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TRENDS AND COMMENTS

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This compelling volume offers, in 14 chapters, a wide-ranging examination of games, simulations, and playful activities deployed for practical, utilitarian ends in diverse professional, research, and educational contexts. Over the past thirty years or so, serious games, gaming, or playful activities have come to occupy an important place in organizations, even for utilitarian purposes. While this phenomenon is not new, their use for serious purposes has become widespread over the last two centuries, and their development has been exponential, stimulated by that of information technologies.

This book serves as a guide in navigating this complex and expanding field with multidisciplinary expert contributions from numerous French and Dutch specialists and researchers. This collective expertise spans critical fields, including information and communication sciences, management sciences, linguistics, computer science, engineering sciences, cybersecurity, and foresight. This comprehensive approach ensures that the analysis moves beyond mere technological descriptions to explore deep historical, pedagogical, managerial, communicational, and sociological dimensions of applied play and games. As a result of the rapid growth and complexity of the field, it has become necessary to understand the specificities of these “serious games” and other serious play activities in order to innovate and create value within organizations.

The book introduction begins by challenging the notion that serious games are a modern invention but with a long history. It outlines their evolution over the centuries and the last three decades, already identifying several types of practices that shed light on the specific treatments discussed in the chapters. Consequently, the first chapter delves into the deep origins

of utilitarian play, asking if the serious game is an exclusive “Human or Animal Invention”. Drawing on ethology and biology, the text explores the biological functions of play, such as promoting neurogenesis during the post-natal period through solitary play. The crucial finding is that serious play is not an exclusive human preserve. For example, utilitarian play exists in animals like rats and macaques, whose existence predates *Homo sapiens* by millions of years. The transmission of know-how and innovations through social play in macaques confirms the existence of serious play in non-human species. While humanity cannot claim to have invented the concept, the text emphasizes that it has nevertheless demonstrated exceptional creativity in terms of innovation concerning serious game artifacts.

The next chapter is a prospective analysis that draws heavily on science fiction narratives to explore concepts such as conscious artificial life and neurogames. From dystopian narratives, the text argues that science fiction ultimately provides a cathartic foundation for representations, allowing innovators to purge negative impulses and guide research toward the progress of humanity. Thus, after allowing the reader to consider the distinctions between serious games for animals and for humans, this chapter encourages the reader to project himself/herself into the future of gaming through the examples of media projections provided, which will echo him/her own.

The following chapter aims to clarify numerous concepts and terms specific to the use of games in an educational setting. Through numerous illustrations, it offers an enlightening insight into the world of educational games. Using a kitchen sponge as its main metaphor to clarify the fundamental concepts related to edutainment, this chapter is truly insightful and entertaining. Among the edutainment games and forms of play discussed, there are: ludicization (which occurs when an artifact is collectively recognized as an element of play), serious gaming (hijacking an existing artifact or leisure game for a serious, utilitarian purpose), serious games (artifact intentionally designed from the outset to combine play with a utilitarian purpose), and gamification (use of game design elements in non-game contexts to serve utilitarian goals).

Then, the next two chapters as well as chapter 10 are about tabletop roleplaying. In chapter 4, we address a new phenomenon in amateur and professional tabletop play. In this way, it's about the rise of mediated tabletop roleplaying games, known as “Actual Play”. This phenomenon is analyzed through an exploratory comparative study of successful French programs, which will undoubtedly echo similar practices in other countries where tabletop roleplaying games are well established. These broadcasts transform the inherent collaborative fiction of a play into a specialized form of “semi-leisure”, blending recreational activity with the institutional demands of

media entertainment and audience engagement. Chapter 5 details a pedagogical experiment implementing a tabletop roleplaying game to gamify a Management Control case study for students in management. This approach addresses the prevalent issue where students prioritize quantitative results over a deeper understanding of economic and managerial concepts. Students adopt professional personas, compelling them to apply theoretical knowledge collaboratively and experientially. The roleplaying game framework introduces micro reward cycles and emotional elements that help anchor knowledge and develop reflective, creative learning postures, surpassing the motivation provided by standard grades. Chapter 10 presents another case of an edutainment experiment aimed at training master's students in project management. The core pedagogical device invited students to construct managerial theories starting from a playful experience. Participants overwhelmingly provided positive feedback, confirming the value of edutainment in comprehending collaborative management concepts and simulating real-world professional issues without consequence. These chapters thus enable us to consider a trendy diversion from tabletop games in the context of management courses for the second and third cases, and from the roleplaying actual play dedicated, for example, to courses on mastering audiovisual equipment and methods.

Chapter 6 is focused on a new serious game category: agile games. This chapter explores these games which appeared shortly after agile methods and help to raise awareness of them or support their implementation. In this chapter, we learn that these are predominantly non-digital games, appreciated for being inexpensive and faster to develop than their digital counterparts. A survey of 522 games demonstrated that they are used for different purposes, including Icebreakers/Teambuilders and others games to help complete a task. To support innovation, they facilitate experiential learning and provide upstream or downstream support for organizational processes. To give readers a better idea, 15 of these games are detailed at the end of the text, allowing them to select a game and learn more about it through further reading or web research.

In chapters 7, 12 and 13, we learn that a game could be used in Research. Chapter 7 examines the innovative potential of serious games as a provocative research method, distinct from their traditional role in knowledge dissemination or controlled testing. This methodology, characterized by critical distancing, materialization of thought, and a transformative aim, was employed to explore how exposure to failure influences individual creativity. The experiment engaged management students using two games. Results showed that learning from failure significantly increased intellectual risk-taking. Reading this chapter is interesting for understanding the radical

transformation of the researcher's role: by using game-based methods, the researchers become an active agent capable of influencing the dynamics under study and revealing behaviors that would remain inaccessible through traditional methods. This change in the researcher's stance stimulates scientific creativity, even if it complicates the validation and replication of studies. In other ways, chapters 12 and 13 discuss serious games with much less well-known uses: data collection and knowledge consolidation. They are about digital games with a purpose (GWAP) which are proven to be more economical and notably efficient than conventional manual methods for building knowledge bases. From two game examples dedicated to linguistic and artificial intelligence problem resolution, we learn that they are particularly aimed at building lexico-semantic resources, and they prove to be more economical and efficient than conventional manual methods. This approach yields resources of demonstrably better quality and greater diversity. Games with a purpose rely on collective intelligence and leverage consensus mechanisms, requiring data to be produced by at least two players – anonymously and asynchronously – to ensure high-quality acquisition. This setup allows for the rapid acquisition of substantial lexical and semantic information, even for terms previously unknown to the system. Interested readers will thus be able to imagine addressing some of their own problems by developing one of these games, having understood – thanks to these two chapters – the essence of how they work and some of their advantages.

Chapter 8 addresses cybersecurity resolution through a board game (and more specifically, cybersecurity in hospitals). It proposes a microgame methodology to generate threat-specific counterterrorism response plans for hospital decision-makers. We thus discover microgames, which are a kind of game designed to be played quickly with limited resources. In the context mentioned, the microgame uses a single A4 sheet, and helps managers overcome biases such as overconfidence and maximize information exchange. By detailing specific threat profiles (e.g., ideologically motivated hacktivists vs. destruction-motivated groups), participants learn to tailor their response plans based on the adversary's motivation. In essence, this chapter provides us with a game solution (microgame) that is inexpensive in terms of time and materials and can serve as an effective tool for transforming a hospital's preparedness for complex cyber threats by identifying the attackers' motivations. However, the issue of designing a serious microgame remains.

After addressing security issues through serious microgames, chapter 9 moves on to solving military problems using larger-scale games (both physical and digital). It therefore deals with wargames and wargaming: the professional practice of these games for education, planning, exploration, and prospective

analysis. The text details their history and key typologies, including: rigid wargames (rule-heavy, like the Prussian kriegsspiel), free wargames (relying heavily on expert judgment), matrix (war)games (argument-based games resolved by dice and counter-arguments), and three-table wargames (used for cost-effectively testing doctrine or technology). This chapter explores current and historical military practices dating back more than two centuries. It sheds light on their specific characteristics and examines the potential benefits and risks of digital technology and artificial intelligence in designing, supporting and playing these games, or in assisting the upstream and downstream tasks associated with these practices (such as briefing, debriefing, and capitalizing on the knowledge gained from games played).

The following chapters bring us back to the civilian applications of utilitarian gaming practices. Chapter 11 presents the contribution of open-access digital gaming to educational activities, particularly with students. Thus, Free Open-Source Software (FLOSS) serious gaming is presented as a simple, easily accessible, and inexpensive way to implement a gamification process. This use is illustrated via the tool Minetest/Luanti (an alternative to video game Minecraft via a dedicated platform), which is presented as a frugal innovation. In fact, this platform seems to offer high performance at a low cost, requiring only minimal server rental. Therefore, it supports immersive training and fosters inclusive collaborative online learning projects involving multinational teams. This chapter provides several examples of how this type of game can be used, clearly illustrating what serious gaming can be and how gaming environments can be usefully and effectively repurposed for educational purposes. We highly recommend it to any teacher looking to make use of digital gaming resources.

The final Chapter analyzes the effective combination of serious games with the iterative methodology of design thinking. As such, it offers some ideas and insights for anyone interested in designing one of these games. By analyzing the design of two serious games, the text enables readers to form their own opinions and envision designing a game through rapid iteration cycles involving the creation of intermediate prototypes at various cost levels.

At the end of reading this book, whose chapter division may be debatable, serious games seem to be an indispensable resource for innovation. By integrating historical depth, theoretical rigor, and practical applications – primarily in educational support, but also for cybersecurity, research, management, and AI development – the book demonstrates that mastering game-design principles adapted for serious purposes is an avenue full of opportunities for innovation. It fulfills the promise of providing the history, characteristics, future vision, and implementation strategies necessary for

readers to understand serious play/games in practice, or to engage with and even design their own solutions.

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