

# uFood: Concept for a Serious Moral Game on Social-Media Marketing

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## ABSTRACT

Many ethical problems and risks are connected to the use of social media for purposes of marketing. Serious games have been shown to be particularly effective in promoting ethical sensitivity in other domains. In this paper, we outline the concept of *uFood*, a serious moral game to sensitize students of business and technology to issues related to social-media marketing. In this paper, we present the game's educational strategy before the background of findings from moral psychology and studies of game-based learning. A central question was whether to employ a "no-warning" strategy with or without immediate feedback on ethical dimensions of decision making. It is an open research question, which of these strategies could be more promising. Therefore, we have decided to develop two versions of the game for experimental purposes.

## Keywords

Social media, serious game, game-based learning, ethical sensitivity, moral sensitivity, game mechanisms, educational strategy

## INTRODUCTION

A wide range of ethical problems and risks have been associated with social media, including the spreading of misinformation at a grand scale (Trittin-Ulbrich et al. 2021) and the promotion of self-destructive attitudes and behaviors – especially among vulnerable groups (Strycharz & Duivenvoorde 2021). By social media we refer to "Internet-based channels that allow users to opportunistically interact and selectively self-present, either in real-time or asynchronously, with both broad and narrow audiences who derive value from user-generated content and the perception of interaction with others" (Carr & Hayes 2015, p. 50). Unlike other media, which are primarily consumed passively, social media allow masses of users to create content, share information, and interact with each other virtually.

Since many ethical problems associated with social media are not regulated to an extent that could protect users from various risks (Strycharz & Duivenvoorde 2021), there is a growing awareness that citizens need to develop social-media literacy, including

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competences to protect themselves and others from mental risks, cyberbullying, the spreading of misinformation, etc. (Polanco-Levicán and Salvo-Garrido 2022, p. 5).

One avenue that has been used to promote social-media literacy, are serious games. In ethics education, serious games, and other forms of experiential learning have been found to be among the most effective teaching approaches (Katsarov et al. 2021). Serious games have been developed to sensitize people to a wide range of ethical issues related to social media, including cybermobbing (Calvo-Morata et al. 2020), data protection and cybersecurity (Dewes et al. 2022; Ryan et al. 2020), misinformation and trolling (e.g., Basol et al. 2020), and political radicalization (e.g., *Hidden Codes*, *Playing History* 2022; Menendez-Ferreira et al. 2022). However, thus far, we have not been able to detect any serious games on a responsible use of social media in marketing and advertisement – one of the focal areas of our project (DI-SZENARIO), which focuses on designing and implementing game-based-learning curricula for students of business and technology.

## **EDUCATIONAL GOALS**

### **Ethical Sensitivity**

Diverse studies have shown that marketing is a practice, where people may ignore and underestimate ethical problems and risks, potentially leading to serious misconduct in their later practice. For example, Sparks and Hunt (1998) found that only a minority of market-research practitioners and Marketing students recognized all three ethical issues that were embedded in a test of ethical sensitivity in market research. Relatedly, Singhapakdi and colleagues (1996) found that marketing professionals were unlikely to disagree with unethical marketing practices when they did not perceive the described situations to involve ethical issues or problems. People who are aware of the given risks, were much more likely to say that they would not engage in the described behaviors. Finally, Beggs (2010) found that the majority of 18 groups of marketing students, who were challenged with marketing beer in a simulation, opted to sell the product to the most vulnerable community despite warnings from a fictional member of the marketing team. What these studies show, is that a sensitivity to ethical risks and problems of marketing is crucial for the prevention of business misconduct. We have therefore decided to make the promotion of ethical sensitivity a focus of our game.

At the same time, marketing – and especially social-media marketing – is a practice where a wide variety of ethical problems needs to be considered. Yildirim and colleagues (2021), who reviewed marketing-ethics publications systematically, detail 16 areas of problematic *promotion* alone (i.e., in addition to product-, price-, and placement-related issues): deceptive advertising, puffery, comparative advertising, using children in advertising, body image advertising, sexuality advertising, coupon fraud, sweepstakes and contests, high-pressure persuasion, customer discrimination, misinterpretation, offering gifts, exclusionary behaviors, interfering with competitive offerings, offering deceptive information, and spreading misinformation. Considering the wide array of ethical risks and problems attached to social-media marketing, our goal is to design a game that can sensitize learners to multiple issues, instead of focusing on a singular issue, and to alert them to risk factors that may cause them to ignore ethical problems.

### **Understanding of Social-Media Effects**

Many ethical problems associated with the use of social media for purposes of promotion are shared with the use of other media, e.g., deceptive advertising, problematic presentations of women, or the discrimination of social groups. What is new, is the way in which social media can exacerbate these risks through their technological and psychological mechanisms. For example, social-media marketing

regularly engages users in providing feedback on products and services, whereby they share information about themselves – some of which may be very personal (e.g., personality traits). Through algorithms, social-media platforms and advertisers can use this data to prepare personalized advertisement, which aims at triggering emotions that could lead to more positive product associations, higher consumption, etc. (cf. Zuboff, 2019). Personalized advertisement of this sort can become particularly problematic, when vulnerable groups are targeted with messages that aim at exploiting their fears and anxieties, thereby potentially increasing their anxiety, and promoting increasing the risk that they will engage in self-destructive behaviors (e.g., excessive use of medication). Moreover, social media come with additional ethical risks due to the ways in which they may activate users – who are passive in their consumption of other media. For instance, social-media users who are invited to share pictures of themselves or their lifestyles may be exposed to cybermobbing and harassment, or users may put themselves (or others) in danger when trying to engage in social-media challenges. For businesspeople working with social media, it is therefore important to understand how social media can affect people at the psychological level, and what effects their promotion-related decisions could have. Promoting this knowledge is the second main goal of our game.

### **Usability in Education and Training**

A third educational goal of our game relates to its usage: our goal is to develop a game that can be used within university courses in a relatively flexible manner. The goal is not to develop a game that integrates all relevant lessons, but to design a game that alerts players to the importance of knowledge and ethical sensitivity regarding social-media marketing, and which motivates learners to afford heightened attention and interest to relevant theory.

Teachers who work with the game will be equipped with a range of exercises and materials to embed the game in classes, to facilitate a transfer of lessons learned from the game to practice, and to help connecting theory to practice via reflection of decisions in the game and real-world cases. To allow for a flexible deployment of the game for diverse settings of education and training (e.g., online / offline, individual / group-based, small vs. large groups), we aim to create a game that can be played in about 30 minutes, and which can be played in a Browser, on a computer or smartphone, or via a learning management system like Moodle.

A final educational goal is for the game to support practice and experimentation and to be experienced as replayable by learners. To make it attractive in this manner, we aim to create a game that provides learners with many choices, which are randomized to such an extent that players will not encounter the exact same game experience twice. Replayability will augment the game's usability for educational purposes. However, replayability will need to be conceived in a manner, which ensures that learners will still share a common experience, which can be discussed in class.

### **EDUCATIONAL STRATEGY**

Arguably, the learning objectives detailed above could easily be achieved through an essay or a documentary, which informs learners about problematic practices and their effects (information approach). Another approach that is very popular in ethics education is to discuss real or fictional cases with students in view of how people should act (case-discussion approach). Although approaches like these can promote sensitivity to ethical problems (e.g., Ritter 2006), they tend to be inferior to experiential methods of teaching and learning. As Perry and Robichaud (2020) argue, an important limitation of case discussions is that students tend to disengage from the cases that are being discussed, e.g., by questioning the constraints of the cases and idealizing their own competence in dealing with similar situations (p. 227). Similarly, Schelb (2019) found

that students of medicine perceived lectures and case discussions around principles and core values of medical ethics to make sense – however, since ethical thinking appeared to be common sense, they did not give it further thought. In line with these observations and statements, a meta-analysis on research-ethics education found that experiential learning was far more effective in promoting all goals of ethics education than theoretical courses and case discussions (Katsarov et al. 2021). What appears to have the largest effect on students – irrespective of their age and experience – is putting themselves into a fictional situation, where they experience semi-realistic challenges in combination with feedback on their behavior. This appears to increase the meaningfulness, which learners afford to the lessons they learn from their experience, and to theories and principles that they can connect to their experience.

Why? One of the best explanations is offered by Bazerman and Tenbrunsel (2011) who explore the way in which situational characteristics trigger behaviors in people, which are incompatible with their own values, but which are rationalized (e.g., as “inevitable”) when people re-member the situations.<sup>1</sup> People tend to ignore these situational influences (“blindness”) when they deliberate about ethical cases at a distance, i.e., when they can pass judgment on the behaviors of *other* people from a *detached* perspective (cf. Perry & Robichaud, 2020). However, when they personally engage with a fictional situation, e.g., via roleplay, the situational factors may strongly affect their emotions, cognitions, and behaviors – which in turn creates the opportunity to reflect on the way in which situational constraints may undermine ethical sensitivity and judgment and facilitate ethical misconduct.

### **Drivers of Ethical Blindness**

In business, three central drivers of ethical blindness, i.e., the failure to recognize ethical problems (a.k.a. failures of ethical sensitivity), are (1) conflicts of interest, (2) a one-sided framing of issues in terms of business objectives, and (3) a gradual erosion of ethical standards (slippery-slope effect). These “blindness”, in the language of Bazerman and Tenbrunsel (2011) usually affect people subliminally, i.e., without people’s conscious awareness. *Conflicts of interest* lead people to systematically favor and overestimate the importance of information that supports decisions in line with their investment in a situation, whereas unfavorable information tends to be judged more skeptically (Moore et al. 2010). For example, Moore and colleagues (2010) found that “financial advisors” in a negotiation experiment could not form an objective judgment on the value of a property: although they were financially rewarded for an objective assessment, they overestimated or underestimated the property’s value systematically, depending on whether they were advising the seller or the buyer.

A *one-sided framing* and interpretation of a decision as a “business issue” has similar effects: it leads *some* people to ignore ethical aspects systematically, if they do not reflect their business interests (e.g., duties towards their employer). For example, Fiolleau and Kaplan (2017) found that accountants and accounting students tended to ignore that some accounting practices were unethical when they were informed that the fictional company, they worked for in the experiment placed a heavy emphasis on the achievement of financial targets. However, when accountants and students were informed that their company rewarded corporate social responsibility, they tended to recognize unethical accounting practices much more regularly. What happens here is that some people’s *schemas* for an automatized interpretation of *business situations* are not linked to their *moral schemas*, which would allow them to *also* recognize ethical problems automatically (Jordan 2009). Contrarily, people with *integrated schemas* tend to be aware of ethical dimensions in business-related decision making whether they are rewarded for responsible behavior or not (Katsarov 2021).

Conflicts of interest and a one-sided framing and interpretation of decisions in economic terms do not only inhibit or distort people's *immediate* recognition of ethical problems. They may also have lasting effects on the kinds of ethical problems that people recognize in the future. Once people have decided that an (ethically problematic) course of action is legitimate, they will tend to recommit to this understanding in the future and may even try to justify it in ethical terms if it is challenged – a phenomenon called *moral disengagement* (Bandura 1999). For instance, a social-media manager who decides to publish content that reinforces prejudice against obese people may defend her decision with an appeal to the “freedom of speech” if someone criticizes her. Moral disengagement of this sort can lead to a gradual erosion of ethical standards, whereby ethical considerations become increasingly less relevant over time (*rigid framing*, cf. Palazzo et al. 2012). Moreover, once ethical standards have been lowered, worse forms of ethical misconduct lose some of their horror and the risk increases that they, too, will soon be normalized by people – a phenomenon known as the *slippery-slope effect* (cf. Bazerman & Tenbrunsel 2011).

### **Alternative Approaches**

At least three educational strategies can be considered in sensitizing learners to these drivers of ethical blindness, and thereby promoting the importance that they will place on strong principles and strict ethical standards in future situations. First, learners could receive *just-in-time guidance*, which alerts them to the concrete blinders (e.g., conflicts of interest) before they experience a difficult situation (*warning approach*). Dunbar and colleagues (2014) found that this strategy added substantial value in a digital game that aimed at raising awareness for the risk of confirmation bias in decision making. Second, learners can be exposed to blinders without warning, and be confronted with the consequences of their actions – ideally with thorough feedback and discussion – at the end of the game (*no-warning approach*, cf. Teach et al. 2004). Third, this approach can be combined with a system that provides players with *immediate feedback* on their actions during gameplay, e.g., a *reputation system* (Katsarov et al. 2019) or a kind of *morality meter* (cf. Formosa et al. 2021). This *no-warning/immediate-feedback* approach has been employed in a serious game for medical-ethics training, *uMed: Your Choice* (Katsarov et al. 2020b), which yielded large positive effects on players' protection of ethical values (Solari 2020). In providing players with regular feedback on the degree to which their actions can be considered empathetic, professional, and efficient, players are constantly alerted to consider these competing dimensions in their decision making during the game (Katsarov et al. 2020a).

In the conception of our social-media marketing game, we have decided to experiment with the *no-warning* and the *no-warning/immediate-feedback* approaches. On the one hand, we assume that the *no-warning/immediate-feedback* approach will be highly effective in promoting the development of *integrated schemas* and a wariness for the impact of conflicts of interest on ethical decision-making. If players must constantly expect feedback from the game related to ethical aspects, they will be trained to include ethical considerations in their marketing-related decision-making (cf. Katsarov et al. 2020a). However, we expect that the *no-warning* approach (without immediate feedback on ethical behavior) will be more effective in sensitizing learners to the slippery-slope effect: if players can be shown how their own ethical standards deteriorate throughout gameplay, as they tend to focus on economic performance more and more, this – in combination with negative consequences of their actions – could lead to a strong and lasting insight regarding their own vulnerability to rigid framing.

In view of our overarching learning objectives, we suppose that the *no-warning/immediate-feedback* approach will be more effective in stimulating sensitivity for a wide range of ethical problems, because immediate feedback ought to sensitize learners for types of ethical misconduct more easily. However, immediate ethical

feedback will systematically decrease the risk that players do, ultimately, engage in ethical misconduct during the game. This will prevent them from experiencing the slippery-slope effect and the full effect of conflicts of interest on ethical decision-making. It could ultimately invoke an overoptimistic sense of moral integrity in players, which allows them to pay less attention to ethical considerations.

As these considerations show, it is currently an open research question, whether a no-warning approach or a no-warning/immediate-feedback approach will be more effective in sensitizing learners to ethical problems through serious moral games. The *no-warning approach* bears the promise of “shocking” players to such an extent that they will systematically pay close attention to ethical problems in the future and be very cautious to blinders. However, the no-warning approach also comes with the risk that players may feel compelled to reject the game experience if it arouses highly negative emotions (guilt, failure) in them. In some cases, it could ultimately lead people to develop negative attitudes towards business ethics and promote rigid framing, if things go wrong. The *no-warning/immediate-feedback approach*, on the other hand, will probably afford comparatively fewer players with the experience of total failure. It operates with more fine-tuned feedback, which can help to balance positive and negative emotions while people learn about diverse ethical problems. This reduces the risk of reactance, i.e., of unhappy players dismissing their game experience as “useless”. However, it comes with the risk that some players will not be alerted to their vulnerability to the discussed blinders and may ignore some ethical problems that are presented in the game altogether.

Since we are interested in the question, which of these approaches will be more effective, we have decided to construct our game in an experimental manner. In the *no-warning* version, players will be subjected to one-sided pressures to prioritize business interests, pursue short-term profit maximization, and ignore ethical aspects. They will receive immediate feedback on their decisions but only in economic terms. In the no-warning/immediate-feedback version, they will additionally receive regular feedback on ethical aspects from a “critical friend”.

## **GAME MECHANISMS**

Building on the described goals and strategy, we began to design the game *uFood* in 2023. In this section, we shortly describe the game in terms of its main game mechanisms and explain our decision making.

### **Role and Challenge**

Since the game is designed for students of business and technology and focuses on the responsible use of social media in marketing, *uFood* places players in the role of a social-media manager at a large company. At the beginning of the game, their boss unexpectedly promotes them to become the new social-media manager for a product called *uFood*, after the previous manager had to take paternal leave on short notice. *uFood* is a high-protein drink that contains many vitamins, which is available in diverse flavors and colors at a relatively high price. The boss is portrayed as a very busy, somewhat skeptical person, who is forced to rely on the player in lack of anyone more suitable for the role. Players can select their own name in the game for the sake of personalization and can decide whether they view themselves as qualified for the role or not. Players’ challenge in the game is to achieve a high number of social-media endorsements for *uFood* over the course of 10 “weeks” of gameplay as well as a high contribution to product revenue. Their boss specifies concrete expectations and presents part of the game’s feedback system at this opportunity. An additional expectation, which is explicitly mentioned, is also to ensure that the brand’s reputation is not harmed. To achieve their goals, players must decide among diverse possible actions each week. They can choose among advertisements that they can post on a

social-media outlet of their choice (the game portrays six different social-media apps), choose among different posts that they can share on social media, choose among influencers that they can hire for product promotion, invest in market research, or accept special offers. Each week, they receive a limited amount of in-game currency (action points). They can end a week without spending all their action points if they want to save up resources or are unhappy with their options.

### **Options and Feedback System**

Social-media endorsements and product revenue are the two central metrics of the game. After each action, players will see immediate effects in terms of these two metrics. For instance, they will gain 144 new followers on one of the social-media platforms and the sale of 98 bottles of uFood will be attributed to their effort. Each action will also be accompanied by a comment – either from their boss or from a social-media user. Most of the decisions that players can make in the game will be relatively unproblematic from an ethical perspective. Players will have to choose strategically between options of differing quality, e.g., between an ad that targets high performers and an ad that targets people who care about the environment, with one of them focusing on information while the other tries to evoke positive emotions. Building on findings from market research, players will receive social-media endorsements based on the smart selection of ads, posts, and influencers to target promising consumer groups via the right social-media platforms. Comments from users and their boss will provide them strategic feedback, e.g., via complaints about “boring” ads, comments from influencers who are “amazed” at the positive responses from their followers, etc. This feedback system is aimed at activating players’ schemas for strategic marketing in the game.

Over time, players decisions will begin to affect the brand’s reputation positively or negatively. Growing numbers of followers will have a positive impact on brand reputation, whereas negative reactions to ethical scandals will have a negative impact. Every week, players will be *tempted* to engage in at least one *unethical action* from the wide array of ethical problems that we want to represent in *uFood*. Unethical actions will be designed as egoistic temptations by promising many endorsements for a relatively small investment of action points. However, they will not be marked as unethical: based on text and pictures, players will need to make up their own mind about the strategic and ethical appropriateness of each promotional activity that is presented to them. The choice of unethical actions will often be rewarded with positive short-term consequences. There may also be negative consequences in some cases. However, these will be *delayed* by several weeks. They will take the form of critical articles on blogs, in social media, or in newspapers, and criticize the player’s company for a specific decision. Positive media coverage will partially create a “balance”, which may allow players to frame criticism as “biased”.

If people engage in too many unethical actions, the brand reputation will sink below a certain threshold. In this case, players will be fired at the end of the game. The focus of the tragic ending will, however, be on illuminating how people were harmed through the player’s actions. The happy ending of the game will be reached if players succeed in reaching their business-related goals while maintaining a positive image for the brand. The moderate ending will occur if players neither reached the happy nor the tragic ending.

In any case, players will receive critical feedback towards the end of the game for problematic decisions. First research findings suggest that games, in which players are tempted to engage in unethical actions, while playing a role they can positively relate to, bears the risk of ethical desensitization (*positive reinforcement of malicious play*, Katsarov 2021). For instance, Peña and colleagues (2018) found that players of *Papers*,

*Please* (Pope 2013), a game that punishes players for aiding migrants cross a border without adequate papers, gradually developed negative attitudes towards helping migrants. Based on the first findings from experiments with the medical-ethics game *uMed: Your Choice* (Katsarov et al. 2020b; Solari 2020), negative consequences at the end of a game appear to counteract the possibility that players leave a game desensitized after engaging in ethical misconduct.

One mechanism that we might use to reinforce players' awareness of how their actions may have positive or negative effects, is to also provide an overview of which unethical actions they took and did not take at the end of the game. This kind of an overview can also be used to show players if they fell prey to the slippery-slope effect in the game: at the beginning of the game, players may have decided against actions, which they then took towards the end of the game – a development observed in players of *This War of Mine* (11 Bit Studios 2014) by Wessel (2017).

Only in the *no-warning/immediate-feedback* version of the game will unethical action also lead to immediate negative feedback from the side of players' critical friend. In this version of the game, players will always see how good their relationship with their critical friend is on a dashboard. By clicking on their critical friend, they will see an overview of their critical friend's comments, as well as a picture of their critical friend that illustrates the condition of the relationship on a scale from happy/positive to sad/angry. To build a positive association between players and their critical friend, they begin the game by choosing one of four characters with different back stories as their critical friend. This person believes in the players, congratulates them on their new work opportunity, and responds to players' decisions in an empathetic manner. The *no-warning/immediate-feedback* version of the game will have additional sequences at the end, depending on the final status of players' relationship with their critical friend.

## **CONCLUSION**

In this paper, we have introduced the educational strategy and concept for the game *uFood*, which we are currently developing at Leuphana University Lüneburg. We hope that our discussion can inform further research and development on serious moral games. In the winter semester of 2023/24, we will conduct first experiments with *uFood* to evaluate its effectiveness and investigate which of the two design strategies adds more value. Among others, we will test, how well students perform on a test of ethical sensitivity in marketing before and after playing the game (e.g., the scenarios developed by Robin and colleagues, 1996, to assess the ethical sensitivity of advertisement managers). Our aim is to publish the game as an open educational resource alongside exercises and teaching materials for the game's usage in education and training.

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## **BIBLIOGRAPHY**

11 Bit Studios. 2014. *This War of Mine*. Microsoft Windows, Mac OS, Linux, Android, Apple iOS, PlayStation 4, Xbox One, Nintendo Switch. Deep Silver / 11 Bit Studios.



- Bandura, A. 1999. "Moral Disengagement in the Perpetration of Inhumanities." *Personality and Social Psychology Review*. 3(3): 193–209. [http://dx.doi.org/10.1207/s15327957pspr0303\\_3](http://dx.doi.org/10.1207/s15327957pspr0303_3).
- Basol, M., Roozenbeek, J., & van der Linden, S. 2020. "Good News about Bad News: Gamified Inoculation Boosts Confidence and Cognitive Immunity Against Fake News." *Journal of Cognition*. 3(1): 2. <http://doi.org/10.5334/joc.91>.
- Bazerman, M. H. and Tenbrunsel A. E. 2011. *Blind Spots: Why We Fail to Do What's Right and What to Do About It*. Princeton University Press.
- Beggs, J. M. 2010. "Seamless Integration of Ethics." *Marketing Education Review*. 21(1): 49–55. <http://dx.doi.org/10.2753/MER1052-8008210107>.
- Calvo-Morata, A., Alonso-Fernández, C., Freire, M., Martínez-Ortiz, I. and Fernández-Manjón, B. 2020. "Serious games to prevent and detect bullying and cyberbullying: A systematic serious games and literature review." *Computers & Education*. 157, 103958. <https://doi.org/10.1016/j.compedu.2020.103958>.
- Carr, C. T. and Hayes, R. A. 2015. "Social Media: Defining, Developing, and Divining." *Atlantic Journal of Communication*. 23 (1): 46–65. <https://doi.org/10.1080/15456870.2015.972282>.
- Dewes, T., Gasiba, T., and Schreck, T. 2022. "Understanding the Usage of IT-Security Games in the Industry and Its Mapping to Job Profiles." Paper presented at the *Third International Computer Programming Education Conference (ICPEC 2022)*. 3: 1-12. <http://dx.doi.org/10.4230/OASlcs.ICPEC.2022.3>.
- Dunbar, N. E., Miller, C. H., Adame, B. J., Elizondo, J., Wilson, S. N., Lane, B. L., Kauffman, A. A., Bessarabova, E., Jensen, M. L., Straub, S. K., Lee, Y.-H., Burgoon, J. K., Valicich, J. J., Jenkins, J. and Zhang, J. 2014. "Implicit and explicit training in the mitigation of cognitive bias through the use of a serious game." *Computers in Human Behavior*. 37: 307–318. <http://dx.doi.org/10.1016/j.chb.2014.04.053>.
- Fiolleau, K. and Kaplan, S. E. 2017. "Recognizing Ethical Issues: An Examination of Practicing Industry Accountants and Accounting Students." *Journal of Business Ethics*. 142: 259–276. <https://doi.org/10.1007/s10551-016-3154-2>.
- Formosa, P., Ryan, M., Howarth, S., Messer, J., and McEwan, M. (2022). "Morality Meters and Their Impacts on Moral Choices in Videogames: A Qualitative Study." *Games and Culture*. 17(1): 89–121. <https://doi.org/10.1177/15554120211017040>.
- Jordan, J. 2009. "A Social Cognition Framework for Examining Moral Awareness in Managers and Academics." *Journal of Business Ethics*. 84(2): 237–258. <https://doi.org/10.1007/s10551-008-9706-3>.
- Katsarov, J. 2021. *Virtuous Play. Promoting Moral Sensitivity with Digital Games*. Doctoral Dissertation. University of Zurich.
- Katsarov, J., Andorno, R., Krom, A., & van den Hoven, M. 2022. "Effective Strategies for Research Integrity Training—A Meta-analysis." *Educational Psychology Review*. 34(2): 935–955. <https://doi.org/10.1007/s10648-021-09630-9>.
- Katsarov, J., Biller-Andorno, N., Eichinger, T., Schmocker, D. and Christen, M. 2020a. "uMed: Your Choice – Conception of a Digital Game to Enhance Medical Ethics Training". In M. Groen, N. Kiel, A. Tillmann, & A. Weßel (Eds.), *Games and Ethics* (pp. 197-212). Springer. [https://doi.org/10.1007/978-3-658-28175-5\\_13](https://doi.org/10.1007/978-3-658-28175-5_13).
- Katsarov, J., Christen, M., Mauerhofer, R., Schmocker, D. and Tanner, C. 2019. "Training Moral Sensitivity Through Video Games: A Review of Suitable Game

- Mechanisms.” *Games and Culture*. 14(4): 344–366, <https://doi.org/10.1177/1555412017719344>.
- Katsarov, J., Rossi, S., and Schelb, M. 2020b. *uMed: Your Choice*. Android, Microsoft Windows. Biller-Andorno, N., Christen, M., & Eichinger, T., and Katsarov, J. (University of Zurich) & Koboldgames.
- Menendez-Ferreira, R., Torregrosa, J., López-Fernández, D., & Mayor, J. 2022. “Design of a serious games to improve resilience skills in youngsters.” *Entertainment Computing*. 40: 100462. <https://doi.org/10.1016/j.entcom.2021.100462>.
- Moore, D., Tanlu, L. and Bazerman, M. 2010. “Conflict of interest and the intrusion of bias.” *Judgment and Decision Making*. 5(1): 37–53. <http://dx.doi.org/10.1017/S1930297500002023>.
- Palazzo, G., Krings, F. and Hoffrage, U. 2012. „Ethical Blindness.” *Journal of Business Ethics*. 109: 323–338. <http://dx.doi.org/10.1007/s10551-011-1130-4>.
- Peña, J., Hernández Pérez, J. F., Khan, S. and Cano Gómez, A. P. 2018. “Game perspective-taking effects on players’ behavioral intention, attitudes, subjective norms, and self-efficacy to help immigrants: the case of ‘Papers, Please.’” *Cyberpsychology, Behavior, and Social Networking*. 21(11): 687–693. <http://dx.doi.org/10.1089/cyber.2018.0030>.
- Perry, T. J., and Robichaud, C. 2020. “Teaching Ethics Using Simulations: Active Learning Exercises in Political Theory.” *Journal of Political Science Education*. 16(2): 225–242. <http://dx.doi.org/10.1080/15512169.2019.1568879>.
- Playing History. 2022. *Hidden Codes*. Bildungsstätte Anne Frank.
- Polanco-Levicán, K. and Salvo-Garrido, S. 2022. “Understanding Social Media Literacy: A Systematic Review of the Concept and Its Competences.” *International Journal of Environmental Research and Public Health*. 19 (14): 8807. <https://doi.org/10.3390/ijerph19148807>.
- Pope, L. 2013. *Papers, Please. A Dystopian Document Thriller*. Microsoft Windows, OS X, Linux, iOS, PlayStation Vita. 3909.
- Ritter, B. A. 2006. “Can Business Ethics be Trained? A Study of the Ethical Decision-Making Process in Business Students.” *Journal of Business Ethics*. 68: 153–164. <https://doi.org/10.1007/s10551-006-9062-0>.
- Robin, D. P., Reidenbach, R. E. and Forrest P. J. 1996. „The Perceived Importance of an Ethical Issue as an Influence on the Ethical Decision-making of Ad Managers.” *Journal of Business Research*. 35: 17-28.
- Ryan, M., McEwan, M., Sansare, V., Formosa, P., Richards, D., & Hitchens, M. 2022. “Design of a Serious Game for Cybersecurity Ethics Training.” *Proceedings of DiGRA 2022*. Paper 156, 1–18. [http://www.digra.org/wp-content/uploads/digital-library/DiGRA\\_2022\\_paper\\_156.pdf](http://www.digra.org/wp-content/uploads/digital-library/DiGRA_2022_paper_156.pdf).
- Schelb, M. 2019. *Die Wirkung eines Videospiele zur Förderung der Moralischen Intelligenz im medizinischen Arbeitskontext*. Unpublished Master Thesis. University of Zurich.
- Singhapakdi, A., Rao, C. P., and Vitell, S. J. 1996. “Ethical Decision Making: An Investigation of Services Marketing Professionals.” *Journal of Business Ethics*. 15(6): 635-644. <https://www.jstor.org/stable/25072789>.
- Solari, M. 2020. *uMed: Your Choice – Der Einfluss von Achievements auf den Lerneffekt eines Serious Moral Games im medizinischen Arbeitskontext*. Unpublished Master Thesis. University of Zurich.

- Sparks, J. R. and Hunt, S. D. (1998). "Marketing Researcher Ethical Sensitivity: Conceptualization, Measurement, and Exploratory Investigation." *The Journal of Marketing*. 62(2): 92-109. <http://www.jstor.org/stable/1252163>.
- Strycharz, J. and Duivenvoorde, B. 2021. "The exploitation of vulnerability through personalised marketing communication: Are consumers protected?" *Internet Policy Review*. 10(4). <http://dx.doi.org/10.14763/2021.4.1585>.
- Teach, R. D., Christensen, S. L. and Schwartz, R. G. 2004. "The Slippery Slope." *Simulation & Gaming*. 36(3): 407-416.
- Trittin-Ulbrich, H., Scherer, A. G., Munro, I., and Whelan, G. (2021). "Exploring the dark and unexpected sides of digitalization: Toward a critical agenda." *Organization*. 28(1): 8–25. <https://doi.org/10.1177/1350508420968184>.
- Wessel, A. 2017. "This Moral of Mine. Reflecting Ethical Decision-Making with Digital Games." In Clash of Realities (Eds.), *Clash of Realities 2015/16. On the Art, Technology and Theory of Digital Games. Proceedings of the 6th and 7th Conference* (pp. 267–290). Transcript.
- Yildirim, E., Mert, K. & Cebeci, H. 2021. "Comprehensive Review of the Marketing Ethics Literature: A Bibliometric Approach." *Turkish Journal of Business Ethics*. 14: 242–269. <https://doi.org/10.12711/tjbe.2021.14.2.2176>.
- Zuboff, S. 2019. *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. Profile Books.

## ENDNOTES

<sup>1</sup> People do not recall situations objectively. Research has proven that people tend to reconstruct situations based on the incomplete information that they were aware of while acting, whereby they sometimes fill in gaps in their memory by reconstructing the order of events or imagining occurrences, which help them to make sense of their own behavior. This is discussed in more depth by Bazerman and Tenbrunsel (2011).