusting. Further work investigating the relationship between attitudes of moral disgust and the perceived moral acceptability of fictional wrongdoings may support the work of Coghlan and Cox (2023), who attempt to resolve the Gamer's Dilemma by arguing that those fictional actions which are justifiably repugnant are morally off-limits. Second, we found that, except for video games, previous experience with different media did not alter judgments of moral acceptability. Why does higher levels of experience with video games lead to a more permissive view of the moral acceptability of fictional wrongdoing, whereas higher levels of experience with other forms of media does not? Further research is needed to explore and explain this result. Finally, our sample was representative of a US demographic in terms ethnicity, age, and gender. While results from our sample are therefore more generalizable than those that come from a non-representative sample, given that we know conventional attitudes concerning fictional wrongdoing differ across cultural groups (Young, 2016), exploring the moral attitudes of other nationally representative samples would be a helpful extension of our study.

7. Conclusion

This study found that fictional murder is more morally acceptable than fictional sexual assault across a range of media, and that fictional wrongdoings in both low agency and non-audio-visual mediums are more morally acceptable than those in both high agency and audio-visual mediums. These results make a novel contribution to the literature in two key ways. First, it confirms the claim that the intuitions that ground the Gamer's Dilemma extend to other forms of media. This provides empirical support for the Paradox of Fictionally Going Too Far. Second, it provides an empirical basis to help inform the direction in which theoretical discussions of the expanded Gamer's Dilemma could move by suggesting that contextual features shared across forms of media, such as the degree of agency, play a role in shaping views about the moral acceptability of fictional wrongdoings. Our study thus justifies shifting the focus of the Gamer's Dilemma



beyond video games into a broader discussion about forms of fictional wrongdoing across different forms of media.

Notes

- 1. This paper discusses depictions of fictional sexual violence and murder.
- 2. "The Paradox of Fictionally Going Too Far" is a variation on what Luck (2023) has called "The Paradox of Treating Wrongdoings Lightly" which doesn't take light treatments of fictional wrongdoings to be a central feature of the dilemma. We use the former because it describes the problem more generally.
- 3. As raised by Montefiore & Formosa (2023a) and Luck (2023), showing that intuitions exist (what we are doing here) is not a normative project, and therefore cannot by itself solve the paradox of fictionally going too far. We take it that both descriptive and normative questions are useful for exploring the paradox.

Acknowledgements

The authors gratefully acknowledge funding to undertake this study from the Macquarie University Ethics and Agency Research Centre.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

The work was supported by the The Macquarie University Ethics and Agency Research Centre.

Author contributions

Conceptualization: TM, PF; Methodology: PF, VP, TM; Formal analysis and investigation: VP; Qualitative analysis: TM, PF; Writing: TM, PF, VP; Funding acquisition: TM, PF.

References

Aguinis, H., & Bradley, K. J. (2014). Best practice recommendations for designing and implementing experimental vignette methodology studies. Organizational Research Methods, 17(4), 351–371. https://doi.org/10.1177/1094428114547952

Ali, R. (2015). A new solution to the gamer's dilemma. Ethics and Information Technology, 17(4), Article 4. 267–274. https://doi.org/10.1007/s10676-015-9381-x

Bartel, C. (2020). Video games, violence, and the ethics of fantasy. Bloomsbury Publishing.



- Behrend, T. S., Sharek, D. J., Meade, A. W., & Wiebe, E. N. (2011). The viability of crowdsourcing for survey research. Behavior Research Methods, 43(3), 800-813. https:// doi.org/10.3758/s13428-011-0081-0
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77-101. https://doi.org/10.1191/1478088706qp063oa
- Carter, N., Bryant-Lukosius, D., DiCenso, A., Blythe, J., & Neville, A. J. (2014). The use of triangulation in qualitative research. Oncology Nursing Forum, 41(5), 545-547. https:// doi.org/10.1188/14.ONF.545-547
- Coghlan, T., & Cox, D. (2023). Between death and suffering: Resolving the gamer's dilemma. Ethics and Information Technology, 25(3), 1-9. https://doi.org/10.1007/s10676-023-09711-z
- Davnall, R. (2021). What does the gamer do? Ethics and Information Technology, 23(3), 225-237. https://doi.org/10.1007/s10676-020-09558-8
- Douglas, B. D., Ewell, P. J., & Brauer, M. (2023). Data quality in online human-subjects research. PLOS ONE, 18(3), e0279720. https://doi.org/10.1371/journal.pone.0279720
- Ekdahl, D. (2023). From the Gamer's dilemma to the real world. *Philosophy & Technology*, 36(3), 61. https://doi.org/10.1007/s13347-023-00662-3
- Formosa, P., Montefiore, T., Ghasemi, O., & McEwan, M. (2023). An empirical investigation of the Gamer's Dilemma. Behaviour & Information Technology, 43(3), 571-589. https:// doi.org/10.1080/0144929X.2023.2178837
- Formosa, P., Ryan, M., & Staines, D. (2016). Papers, please and the systemic approach to engaging ethical expertise in videogames. Ethics and Information Technology, 3, 211. https://doi.org/10.1007/s10676-016-9407-z
- Huizinga, J. (1944). Homo Ludens. Angelico Press.
- Juul, J. (2008). The magic circle and the puzzle piece (pp. 056-057). University Press.
- Luck, M. (2009). The gamer's dilemma. Ethics and Information Technology, 1, Article 1. https://doi.org/10.1007/s10676-008-9168-4
- Luck, M. (2018). Has Ali dissolved the gamer's dilemma? Ethics and Information Technology, 20(3), Article 3. 157–162. https://doi.org/10.1007/s10676-018-9455-7
- Luck, M. (2022). The grave resolution to the Gamer's Dilemma: An argument for a moral distinction between virtual murder and virtual child molestation. Philosophia, 50(3), 1287-1308. https://doi.org/10.1007/s11406-021-00455-y
- Luck, M. (2023). Has Montefiore and formosa resisted the Gamer's dilemma? Ethics and Information Technology, 25(2), 31. https://doi.org/10.1007/s10676-023-09705-x
- McEwan, M. (2017). The influence of naturally mapped control interfaces for video games on the player experience and intuitive interaction [PhD Thesis]. Queensland University of Technology. https://doi.org/10.5204/thesis.eprints.107983
- McEwan, M., Blackler, A., Wyeth, P., & Johnson, D. (2020). Intuitive interaction with Motion Controls in a Tennis Video Game. Proceedings of the Annual Symposium on Computer-Human Interaction in Play (pp. 321-333). https://doi.org/10.1145/3410404. 3414242
- McHugh, C., McGann, M., Igou, E. R., & Kinsella, E. L. (2017). Searching for moral dumbfounding: Identifying measurable indicators of moral dumbfounding. Collabra: Psychology, 3(1), 1-24. https://doi.org/10.1525/collabra.79
- Montefiore, T., & Formosa, P. (2022). Resisting the Gamer's Dilemma. Ethics and Information Technology, 24(3), Article 3. https://doi.org/10.1007/s10676-022-09655-w
- Montefiore, T., & Formosa, P. (2023a). Crossing the fictional line. *Philosophy & Technology*, 36(3), 58. https://doi.org/10.1007/s13347-023-00660-5



- Montefiore, T., & Formosa, P. (2023b). Can e-sport gamers permissibly engage with off-limits virtual wrongdoings? Philosophy and Technology, 36(4), 1-3. https://doi.org/ 10.1007/s13347-023-00667-y
- Öhman, C. (2020). Introducing the pervert's dilemma: A contribution to the critique of Deepfake Pornography. Ethics and Information Technology, 22(2), Article 2. 133-140. https://doi.org/10.1007/s10676-019-09522-1
- Ostritsch, S. (2017). The amoralist challenge to gaming and the gamer's moral obligation. Ethics and Information Technology, 19(2), Article 2. 117-128. https://doi.org/10.1007/ s10676-017-9420-x
- Palan, S., & Schitter, C. (2018). Prolific.Ac—A subject pool for online experiments. Journal of Behavioral and Experimental Finance, 17, 22-27. https://doi.org/10.1016/j.jbef.2017.12.004
- Patil, I., & Silani, G. (2014). Alexithymia increases moral acceptability of accidental harms. Journal of Cognitive Psychology, 26(5), 597-614. https://doi.org/10.1080/20445911.2014. 929137
- Patridge, S. L. (2013). Pornography, ethics, and video games. Ethics and Information Technology, 15(1), Article 1. 25-34. https://doi.org/10.1007/s10676-012-9310-1
- Peer, E., Rothschild, D., Gordon, A., Evernden, Z., & Damer, E. (2022). Data quality of platforms and panels for online behavioral research. Behavior Research Methods, 54(4), 1643–1662. https://doi.org/10.3758/s13428-021-01694-3
- Polito, V., & Hitchens, M. (2021). Digital media impacts multiple aspects of self-representation. Psychology of Popular Media, 10(3), 303-318. https://doi.org/10. 1037/ppm0000330
- Ramirez, E. J. (2020). How to (dis)solve the Gamer's Dilemma. Ethical Theory and Moral Practice, 23(1), Article 1. 141–161. https://doi.org/10.1007/s10677-019-10049-z
- Salen, K., & Zimmerman, E. (2003). Rules of play: Game design fundamentals. MIT Press.
- Wallander, L. (2009). 25 years of factorial surveys in sociology. Social Science Research, 38 (3), 505-520. https://doi.org/10.1016/j.ssresearch.2009.03.004
- Young, G. (2016). Resolving the gamer's dilemma. Springer International Publishing.
- Young, G. (2017a). Integrating poor taste into the ongoing debate on the morality of violent video games. The Computer Games Journal, 6(4), Article 4. 227-237. https://doi.org/10. 1007/s40869-017-0044-5
- Young, G. (2017b). Objections to Ostritsch's argument in "The amoralist challenge to gaming and the gamer's moral obligation". Ethics and Information Technology, 19(3), 3. https://doi.org/10.1007/s10676-017-9437-1