Chapter 11
Manipulation Through Gamification and Gaming

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Abstract In this chapter, we examine the manipulation that may occur through gamification, facilitation, and debriefing processes. We focus in particular on "unintended" manipulation that even professional facilitators or game designers may practice. First, we examine gamification, followed by gaming and simulation. Although gamification, which is a relatively new field, is associated with issues of manipulation, the gaming and simulation field, which has over five decades of history, is seldom affected by manipulation issues. Of course, facilitators' ethics have long been the subject of much discussion; here, we focus on the more subtle and unintentional aspects of manipulation, which have been relatively overlooked, additionally in relation to the embodied experience. In the chapter's final section, we provide a list of recommendations aimed at supporting game professionals in minimizing manipulation. These questions may be used as guidelines for future game practices and research, leading to the development of a code of ethics for game studies.

Keywords Manipulation · Gamification · Facilitation · Debriefing · Codes of ethics · Embodied experience

11.1 Introduction

Attempts to use simulation and games, particularly for educational purposes, are always associated with the possibility of "unintended manipulation." Here, we adopt the term "unintended manipulation" to highlight the fact that educators and facilitators are not always aware of their unconscious adoption of preconceived

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conclusions, regardless of courses of learning. For example, when gaming is practiced with the objective of realizing the importance of diversity and inclusion in societies, facilitators may compel participants to adopt these conclusions. Regardless of whether the participants fully appreciate the importance of diversity and inclusion, they may agree superficially with the facilitator-guided conclusion.

In this sense, facilitators and teachers "manipulate" learning unintentionally. However, the situation is inherently inevitable, since every pedagogical endeavor's objective is the learners' achievement. Experiential learning methods, including simulation and gaming, are no exception.

11.2   Why Is Unintended Manipulation a Serious Issue?

Manipulation may be defined as the use of means to exploit, control, or otherwise influence others to one's advantage (APA, 2021). Manipulation is forced influence that is used to gain control, benefits, and/or privileges at the expense of others. Although conscious and malicious manipulation may be rare in gaming simulation, unconscious manipulation through game design and facilitation poses a potential danger. From a design science perspective (Klabbers, 2009), gaming generally means changing current dysfunctional situations and systems dynamics into new and preferred situations and processes. Games are used for learning and educational matters and/or to support the transformation of organizations and larger social systems. Therefore, we must be aware that all games are implemented with the purpose of reaching a desired learning outcome or system transformation. To achieve this aim, hidden agendas and designed game mechanics that involve manipulation may be in play. At the very least, games are used to influence and persuade all kinds of players, such as participants in game-based education and training and users of gamified products and services. Gaming has an underlying instrumentality in urging persons to desired actions, typically within the context of a specific goal. Influence and persuasion per se are neither positive nor negative (Duncan, 2018). Influence can be understood as mainly harmless, as it respects the influenced party's right to accept or reject it and is not unduly coercive (Noggle, 2020). Manipulation is a stronger form of forced influence that may detrimentally take advantage of others' gullibility and (emotional) weakness with the aim of gaining control and benefit at their expense.

Numerous different forms of manipulation exist, with various motivations for manipulation in gaming. For example, on the personal level, players and facilitators as the main actors in a game may seek personal gain, to attain feelings of power and superiority in their relationships with other participants, to be in control, to boost their own self-esteem, and—in competitive simulation games—to win the game. On a more systemic and organizational level, games may be designed as communication media to support certain behaviors and/or create certain mindsets and attitudes that reflect the values or interests of the game designers or their sponsors. The aims may

range from political and ideological indoctrination to criminal economic and financial interests.

11.3 Gamification and Manipulation

As already discussed in Chap. 1 (in this book), gamification can be defined as the use of game design elements in "non-game" contexts (Deterding, 2015). Gamification employs game-based mechanics and dynamics and game design principles and aesthetics. Gamification's main purpose is to engage and motivate, to influence behavior and decision-making, and to build knowledge and attitudes. Gamification is often aimed, for example, at influencing employee performance, the organizational climate, employer branding, or customer retention.

Gamification applies some of the leading theories and results from social and motivational psychology and behavioral economics. For example, Landers (2015) developed a psychological theory of gamified learning that linked gaming and gamification. According to this approach, gamification is defined as the use of game attributes, as defined by Bedwell et al.'s (2012) taxonomy, outside the context of a game with the purpose of affecting learning-related behaviors or attitudes. Numerous studies have examined the effects of "manipulating" game attributes to foster intended outcomes. In this chapter, we do not wish to discuss specific studies further, regardless of whether they report intended outcomes and "positive" effects on people's behavior and motivation (e.g., Gallus, 2017) or show partly positive effects and partly unintended and "negative" results (e.g., Mollick & Rothbard, 2014).

We argue that, whatever framework or taxonomy we might use to describe game attitudes, principles, and mechanics (e.g., Schell, 2008; Salen & Zimmerman, 2004; Marczewski, 2018; Kim, 2018), those elements can be used to manipulate. The same principles described by gamification and "serious games" researchers and designers are also applied in the development of simulation games. Simulation games often involve more complex dynamics and are applied to a wide range of additional purposes. The founding father of ISAGA (International Simulation and Gaming Association) identified 21 steps of game design and more than 100 game design elements and attributes in his famous "game design wheel" model (cf. Duke, 1974; Duke & Geurts, 2004). All attributes can be consciously used for manipulation purposes (with the best intentions, of fostering education, etc.), but more often these are unconsciously used by designers and facilitators who use games only as tools or instruments and have little or no knowledge about the underlying principles and mechanisms.

Concepts such as Octalysis (Chou, 2015) can be useful in elucidating players' motivational and learning processes and can be applied in designing game artifacts. The Octalysis framework uses eight core drive factors. We briefly discuss them here as an example to illustrate the potential dangers of manipulation or harmful effects if

we do not care or know about design connections with the psychological processes of the participants in games.

- Epic meaning and calling: This core drive is in play when a person believes that they are doing something greater than him/herself or contributing to a "higher purpose." Players do not receive an extrinsic reward, but they feel that their contribution will help create something important.
- Development and accomplishment: Here, people are driven by a sense of growth toward a goal and its accomplishment. They may strive to win a game or to overcome a challenge. On reaching the goal, players feel self-efficient and high-performing and that they have made progress and developed their skills.
- Empowerment of creativity and feedback: This drive is expressed when users are engaged in a creative process in which they repeatedly try to be innovative. People need not only ways to express their creativity but also to see the results of their creativity, receive feedback, and adjust, in turn.
- Ownership and possession: This drive concerns players' feeling that they own or control something. When people feel ownership, they want to increase and improve what they own. Besides being the major drive for wanting to accumulate wealth, this deals with many virtual goods.
- Social influence and relatedness: This drive incorporates all the social elements that motivate people, including group dynamics from cooperation, social acceptance in a group, and friendship to competition, mobbing, and envy.
- Scarcity and impatience: This drive causes people to want something simply because it is extremely rare, exclusive, or immediately unattainable (e.g., the fact that people cannot get something right now—often because of artificial scarcity—motivates them to return to check the product's availability and to think about it constantly).
- Unpredictability and curiosity: Unpredictability is the core drive for being constantly engaged because the player does not know what is going to happen next.
- Loss and avoidance: This core drive impels people to avoid negative occurrences. People feel as though if they fail to act immediately, they will lose the opportunity forever.

Chou (2015) connected the eight core drives to well-known concepts, such as intrinsic and extrinsic motivation, and distinguished between "white hat" (positive) and "black hat" (negative) emotions that correlate with the drives. In particular, the more extrinsic and black hat drives (e.g., scarcity and impatience, unpredictability and curiosity, loss and avoidance, and ownership), if combined and used as game techniques, may lead to potentially harmful effects. For example, they might support gaming addiction and gaming disorders (2019, ICD, WHO) through the use of random variable rewards and artificial scarcity for items players want to win and/or do not want to lose. These techniques can engage users, but they are often used with a manipulative hidden agenda to drive business through the users' influenced behavior.

Simulation games do not typically intend to induce people to gamble, and the danger of addiction to simulation games is low. However, the same potentially

harmful gamification principles are used in many competitive simulation games (e.g., many traditional business games with simulated market competition and a winning company). They may lead to high competition, engagement, and even fun and excitement but may reduce the learning effect for all participants and cause the losing participants' motivation to decline (Kriz & Auchter, 2016). If there is no proper debriefing (and too often this is still missing), players may enjoy playing against the simulation model that remains a "black box" like a slot machine. In the worst case, participants not only learn nothing but may even develop false assumptions about the underlying system processes and relationships in the "real" world (see the discussion of misuse of business games in the section that follows).

11.4   Gaming Simulation and Manipulation and the Role of Debriefing

To illustrate some main aspects of manipulation and unethical use related to the process of gaming simulation, an example of a typical business simulation game should be described here. Somewhat provocatively, one could argue that the typical business computer simulation games used nowadays bear responsibility for the worldwide financial crisis. Generations of young students have run through MBA programs and have played typical business games, and, unfortunately, now as managers of companies and banking institutes, they implement in practice what they have learned in games. They transfer knowledge gained from gameplay but in a way that makes reality increasingly gamelike, gambling with the earth's limited resources.

The following example and its arguments are based on the work of Richard Teach, from personal communication and several of his published articles (e.g., Teach, 1990; Teach et al., 2005).

Most business games played worldwide are based on the rigid, highly reductive, and outdated models of the traditional free-market economy (mainly dealing with the competition on markets for customers and preference of cost leadership strategies to win, leaving out the supplier side, etc.). These models do not take ethical aspects into account. Players do not deal, for example, with compliance or business ethics. They cannot put into practice sustainability, "green production," "zero waste," ethical consumerism, etc. simply because the game's reductive model game does not allow such decisions. Therefore, most rigid-rule business games are biased models of reality that follow narrow economic narratives.

The didactic approach of such games fails to wholly consider ethical issues. Sustainability and more ethical strategies would require longer periods of gameplay for the impact to become apparent. However, time is always limited in the use of a game, and many business games are played in too few rounds to facilitate sustainable (long-term) strategies that are successful enough for winning. Ethical decisions make no sense from the perspective of players with a mindset of winning the game with

short-term profit-oriented strategies. Therefore, many of these games' designs are aimed at short-term and simple exploitation strategies and are focused on ownership, loss, and avoidance and scarcity (see above Octalysis drives, which are mainly black hat and extrinsic). Participants should not think about long-term sustainability, higher purposes, or creativity. Through these games, participants receive an education in business and economics but only to the extent that it aligns smoothly with specific consumption-oriented mainstream and neoliberal policies. Here, the manipulation is subtle, unconscious, and hidden, as many sponsors, designers, and facilitators themselves believe in the correctness of this economic paradigm and way of life.

Moreover, many facilitators lack any strategy for dealing with playing teams that must declare bankruptcy in traditional business games. Consequently, facilitators of business games tend to provide conscious or unconscious support, particularly to teams that fail to thrive. Adopting the role of the bank, facilitators give unlimited loans to keep teams and participants in the game. Participants' engagement in high-risk and unethical behavior is supported, and the learning effect may be that managers can evade real responsibility and consequences for their risky decisions because someone will bail them out. This is precisely what is happening worldwide in the current economic crisis: the games used and the way in which they were facilitated conveyed the wrong message, leading to real-world business being approached as gameplay or gambling with resources.

Often, the business ethics and manipulation dimension is wholly omitted from the debriefing stage. Even more problematically, the described weaknesses of traditional business games' simulation and didactic models are not covered in the game's evaluation, because the ethics and manipulation dimension is excluded from the evaluation process. Designers, facilitators, and participants still believe in neoliberalism and a pure free-market economy. They concoct a reductive and normative model and reality and then think that the game is ontologically true and fully representative of reality. They erroneously believe that winning a game demonstrates competencies and learning. Many business schools grade and assess students based purely on their game results. Students with better financial results, simulated stock prices, market values, and KPIs (key performance indicator) in simulation games are awarded better grades despite having participated in no debriefing or reflection on the game's underlying assumptions and models. The schools do not reveal or challenge the simulated variables and interconnections, and the game model thus remains a black box. In this way, even traditional simulation games are intentionally or unintentionally used as one-dimensional and biased media of propaganda and self-fulfilling prophecy.

In an interview, Allen Feldt (co-founder of ISAGA) expressed similar concerns. As an example, he took another type of business game with a purely socialist planning economy background:

> Games are powerful because they teach by experience. But the danger is: it teaches by experience. People are not capable of disbelieving things that happened to them. They believe implicitly 'it must be true, because it happened to me'. Games can be designed to lie, and they give false experience. We must be vigilant in protecting this from happening ...

Debriefing is important, by an honest debriefer. I know some well-intentioned professors who believe so strongly in what they are teaching that they lie even when they are not thinking that they are lying. They say things that are not true. For example, Marxists do this. They teach Marxism as sociology, but not all of Marx's ideas are true. But they do it with the best of intentions ... You have to limit complexity for effective teaching through gaming ... but you can misrepresent. (Personal communication with Kriz, see Kriz et al., 2019).

The examples from Richard Teach and the above quote from Allan Feldt demonstrate that every game can intentionally or unintentionally become a medium for propaganda purposes, manipulation, and ideological indoctrination. Debriefing plays an important role in preventing the misuse of games. As stated above, the exertion of influence is part of any attempt to change a system and/or to support learning processes through the use of gaming. This is acceptable and remains harmless if the game-based learning environment respects players' rights to accept or reject it. Gaming participants are often obliged to attend games as a required part of their educational program or workplace activities and must accept their role as a player in the game; it is often not a voluntary activity. From an ethical perspective, we should take care to limit the degree of manipulation, and this means that players must have the right to refrain from playing. From a pragmatic ethical perspective, facilitators of simulation games must consider the participants' well-being and safety (Stewart, 1992; Leigh & Spindler, 2005). Generally, a trusting and open atmosphere among participants should be fostered, and participants must be informed about the game's objectives and purpose. In practice, sometimes a so-called full value contract may be implemented—a contract (i.e., a verbal or written agreement) that determines the ways in which participants will interact with one another to optimally support learning. Such a catalogue of values corresponds to desired behavior patterns (e.g., to give and receive feedback, etc.) and to behavior patterns that will not be tolerated (e.g., physical violence, bullying, etc.).

Participants must have the right to step out of the gameplay at any time should they wish to do so (the "challenge by choice" principle) and to continue with the game activity in an observer role. Furthermore, a proper debriefing is ethically necessary because it offers opportunities to step out of the role one played in the game and deal with stress, strained group dynamics, and the emotional processes of the gaming experience itself. The debriefing is also key to limiting manipulation because the simulation model and the didactic model of the game should also be reflected on and discussed. The commonalities and differences between the game and reality should be discussed in depth, and alternative ways of behaving both in game and in reality should be investigated. The debriefing should lead to a rigorous analysis of the underlying variables and their interconnections to create a better understanding of the limits of the simulation model. Debriefing should enable participants to draw useful lessons learned not only to align with pre-defined patterns and existing paradigms but also to create opportunities and ideas to change existing situations, decisions, and underlying mindsets.

Unfortunately, debriefing can also be misused and—in the worst-case scenario—may reinforce unethical messages and influences mediated by the game. Therefore, additional reflection loops are required. To ensure that gaming leads to better

learning and not to stronger manipulation, it is necessary that a multiple-perspective approach is adopted. In principle, increased diversity can reduce the danger of manipulation. This principle can be implemented by using a diverse group of participants (i.e., with a mix of cultures, disciplinary backgrounds, genders, ages, etc.) and multiple facilitators. Furthermore, a diversity of debriefing methods and a diversity of games within a program can minimize the potential for manipulation. Debriefing and evaluation should consider whether anyone perceives instances of manipulation during gameplay. In addition, feedback loops and meta-debriefing among communities of practitioners (facilitators, designers, educational program managers, etc.) should be implemented along with constant and transparent formative evaluation processes and research studies. In particular, a multidisciplinary dialogue (or, in the tradition of Richard Duke, a "multilogue") with all stakeholders using a simulation game (including participants) should be established with respect to the entire design, learning process, and transfer or intervention (Kriz, 2003, 2010).

11.5   Embodied Experiences in Games

According to Allan Feldt, the danger of manipulation is enhanced by the fact that people tend to believe more in things they have directly experienced themselves. Gaming as a form of learning by experience can lead to "false" assumptions based on the manipulation of experience and false information. In general, every game also has the positive potential to create embodied knowledge (Klabbers, 2009), which increases the meaning, embeddedness, and practicability of knowledge. Embodiment means that human cognition and the creation of mental models depend on the kinds of experience that come from having a body with various sensorimotor capacities and that these individual sensorimotor capacities are themselves embedded in a more encompassing biological, psychological, and cultural context (Varela et al., 1991). Simulation games can offer different levels of embodiment.

For example, three famous games created by the founders of the gaming discipline simulate developing nations in which players must make decisions for the wellbeing of the simulated country and its people. We isolate only the representation of the variable "population" as one aspect. In Stratagem (designed by Dennis Meadows), players are in the role of government, and the affected population and variables are represented merely by numbers on a computer screen and coins on a game board. The population is thus represented on a more abstract level and experienced as less embodied. In HEX (designed by Richard Duke), the population, food, and other variables are tangible game pieces. Game figures (representing the population) who do not have sufficient food (represented by beans) at the end of a simulated round die and are removed from the game board amid an enacted funeral ceremony. This funeral event, in particular, elicits stronger concrete feelings (often shame, sadness, or anger) and embodiment. In SIMSOC (designed by William Gamson), an entire simulated society is created in a complex role-play. Here, the population is simulated in the most concrete and embodied format, because the

players themselves represent the population. Players with wealth can earn simulated money and purchase real food, such as chocolate and soft drinks, while players with less income in the game might merely survive and be able to afford only water and dry bread (and the game lasts 1 or 2 days!); poor players struggle for survival and may experience simulated death after several rounds (these players then cease the gameplay and assume an observer's role).

Embodiment is an excellent means of gaining certain insights, but it may also provoke strong emotions and stress. Strong embodiment combined with strong emotions also warrants intense debriefing, and the facilitation and debriefing must be sensitive to the psychological safety of the participants (see below). At the same time, a strong embodiment may reduce the perceived need for, or interest in, a long and intense debriefing. First, players may be exhausted after their full engagement in the gameplay and may no longer be able to concentrate on an extensive debriefing that seems boring, passive, and wearisome. Second, the embodiment creates the experience and belief that the game is so similar to reality that debriefing is no longer needed. Participants believe that debriefing can be skipped because the game is experienced as a "perfect" model of reality and the gameplay speaks for itself. This creates an increased danger of manipulation and the illusion of acquiring "true" knowledge and skills.

The examples of HEX and SIMSOC also reveal another potential risk: participants may feel emotionally overstrained, and aspects of the gameplay may be perceived as culturally inadequate (e.g., dealing with death and funerals in certain ways, unequal treatment for long periods during gameplay, allowing certain players to drink only water for an entire day while others simultaneously receive good food, etc.). This is another reason why it is so important to implement the rule that participants must have the right to withdraw from gameplay at any time should they wish to do so (the "challenge by choice" principle, see above). Players must be informed of this right during the game briefing.

Simulation games are often described as learning methods that offer a safe and error-friendly environment for participants to experiment with new behaviors and routines. It is a key advantage of simulation games that players can make and learn from mistakes and failures. Peters et al. (2012) investigated the phenomenon of a safe environment and made a distinction between two aspects of this concept. In the first place, there is "systems model safety": erroneous choices during gameplay will not directly affect real-life situations. In this way, participants can learn from poor decisions or failures without concern for real-world consequences. The second aspect is "psychological safety": participants must perform during gameplay, and their performance is observed and measured by others. Players might experience in-game scenarios that they are unfamiliar with, and this may cause them to feel uncomfortable. Certain situational aspects may be perceived as disturbing (e.g., time pressure and competition in the game, the behavior and communication of other participants, confrontation with their own lack of competence and fear of loss of face, expected behavior that is in conflict with their own values, etc.). Although a certain level of imbalance or discomfort is often required for an effective learning

process and is intended by the game, it becomes a problem if the level of discomfort or insecurity becomes so great as to render the player dysfunctional.

In this book, our colleagues Mieko Nakamura (Chap. 8) and Marieke de Wijse and Elyssebeth Leigh (Chap. 9) discuss further valuable guiding principles of facilitation, debriefing, and ethics. These concepts help elucidate the role of the facilitator and add information about important aspects that can help enhance learning and prevent dysfunctional discomfort and unethical or manipulative processes in simulation games. From their insights and further publications (de Wijse-van Heeswijk, 2021; Schwägele et al., 2021), we wish to emphasize one more finding from current research. Designers and facilitators should take greater care to engage in constant formative evaluation and in-between debriefing throughout gameplay. Evaluation and debriefing should not only be implemented at the end or after gameplay but must be interlaced into the entire gaming activity. Facilitators must engage with impulses from gameplay situations and results, participants' behavior, and the learning environment during the entire game-based activity. This can result, for example, in discussions of experiences and observations, feelings and needs, and the emergence of new learning goals and expectations for the participants after every game round or in an extra timeout session. Moreover, connections to theoretical concepts, reflections on the game's simulation and didactic models, and practical transfer issues can be debriefed during the game. This allows participants to assume a more active role in shaping their own learning processes and to make them more self-organized, open, and free-form gaming experiences. Here, participants co-design their own learning processes and assume co-responsibility for the flow of the learning experience. Another advantage is that such an approach limits harmful and unethical processes and gives fewer opportunities for manipulation to operate. The designers and facilitators relinquish a measure of control and influence, and the participants enjoy greater empowerment.

11.6 Recommendations for Reflecting on Ethics and Minimizing Manipulation

11.6.1 Analytical Science Perspective

Ethical questions and concerns about manipulation in general can be described from the perspective of analytical science (Klabbers, 2009). Here, games are used to test hypotheses and to develop theories. This perspective is concerned with the honesty and integrity of science and the ethics of research and science in general. For example:

- Authorship and research standards: the dishonest theft of other authors' ideas, inadequate citation of colleagues, violations of copyright, manipulation of data, etc.

- Review process: The peer review process should contribute to the quality control of the research. However, journals' review processes may be corrupt or biased owing to leading paradigms of academic understanding.
- Ethical standards: How should facilitators behave with participants (from this perspective, test subjects) in gaming simulations that are used as quasi-experimental environments?
- Integrity: (Consciously) biased interpretation of findings to please certain sponsors of a research study.

11.6.2 Design Science Perspective

Several interconnections exist between gaming simulations and ethics from the design science perspective (Klabbers, 2009). Here, games are used to foster learning at the individual, collective, and organizational levels and to support decision-making, policy development, and the transformation processes of large socio-technical systems. Designing and using simulation games can facilitate better understanding, in an applied and pragmatic way, of the (un)ethical aspects of real-world decisions. Issues of ethics and manipulation must be studied by experiencing complex and ambiguous situations and dealing with complex problems. In managing complex systems, the answers are almost never simply "yes or no" or "right or wrong" statements.

11.7 Ethics and Manipulation as Game Content

Various topics relating to ethics may form the content of games or the motivation for using a game to train participants to base real-world decisions on gaming simulation methods. The idea is to make a positive social contribution by applying a game and to change existing dysfunctional situations into preferable scenarios by using gaming simulation (Kaneda et al., 2016).

Some examples are as follows:

- Using business games focused on compliance and business ethics to prevent corruption and unethical business practices.
- Using games focused on climate change and energy consumption to foster environmentally sustainable behavior.
- Using games for disaster management and crisis simulations to train participants for crisis situations and/or to develop better strategies for decision-makers, etc.
- Using games to understand and mitigate harmful group dynamics, to build trust and empathy, to reduce prejudice and social conflicts, etc.
- Using games to demonstrate and reflect on techniques and processes of manipulation and indoctrination, fake news, and filter bubbles.

11.8   Ethics Within the Process of Gaming Simulation

Ethics can further be related to the gaming simulation process. Various ethical concerns and dimensions are involved in the process of game design; in the process of game application, including briefing, playing, and debriefing; and in the process of evaluating a game. Within the process dimensions, several critical factors for designers, facilitators, and evaluators determine whether an ethical learning environment can be created for specific participants and users of the game. From the perspective of the design science paradigm, several key questions surround the practical ethical and manipulation concerns (Kriz & Hense, 2006; Kriz, 2012). The following list of questions may be seen as prompts for further research but also as a practical list for reflection during meta-debriefing of game designers and facilitators. We believe the list may form a starting point for discussion among the simulation and gaming community and lead to the establishment of a code of ethics emerging from this study.

11.8.1   Design Process

- How can game designers be prevented from violating other designers' intellectual property rights (theft of game concepts in the worst-case scenario) during the design process?
- How can a simulation model be designed to include the ethical aspects of decisions and the simulated reality?
- How can we sensibly and appropriately address and increase awareness about issues of gender, diversity, and culture (not only in design but also in facilitation and debriefing)?
- How can game design that is aimed at manipulating and disseminating false information be prevented?
- How should we deal with the unethical misuse of power and the micropolitics of stakeholders who participate in the development of the simulation game model?
- How can real multi-perspectives and dialogue be ensured in the design process?
- How can we minimize all (unnecessary) complexity, uncertainty, and ambiguity in the scenario and the gaming materials (that are superfluous to the learning goals)?
- How can the game be designed in such a way that game elements such as rules and steps of play are less rigid and normative and more open to ensure sufficient freedom for facilitators and participants to contribute to and tailor their own learning process?
- How can we design a simulation game that presents an appropriate level of uncertainty, one that stimulates participants to develop strategies for action and decision-making, but that is not overburdening as a result of excessive complexity and ambiguity?

11.8.2   Facilitation and Gameplay

- How can we avoid negative consequences relating to the use of gaming (e.g., addiction, emotional hurt, and manipulation with games)?
- How can we agree in advance on a "full value contract"—rules and procedures for dealing with one another in a way that ensures psychological safety and learning (including setting up challenges by means of the choice principle)?
- How can we manage participants' expectations prior to and during gameplay, including, for example, a shared understanding of purpose and learning objectives?
- How can a "safe" learning environment be created for all game participants? Particularly in games that are designed to deal with conflict and intercultural communication and in which frustration and demotivation are elements of the game's scenario?
- How can we determine (and perhaps adapt) the presence of game elements and embodied experiences that may provoke feelings of discomfort in the particular target group?
- How can a didactic process that considers ethical aspects and manipulation in the game be established?
- How can insidiously unethical uses of games (e.g., the client in a company officially uses a game for training purpose, but, in reality, he wants to use it as a hidden assessment, to test his employees, and a dependent facilitator is forced to keep the real purpose of the game secret) be managed?
- How can facilitators deal with the manipulation and disturbing behavior of participants on the spot? How can they manage team conflicts and mobbing among participant groups and protect players from dysfunctional behavior during gameplay?
- How can the over- or under-challenging of participants for extended periods during gameplay be prevented? How can gameplay leading to too much stress or frustrating boredom be salvaged?
- How might participants be empowered to adopt more active roles during gameplay for their own learning transfer and reflection on actions?
- How can a certain "fun factor" be incorporated into simulation games with the aim of ensuring at least some moments of relaxation and positivity during the flow of activities?
- How can we enhance empathy and sensibility for timely recognition of participants' discomfort (so as to take them aside for discussion, giving them the option of assuming an observer role, or, if multiple participants experience discomfort, to implement a timeout and debrief the situation)?
- How can we ensure that participants do not leave the game experience damaged or frustrated, and, if they do, how can we ensure that they receive the necessary care?

11.8.3 Debriefing/Evaluation

- How can we ensure that sufficient time is allowed and appropriate methods are used to help participants cool down and step out of their simulated roles?
- How can we address ethics and manipulation as topics for reflection during game debriefings?
- How can we create awareness of (un)ethical and manipulative methods and questions used in game debriefings or evaluations (this is often also culture-specific)?
- How can a learning environment founded on dialogue and creative "conflict" of exchanging arguments and ideas and giving feedback be established in a constructive way?
- How can overgeneralization be minimized and support be provided to allow participants to discuss the differences between games and reality?
- How can debriefing be held in such a way that encourages all participants to reflect on the game as a hypothesis or model of a socially constructed reality and remain open to reframing and sharing interpretations collectively from a variety of multi-perspectives?
- How can we open the "black box" and rigorously reflect on the underlying assumptions and interests of the designers and sponsors of simulation game models?
- How can we stimulate participants to reflect on the interconnections between simulated system elements and gaming elements?
- How can we mine impulses from gameplay, participants, and learning environments for fruitful in-between debriefing and formative evaluation during gameplay to enable participants to co-design and customize their own learning processes?
- How can we ensure that feedback offered between gameplay rounds and debriefings pertains to the role and the performance of that role and not the person themselves?

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