

HIGHER EDUCATION AND THE TRANSFORMATION OF GAMING


Interest in games is steadily increasing. The culture of play and games has been expanding since the mid-20th century, and extending into new sectors of society. Rather than merely encompassing games for children, gaming culture now involves the entire family. Play now comprises countless genres, targeting specialised communities and manifesting in a burgeoning game and recreation industry, and even becoming a means of communication in teaching and in the workplace. Ahead of his time, the Dutch artist Constant (1920–2005) expressed a sense of euphoria when he described this shift in 1964:

“For the first time ever, humankind is confronted with the possibility of relinquishing its existence as a utilitarian creature, and instead rising up to the level of a creative being. [...] All automatio—in other words, everything inhuman—will be banished from this way of life. The individual will simply be the inventor and creator of his or her own life: a true HOMO LUDENS.”

And indeed, play did become an integral part of society through information technology, achieving new dimensions of expressiveness, dissemination, and complexity. Digital video games “found their way out of the laboratories” in the 1970s, and triggered a series of successes that continue to this day. Games united all the primary forms of media during the 20th century; their productions were grounded in the latest developments in infor-

Constant (Constant Nieuwenhuys), *New-Babylon: Imaginäre Stadtlandschaften* (Krefeld: Scherpe, 1964) (translated from German).

Beat Suter, “Geschichte der Computerspiele,” in *Digitale Moderne: Die Modellwelten von Matthias Zimmermann*, ed. Natascha Adamovsky (Munich: Hirmer, 2018), 36–61.


mation technology and audiovisual communication. Hardly any other field of design is so multifaceted and progressive; its only reliable constant is the renewal of its own foundations. In German-speaking countries, journalists describe the “innovative power” of the sector, and attest to it as a conceptual and technological “driver” that inspires and guides other disciplines. 


Along with the new societal status of games and play, activities once considered private and limited to local recreation have expanded to global proportions. This global network has only increased the dynamic growth of the sector. Innovative concepts complement one another, compete with each other, or emerge independently and parallel to one another. Amid the permanent stream of innovation, the technological fundamentals, methods, and models of practice in game design supersede each other rapidly. Against this background of constant change, theory and analysis struggle to define principles and effects. The dynamic interaction between new findings from theory and practice can hardly offer a comprehensive prognosis regarding future trends, nor can it validly depict the field in the long term.

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A HIDDEN TREASURE CHEST

The increasing popularity of video game culture across many sectors of society contrasts

 “Gamescom eröffnet: Minister verspricht weitere Förderung,” *Süddeutsche Zeitung*, August 20, 2019, accessed October 3, 2019, <http://www.sueddeutsche.de/wirtschaft/computer-koeln-gamescom-eroeffnet-minister-verspricht-foerderung-der-branchen-dpa.urn-newsml-dpa-com-20090101-190819-99-526070>.

 Tankred Schipanski, “Digitale Spiele sind Treiber für Innovation,” interview by Dirk-Oliver Heckmann, *Deutschlandfunk*, August 20, 2019, accessed August 21, 2019, http://www.deutschlandfunk.de/gamescom-digitale-spiele-sind-treiber-fuer-innovation.694.de.html?dram:article_id=456768.

with a dearth of knowledge among those not in constant contact with this new medium. Those who do not actively keep informed on the latest updates can barely keep up with the constant shifts in gaming culture. Public communication from the game sector provide only limited access to those on the outside. In contrast to other established cultural sectors, the gaming sector readily addresses its own community but its engagement with general society has been conducted with trepidation. Whenever a broader debate does arise, games tend to be assessed reductively—both in a negative and a positive sense—and the resulting discourse often lacks both a deeper understanding of how to categorise the games, as well as personal experience with gaming. The definitions employed remain vague: Are games a contribution to culture, or merely software products?

Although the turnover of the gaming sector is comparable to that of the film industry, the protagonists of gaming culture are rarely known to the wider public. Hardly anyone has heard of the authors, producers, or art directors of games that enjoy worldwide success, nor their stance on cultural issues. Gaming companies tend to primarily address their own clientele, for whom they improve and refine their content. To this end, they repeat methods proven to keep the topics and

⇒ Ulrich Götz, "From Asteroids to Architectoids: Close Encounters between Architecture and Game Design," in *Architectonics of Game Spaces: The Spatial Logic of the Virtual and Its Meaning for the Real*, eds. Andri Gerber and Ulrich Götz (Bielefeld: transcript, 2019), 265–276.

⚡ The term "GamerGate" describes a smear campaign carried out in 2013, in which female critics of sexism in gaming culture suffered significant harassment.

depictions of big game productions within a small spectrum of the possible, and fail to explore the immense design potential of the medium in any way that might be considered experimental. $\Rightarrow \nabla$ These introverted processes occur within gaming culture in a manner devoid of any general recognition by the public, and this has had clear consequences. While the #MeToo debate originated in the film industry and captured the world's attention, hardly anyone outside the gaming world discussed the sexist smear campaigns at the heart of the "GamerGate" scandal. $\frac{\sqrt{V} \sqrt{V}}{4/X \sqrt{A}}$

Nevertheless, gaming is experiencing a boom as a subject of academic study. Methods of games-based research—such as "Citizen Science" projects—are being discussed in the world's leading specialist journals. $\Pi \Xi \Xi \Pi$ $\frac{\sqrt{V} \sqrt{V}}{4/X \sqrt{A}}$ However, since these contributions are only debated by a certain kind of expert, the academic investigation of game studies is reminiscent of the insider communication found in gaming circles. The multifaceted nature of video game culture is not discussed as a broad phenomenon; instead, debate is limited to specific instances. This explains why using game-based processes to solve social problems is still so often characterised by skepticism and rejection (e.g. in participatory urban planning processes). $\langle X \rangle \langle X \rangle$

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$\Pi \Xi \Xi \Pi$ "Citizen Science" refers to scientific research that is carried out entirely or in part by amateurs. Game mechanisms can provide important indicators about the motivation of such groups.

$\frac{\sqrt{V} \sqrt{V}}{4/X \sqrt{A}}$ Devin P. Sullivan et al., "Deep learning is combined with massive-scale citizen science to improve large-scale image classification," *nature biotechnology* 36, no. 9 (2018): 820–828.

$\langle X \rangle \langle X \rangle$ Ekim Tan, "Play the City: Dungeons and Dragons for Cities," in *Architectonics of Game Spaces: The Spatial Logic of the Virtual and Its Meaning for the Real*, eds. Andri Gerber and Ulrich Götz (Bielefeld: transcript, 2019), 265–276.



$\Xi \Xi$ Maike Thies, "Game City Zurich," *Zett: The Magazine of the Zurich University of the Arts*, June 18, 2018, accessed September 2, 2019, <http://zett.zhdk.ch/en/2018/06/18/game-city-zurich>.

The long-established failure to provide the gaming sector with any meaningful form of cultural support is symptomatic of how this new gaming culture has failed to gain any real foothold in collective consciousness. ∞ Especially in the German-speaking world, the economic and politico-cultural potential of this new medium has long been overlooked. As a result, the historical lack of support for gaming culture has had noticeable ramifications. Games are widely played here, yet the local, German-speaking gaming sector is struggling to connect with the global community. Instead, influential content and guidelines have emerged from international gaming companies located abroad.


Thus, while this medium is a determining factor in contemporary culture, it receives only marginal guidance from societal institutions. This is because its primary content emerges through a direct connection between the globalised gaming industry and its end users. Digital gaming affects most people, whether directly or indirectly, yet there is hardly any public awareness of the principles by which gaming culture, products, and markets actually function. In light of this paradox, the mass phenomenon of gaming might perhaps be considered the most popular mystery in the world today.


REMOTE CONTROL


The shift in gaming from a primarily private matter to a global business phenomenon, with a global revenue stream in the billions, has left its traces on gaming culture. New game genres are not simply distributed as one-off

products, but are continually updated online and are played by innumerable players at the same time. Although entry into many so-called “free-to-play” games is indeed free of charge, companies achieve massive profits from sales within these gaming environments. For example, this is how *Fortnite* was able to secure a daily income of several million dollars.  The true nature of this business model is revealed to players through the strong psychological pull exerted upon them, which also serves to bind them to a particular product. This is also reflected in the employees of the company themselves, who work to provide maximum profits for their products under highly questionable conditions.  Every form of chicanery is employed to intensify the motivation to play; as a result, entire groups of players are effectively a raw material powering this industry.


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In 1958, Roger Caillois (1913–1978) formulated a basic categorisation of play, using the paidia-ludus axis, along which the individual plays either of their own free will without any specific goal, or again, accepts a rules-based order to the game.  The inception of the global free-to-play gaming industry may be extended by a third pole. The motivational principles of many gaming mechanisms are so powerful that they are decisive in determining who becomes a player at all. Furthermore, many such game economies monitor


 Denis Gießler, “Wie Überraschungseier, die pleite und süchtig machen,” *Die Zeit*, July 25, 2019, accessed September 29, 2019, <http://www.zeit.de/digital/games/2019-07/in-game-kaeufer-gluecksspiel-sucht-werbung>.


 Colin Campbell, “How Fortnite’s success led to months of intense crunch at Epic Games,” *Polygon*, April 23, 2019, accessed


August 29, 2019, <http://www.polygon.com/2019/4/23/18507750/fortnite-work-crunch-epic-games>.


 Roger Caillois, *Die Spiele und die Menschen: Maske und Rausch*, trans. Peter Geble (Berlin: Matthes & Seitz, 2017).


the actions of their players online in order to keep them in the game, without the player's awareness. This act of externally controlling the game—and the players—is new.



Constant's hope—as noted in the introduction—can be interpreted as a late echo of Friedrich Schiller's famous suggestion that: “man only plays when he is in the fullest sense of the word a human being, and he is only fully a human being when he plays.”  This description could hardly contrast more with the aforementioned economic strategies that seem to offer free, attractive playing environments, but that are in fact controlling the players' behaviour from behind the scenes. The pressures of competition on the open market have distorted Schiller's notion of play. Considering the profits this sector of the industry generates, it is unrealistic to expect it to exercise any form of self-regulation.

However, the dependency of the individual on global digitisation, which some games serve to enhance, is increasingly becoming a target of criticism. Sarah Spiekermann has written that: “The digital is influencing our values [...] our health, our community, our knowledge, and our freedom.” Although central aspects of everyday life are affected, she notes a distinct passivity among users: “It is the world of others, behind our devices.”  Economic journalist Paul Mason writes: “We have to return to a way of thinking [...] that places hu-

 Friedrich von Schiller, “Ueber die ästhetische Erziehung des Menschen,” *Die Horen*, 2 (Tübingen: Cotta'sche Verlagsbuchhandlung, 1795), 45–124 (translated from German).

 Sarah Spiekermann, *Digitale Ethik: Ein Wertesystem für das 21. Jahrhundert* (Munich: Droemer Verlag, 2019), 108 (translated from German).

 Paul Mason, *Klare, lichte Zukunft: Eine radikale Verteidigung des Humanismus*, trans. Stephan Gebauer (Berlin: Suhrkamp Verlag, 2019), 25–27 (translated from German).


manity at the centre of its worldview,” since we have been reduced “to two-dimensional economic beings.”  Paolo Pedercini develops socio-critical Indie games under the label “Molleindustria” and notes that: “In order to be highly profitable, phone games need to be addictive and exploitative. An entire ‘dark science’ has been created to keep players hooked [...]. [My] proposition is to make games that are respectful of people’s time and intelligence.” 

The women’s movement of the 1970s proclaimed that “the private is political.” But what could be more private and at the same time more political than determining the gaming culture of millions of users, to whom the same content and values are being communicated all around the globe?

THE ECONOMY OF ATTENTION

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Games can demand an incredible degree of attentiveness. The combination of gameplay motivation and cognitive focus necessary to achieve many of the goals in these games can create a very close bond between the game and the player. The concentration resulting from this is part of the reason why this medium and its many genres have been so successful. However, it poses a risk of misuse, both by the users as well as the developers of games. Most importantly, only the game development studios and gaming companies usually possess knowledge about the motivational potential

 Paolo Pedercini, “Invisible (Game) Cities,” conversation with Andri Gerber, in *Architectonics of Game Spaces: The Spatial Logic of the Virtual and Its Meaning for the Real*, eds. Andri Gerber and Ulrich Götz (Bielefeld: transcript, 2019), 53.

of gaming activities. They channel this knowledge directly into the game itself, and it is used in particular to appeal to young people.

Well-established educational concepts are based on the idea that future generations will recognise their own inclinations within the systematic framework of a comprehensive education at institutions of learning, and then be able to further develop these individual inclinations. This preparation for a career path is based on the assumption that, fundamentally, there are no activities that can generate more interest and demand greater concentration than the topics of education themselves. Yet digital games leave deep traces in the content and infrastructure of our information society, which continues to rely on the training given to young professionals as if demanding games had not already long begun to compete for their attention. Thus, a surreptitious transformation is taking place under the radar of educational concepts and job markets. Despite the clear contrast between established educational concepts and the new games of today, the opportunities to experience a playful, self-determined act of learning are not being adequately explored. As previously mentioned, according to Constant, incorporating games into education could actually permit students to become the “inventors and creators” of their lives. 🎮

The economy of attention in a nascent digital society must be subjected to critical analysis. There is an increasingly obvious disinterest in any content that is not communicated digitally. Since the ability to attract a

significant degree of attention ultimately guarantees the success of a game, they contain an increasing number of motivational mechanisms, which are being increasingly optimised to demand absolute attention. However, this economically motivated demand does not prompt the users of games to engage with other developments in the same medium, nor to engage with a broader set of educational or cultural offerings. Other media differ in this respect: experiencing literature, film, or theatre, for example, is greatly enriched through drawing comparisons and intertextual references. This does not apply to games, which can be defined as economic machines. It is therefore necessary to debate just how much pressure games should be allowed to exert on their players in order to retain their loyalty.

It is ironic that the attention many games demand appears to impede their future development. After all, don't exceptional games captivate their players with their content, which is derived from a broad spectrum of academic disciplines, and devised through the combined efforts of highly educated, highly skilled experts?

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THE PLAYING UNIVERSITY

Under these conditions, universities can play a decisive role, and indeed ought to introduce a critical perspective on the young, expanding medium that is the video game. Although the digital transformation of society affects everyone and has instigated profound changes in social game behavior, many sectors of society are only able to react to the pressures of innovation exerted by the gaming industry slowly,

FIG. 1 ZHdK Department of Design Degree Show, Game Design, 2019.



and with significant delay. The sector orients itself towards the “HOMO LUDENS”—the playing human being—at the centre of society, but in this respect, it always retains a firm grasp on its own economic interests.

It is thus the task of universities and institutions of higher education to lead our engagement with digital games in the public interest. They must provide guiding frameworks, design correctives, and make them practicable. To this end, these institutions must, first of all, provide the theoretical basis for a nuanced debate. Their published reflections, analyses, categorisations and criticisms must define the fundamentals of the field and point out new opportunities. Secondly, this engagement should not remain merely theoretical. Universities must make practical use of games if they are to realise innovative uses for them. Such counter-examples are far removed from the profit-orientated contemporary gaming sector, and they are necessary to ensure that companies are not solely responsible for determining the direction in which gaming culture develops as society experiences a digital transformation. Nevertheless, the inventive power of universities can be intensified if the results of pilot projects are linked to the industry, enabling results to flow in both directions. Finally, higher education institutions can play a decisive role in communicating the transformation of gaming culture—and this impacts both the development of the necessary expertise as well as the process of informing the general public. Societal engagement with games cannot occur only with well-known, mainstream titles, but must also ad-

dress previously unknown and experimental approaches.




The Zurich University of the Arts (ZHdK) has been offering a comprehensive curriculum in the field of game design according to these principles since 2004. It was one of the first public universities in Europe to dissect games intensively, in both teaching and research; the critical and constructive stance of the game design programme at ZHdK has led to the creation of its own brand. ZHdK Game Design issues a large number of publications on game studies every year, along with communication projects aimed at the general public and a number of projects in the research and development of serious and applied games.  Some of the games developed by students just after graduating have garnered major international recognition and awards (in some cases, even before students have completed their degrees).  Companies founded by graduates have become known for expanding gaming into the digital dimension, while at the same time leading their players back to its core meaning.  The profundity of interactive narration, virtual poetry and playful learning are what make these games worth seeing and playing. ZHdK Game Design asserts that the medium of games should serve to enrich existing culture, not displace it.

FIG. 1
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See ZHdK Game Design, "Jahresberichte," accessed February 4, 2020, <http://gamedesign.zhdk.ch/forschung/jahresberichte>.



See ZHdK Game Design, "Serious & Applied Games," accessed February 4, 2020, <http://gamedesign.zhdk.ch/forschung/serious-games>.



See Far: Lone Sails, <http://www.far-game.com>; *Niche: A Genetics Survival Game*, <http://niche-game.com>; *Airheart: Tales of Broken Wings*, <http://airheartgame.com>; *Feist*, <http://playfeist.net>.



See Okomotive, <http://okomotive.ch>; Stray Fawn Studio, <http://strayfawnstudio.com>; Playables, <http://playables.net>; ZHdK Game Design, "Take-Off," <http://gamedesign.zhdk.ch/take-off>.

DIGITAL GAMES LEAVE DEEP TRACES IN THE CONTENT AND INFRASTRUCTURE OF OUR INFORMATION SOCIETY

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