

RETHINKING GAMIFICATION

**Edited by
Mathias Fuchs, Sonia Fizek,
Paolo Ruffino, Niklas Schrape**

IMPRINT

A collaboration between the Gamification Lab and the Hybrid Publishing Lab
at Leuphana University of Lüneburg, Germany
<http://cdc.leuphana.com/structure/gamification-lab/>
<http://cdc.leuphana.com/structure/hybrid-publishing-lab/>

Editors Sonia Fizek, Mathias Fuchs, Paolo Ruffino, Niklas Schrape
Editorial Assistance and Project Management Fabian Lehmann
Proofreading and Editorial Assistance Jacob Watson
Layout, Design, and Artwork Laleh Torabi
meson press Mercedes Bunz, Marcus Burkhardt, Andreas Kirchner

Bibliographical Information of the German National Library

The German National Library lists this publication in the Deutsche Nationalbibliografie (German National Bibliography); detailed bibliographic information is available online at <http://dnb.d-nb.de>.

Published by meson press, Hybrid Publishing Lab, Leuphana University of Lüneburg, Germany
www.meson-press.com

The paperback edition of this book is printed by Lightning Source, Milton Keynes, United Kingdom.
The digital editions can be downloaded freely at www.meson-press.com.

ISBN (Print): 978-3-95796-000-9
ISBN (PDF): 978-3-95796-001-6
ISBN (EPUB): 978-3-95796-002-3



This publication is licensed under the CC-BY-SA 4.0 (Creative Commons Attribution ShareAlike 4.0 Unported) license.

To view a copy of this license, visit: <http://creativecommons.org/licenses/by-sa/4.0/>.



WHY FUN MATTERS: IN SEARCH OF EMERGENT PLAYFUL EXPERIENCES

by **Sonia Fizek**

GAMIFICATION AFTER BULLSHIT

In his article, which became the cornerstone for vehement critique of gamification, Ian Bogost boldly claims that:

[...] gamification is marketing bullshit, invented by consultants as a means to capture the wild, coveted beast that is videogames and to domesticate it for use in the grey, hopeless wasteland of big business. (Bogost 2011b)

Indeed, much discussion, especially with marketing background, has been focused on taming the beast and closing it within reproducible score-based structures. The phenomenon has been scrutinised predominantly from the perspective of the mechanical and iterative capacity of gamified systems, which rely on the adaptation of game mechanics to daily activities in order to influence the individual's behaviour and drive engagement (Gartner Inc. 2011; Radoff 2011; Zichermann and Linder 2010 and 2013; Zichermann and Cunningham 2011; Tkaczyk 2011). And the latter are believed to be achieved by implementing the elements of challenge and competition. These require the winning condition, which in most cases translates to a point system

Gabe Zichermann is a vehement advocate of. In his Google Tech Talk, promoting “Game-based Marketing” (2010), Zichermann mentions the gamification loop, a mechanism based on the allocation of points through creating challenges, win conditions, leaderboards, badges, and social networking, which in turn lead to the achievement of status. Those simple game mechanics elements form the essence of gamification also for Gamify, a San Francisco based technology company, whose official mission is to achieve business goals and influence the customers’ behaviours by means of gamified systems implementing levels, badges, quests, rewards and more (Gamify 2014).

The rhetoric around gamification seems to be predominantly structured around accumulation and pointsification.¹ Whereas, as Bogost vehemently notices, “games or points isn’t the point” (2011a). He also encourages researchers critical of the marketing usage of gamification, to stop using the word entirely and replace it with exploitationware or develop innovative approaches to the use of games in different contexts (ibid.). Despite those fervent reactions in the academic and game designer communities, neither the term nor the gamified “Viagra for engagement dysfunction” (Bogost 2011b) have disappeared from the digital horizon. Game designers, gamers, and researchers all seem to have agreed that gamification is bullshit, and yet they still keep stumbling upon it. In 2014 the Gamification World Championship takes place (Gamify 2014). It is enough to take a look at the event’s partners to notice the major worldwide business players, among them Amazon Web Services, Deloitte Digital, and Badgeville. Numerous marketing prognoses still portray a bright and profitable future covered with billions of dollars (Corry 2011, Gartner Inc. 2011). However, if gamification refuses to complement its hype factor with more than easily predictable repetitive reward structures, it may as well considerably slow down or even “[. . .] fail to deliver” (Fleming 2012).

The question remains: What will the post-bullshit era of gamification concentrate on once a simple replication of points and badges loses its initial impact? The answer may be found in Gamify’s CEO and Co-founder’s re-

1 “Gamification is the wrong word for the right idea. The word for what’s happening at the moment is pointsification” (Robertson 2010).

sponse post to Bogost's "Gamification is bullshit" (2011b). Nathan Lands, whose company's official slogans still promise its customers effective point-based solutions to engagement, when confronted with harsh criticism, puts a more friendly face to the profit-driven marketing machine. He might not have realised what a simple and powerful message was delivered when he emphasised the importance of playfulness and fun, defining gamification as "re-imagining experiences with fun in mind" and "an amazing opportunity to experiment with creating a more fun world" (ibid.).²

It seems that the most powerful driver for player's engagement is not based on quantification methods artificially imposed onto every possible context, but indeed on fun. And fun, as Sebastian Deterding notices, is neither about extrinsic motivation powered by rewards nor about adding game features to random products (2012). If the recipe towards meaningful engagement is contained within three simple letters, why is it so difficult to successfully implement it and why does it seem so scarce in existing gamified practices? In order to address this question, I propose to embrace the seemingly ungraspable concept of fun through the lens of *emergent playfulness*, which may guide researchers and practitioners in explaining the fun-driven mechanism of successfully gamified activities. The concept describes the experience of fun as an activity deriving from gameplay and allowed by a system "[. . .] flexible enough for players to inhabit and explore through meaningful play" (Salen and Zimmerman 2004, 165).

PLAYFUL VERSUS PLAYABLE

It is not an easy task to define the ephemeral concept of fun, even when narrowing it down to the medium of games. Taking into consideration all the varied video game genres and player typologies (Bartle 1996, Yee 2004), it becomes even more challenging. Jesper Juul voices his concerns about delimitating the enjoyable ingredients of games by emphasising that:

[. . .] there is ultimately no one-sentence description of what makes all games fun; different games emphasize different types of enjoyment and

2 Land's reply may be found under Bogost's blog entry: http://www.bogost.com/blog/gamification_is_bullshit.shtml (accessed May 6, 2014).

different players may even enjoy the same game for entirely different reasons. (Juul 2005, 19)

*see also
Schrape
p.24–25*

Despite the complexity of the phenomenon and the multitude of game genres, most gamified applications seem to be relying on a simple point-based structure, which is believed to provide enjoyment in all possible contexts. To gamification evangelists such as Zichermann the formula is simple: “If air-trafficking can be fun, anything can be fun” (Zichermann 2010). He transferred this rule to Livecube, one of the latest gamified inventions by Dopamine, a creative agency co-founded by himself. Livecube is a gamified environment, the aim of which is to trigger maximum audience engagement during a live event. This may be achieved by incorporating game mechanics and linking it with a social interaction tool. As the creators emphasise, “we use the latest engagement technology to motivate the audience with points, badges and real-world rewards” (Livecube 2014). Yet again, the proposed tool reveals Zichermann’s grammar of a successfully gamified experience, based on the point system, which ultimately leads to the achievement of status. And status, according to another gamification leader, is everything. Similarly to Dopamine’s solutions, Badgeville has developed its Behavior Platform (2014), on an intricate scoring system. The cloud-based tool may be adapted to the brand’s digital ecosystem and performs four basic functions: it rewards the users, elevates their status, provides social proof, and analyses the brand’s success. The platform’s creators emphasise its innovativeness in comparison to other score-based systems by assuring they are “[. . .] leaving rudimentary point, badge and leaderboard systems in the dust” (Badgeville 2014). However, the only new approach they seem to be adding to an already proven model is a personalised point distribution system they wittingly and enigmatically refer to as contextual game mechanics.

The above examples very accurately illustrate what Robertson refers to as pointsification (2010) and Bogost as exploitationware (2011a). They seem to derive from a formal notion of what constitutes games and playing, concentrating on reapplying proven game mechanics to different scenarios. The design of the gamified experiences certainly makes them playable. But are they playful? Playfulness, after all, is a much more complex and volatile state and may not be easily transplanted by predictable iterative structures.

In order to pin down this slippery phenomenon, I will turn to Eric Zimmerman's gaming literacy, which explains "how playing, understanding, and designing games all embody crucial ways of looking at and being in the world" (Zimmerman 2009, 30). His research contributes to my understanding of *emergent playfulness*, a concept developed in a later section of this article and attempting to shed more light into what makes games fun.

GAMING LITERACY

According to Zimmerman literacy has been formulated as "[...] the ability to understand, exchange, and create meaning through text, speech, and other forms of language" (2009, 23). However, as he emphasises, diverse forms of media, including images, films, music, and television among others, require a new set of competences in order for them to be produced and understood. The situation becomes even more complex when we think about games (including video or electronic games), constituting elaborate systems, which may include all the above phenomena. Games in all their shapes have already left the safe confinement of the magic circle and no longer seem to stand outside ordinary life or within the boundaries of time and space. They are now, more than ever before, used in a myriad of contexts (learning, medicine, marketing) and have become the tools for creating meaning outside of their self-contained systems. According to Zimmerman, an important question to ask in the light of the current status of games is not "What does gaming look like? but instead: What does the world look like from the point of view of gaming?" (ibid., 24). And the latter question seems to be partially answered by the current examples of gamified every day practices, such as participating in events (Livecube, 2014), prioritising e-mails (Attent, 2014), reading books (ReadSocial App, 2014), or even brushing teeth (Kolibree, 2014). All the above examples seem to be turning daily activities into games. However, experiencing the world via gaming is not only about upward movement, rewards, scoring, ranks, and the achievement of status displayed in corresponding social platforms. The process of "[...] assigning a new game-like character to people's daily rhythm" (Dragona 2013, 1) does not have to be defined solely by points and rewards. It may be a little bit more fun to play with.

Interestingly, when referring to the playful world in which "the way we live and learn, work and relax, communicate and create, will more and

more resemble how we play games”, Zimmerman does not even mention the term gamification (Zimmerman 2009, 30). Whether he did it consciously, or whether the term was not yet such a popular buzzword at the time of shaping the concept, the phenomenon he describes to a certain degree seems to be illustrated by gamified practices. But only partially. Gaming literacy explains those practices and creates a meaningful framework, which surpasses the point-based structure and focuses equally on the importance of play and meaningful contextual design.

The concept involves three interweaving phenomena – systems, play and design – which demand a new set of cognitive, creative, and social skills from the participants (ibid., 25). Being systems literate is the ability to understand the world in terms of dynamic structures formed out of changing elements. This way of understanding cultural texts in their broad sense, is very much useful with reference to games, which are systemic constructs based on sets of rules. When those very same rules are put into action and interacted with, the concept of play emerges. As Zimmerman emphasises, “[j]ust as games are more than their structures of rules, gaming literacy is more than the concept of systems. It is also play.” (ibid., 26). Rules are fixed and rational, whereas the activity of play may be subversive and improvisational. Play may be understood as a “free movement within a more rigid structure” (Salen and Zimmerman 2004, 304) or it may as well refer to play within or with that very same structure. Zimmerman supports this observation with the examples of players modding games, engaging in playful discourse between games, and developing whole cultures around certain game titles (2009, 27).³ Systems are crucial for the proper understanding of gamified practices, but without the play component, they do not make much sense. As Zimmerman rightfully notices, systemic literacy centres on games whereas playful literacy shifts the focus towards the very action of playing and players who are at its core. It diverges from structures of rules towards structures of human interaction (ibid.). The third component focuses on creating meaning through game design. It differs from system design in that it refers to a particular social and cultural context. Not only is it based on

3 Such creative practices and shadow economy surrounding games have been extensively discussed by James Newman in *Playing with Videogames* (2008).

logic and rules, more importantly it demands the understanding of culture and entertainment environment in general.

TOWARDS EMERGENT PLAYFULNESS

Being game literate equals being playful, which translates into “[. . .] a ludic attitude that sees the world’s structures as opportunities for playful engagement” (Zimmerman 2009, 27). In accordance with Zimmerman’s concept, in order for engagement to appear, one needs not only a system of rules, but also human interaction with it and culturally significant design. Playfulness then does not reside solely within the systemic infrastructure of games, but seems to be a quality deriving from the very interaction with the system. Following this observation, I propose the following definition of fun with reference to games: an enjoyable emotional reaction deriving from the capacity to engage in playful behaviour, which emerges out of the interaction with the game. This may be achieved in numerous ways, for instance conditioned by the implemented rules, and/or as a result of autonomous player’s actions not directly predicted by the system.⁴ In the case of the first scenario, the player’s satisfaction is achieved only through the actions performed in accordance with the strict and fixed rules of a given ludic system. The latter one points towards all the unexpected activities that happen in and around the game, creative interpretation of rules, modding, shadow economy (Newman 2008), or to go back to Zimmerman’s concept, play within and play with the game (Zimmerman 2009). It is this second component, which is not as easily replicable as the intended interaction with the system itself. Fun, defined in this way, seems to be relying on play as “[. . .] a voluntary activity” (Huizinga 1950/1938, 7), providing the player with a certain amount of autonomy (Deterding 2012), which in turn creates space for playful behaviour. This free movement within a given structure ultimately leads to what I refer to as *emergent playfulness*.

4 For Raph Koster, for instance, fun emerges as a result of the mental mastery of a task, and is specifically related to the learning scenario (Koster 2005, 2012). He supports his claim with Chris Crawford’s remark on fun as “[. . .] the emotional response to learning” (in Koster 2005, 228).

The concept bears noticeable terminological affinity to emergent gameplay, which describes a basic game structure combining simple rules to produce large numbers of variations (Juul 2002 and 2005). Emergence as such may also indicate a general term for player behaviours that have not been predicted by game designers (Smith 2001). It is a phenomenon arising “[. . .] out of complexity [and . . .] unplanned patterns appearing from within a system” (Salen and Zimmerman 2004, 152). Juul juxtaposes games of emergence to games of progression (2005, 67). To him, both present the players with different types of challenges. In the first case, the challenge is set up by means of interacting rules. The latter one requires each challenge to be presented consecutively, as it is done in classic adventure games. It is also important to emphasise that “many games can be found on a scale between emergence and progression” (ibid., 71). Emergent playfulness draws from the above understandings of emergence, and links them with the idea of fun as a process originating from the more open design allowing for some level of improvisation on the part of the player.

How will gamification look like in the post-bullshit era?

The improvisational quality of play, as demonstrated in the previous paragraph, is also a crucial component in Zimmerman’s gaming literacy.

However, it should be noticed here that emergent playfulness, unlike emergent gameplay, is not understood in a strictly design-focused way and does not have to refer to a gameplay style or to a structural way of providing challenges. It designates a joyful activity, which is the result of meaningful gameplay. Just as Zimmerman shifts his focus from systemic literacy occupied with game structures to playful literacy referring to playing, I propose to look at playfulness as a quality emerging from play rather than a framework describing a certain design schema. In the case of emergent playfulness the space of possibility (Salen and Zimmerman 2004, 165) or landscape of possibilities (Juul 2005, 73), do not have to be exclusively tied to the patterns of emergence. The rewarding experience may result from the enjoyment of rules (emergence) or fictional worlds and storylines (progression) or both (emergence with progression components or progression with emergence components), but more importantly it does not have to be tied to strictly defined design frameworks. The concept detaches the notion of fun from a systemic understanding and elevates it to a more general quality expressed by gaming literacy.

The above reasoning may help us understand why such applications as the previously mentioned *Attent* and *Kolibree* do not translate the world's structures into playful interactions but more so into well thought through fixed game structures. Let us have a closer look at the two examples and their mechanics keeping emergent playfulness and gaming literacy as reference points.

Attent is a simple tool, the purpose of which is to develop more cautious behavioural patterns of e-mail distribution. The main function of the application is to facilitate the prioritisation of sent messages. This simple quantification mechanism is based on the *Serios* currency, which enables the users to attach value to distributed information. The allocation process needs to be considerate as the number of points is finite. The systemic solution offered by *Seriosity* may greatly influence communication efficiency within a corporation. However, its relation to games seems far-fetched and disguises a marketing strategy to increase product sales. The company claims that their currency solutions are inspired by multiplayer online games. This simple currency exchange rule, however, does not turn reading e-mails into a game or an inherently playful experience.

see also
Razcowski
p. 154–155

Zicherman claims to be able to change the behaviour and motivational patterns by gamification loop where the point system consists of six elements: challenges, win conditions, leaderboards, badges, social networks, and status. The creators of *Attent* selected points as the only means of game-ness, resigning from leader boards, badges, status, or win conditions. And such a simplified solution may be a perfect choice to deal with information overload. It should be, however, taken for what it really is, a well-designed pointsification system, not a game, and certainly not one allowing for emergent playfulness. Juxtaposing *Attent* with the three concepts forming gaming literacy (see figure 1), further exposes its simplicity.

The core of *Attent* is its currency allocation system, which constitutes a simple structure devoid of the mechanism that would further contextualise the activity. There seem to be no apparent challenges, winning conditions, or rewards. The closed design of the system does not allow for any improvisation. Furthermore, the action of e-mail prioritisation has not been embedded in any storyline scenario. Lack of those elements makes playfulness difficult to achieve, if not impossible. The user neither plays within nor with the system, but rather interacts with a familiar interface structure,

System	Play	Design
<ul style="list-style-type: none"> • Dynamic Structures Involving Constituent Parts 	<ul style="list-style-type: none"> • Play within Structure • Play with Structure 	<ul style="list-style-type: none"> • Taking into Account Social and Cultural Context • Not Only Based on Rules and Logic

Figure 1: Gaming Literacy and Its Components (based on Zimmerman 2009)

attaching points to the outgoing messages. *Attent* does not provide any win conditions and rewards for the challenge of witty point management. The user may of course try to create a meaningful game-like scenario for the application and in that sense play with the lack of imagination on the part of its designers. The main goal may be the attempt to win the attention of the receiver by allocating the right number of points. Such a perspective still does not turn *Attent* into a game, but rather creates potential for a non-existent meaningful ludic scenario.

The gameness of *Seriosity's* first gamified application may be questionable. However, the company's aspirations to design their products as ludic experiences have been articulated in black and white. In their blog post devoted to games and work, *Seriosity* refers to Byron Reeves, a professor at the Department of Communication at Stanford University, who emphasises that highly engaging features of games may become ingredients, recombined in different scenarios to make them more game-like (Reeves 2011). As one of the participants at the Business Innovation Factory-7 Summit, Reeves was wondering how to combine gaming with work, so that a boring interface incites a similar level of excitement to a *World of Warcraft* (2004) session. Maybe, if the creators of *Attent* turned directors or managers into guild masters, and applied reward conditions for or a possibility to trade *Serios* among the employees, they could be successful in creating a game-like experience. However, a simple point distribution system does not turn e-mail boxes into a *World of Warcraft* gameworld.

Points are not inherently bad, but gamified practices devoid of emergent playfulness and meaningful design in favour of raw pointsification systems, may seem futile and a little less, if at all, fun to play with. In order for play

to take place, a certain level of improvisation is needed (Zimmerman 2009, 26). Let us see whether Kolibree, a gamified teeth-brushing experience, fosters emergent playfulness and enables the shift from systemic interaction towards player-centred involvement and meaningful design. Kolibree is a new product by a French start-up, which is launching its Kickstarter campaign in the summer of 2014. If successful, it will be one of the first attempts to deliver a smart toothbrush with an integrated gamified smartphone application. The device and the corresponding software will track long-term progress and analyse brushing habits, moves, and frequency. The results will be displayed on scoring scales and assigned to a personalised account, which may incorporate up to five users / players. The brushing progress will be rewarded with points where each score corresponds to a certain brushing accomplishment. The scores will ultimately be translated into rewards and badges, and the overall performance will be shared via social networks.

If we removed the name of the product from the above description, it could certainly refer to most gamified applications available on the market. Similar to *Attent*, Kolibree operates on the systemic level. The interaction with the device incorporates progress measurement and score-based reward system, which ultimately may lead to the achievement of status in social networks. This rule-driven design seems to correspond very accurately with Zicherman's gamification loop (challenges, win conditions, leaderboards, badges, social networks, status). However, when juxtaposed with the three concepts underlying gaming literacy, Kolibree fails to integrate the aspects of playfulness and meaningful design. Again, the constrained rule-based structure does not create space for improvisation. The big question remains. How to go beyond points and purely systemic features of games, and move the experience onto the remaining two levels of gaming literacy that might lead to emergent playfulness?

The *Brusheads* (2014) concept proposed by PA Consulting seems to be addressing the above concern. Most importantly, the game-like properties of *Brusheads* start at the level of its design. The prototype comes in five different versions, modelled as cartoon characters. As Ahmad Bitar, PA expert in product design, explains, children identify with their character and the personified toothbrush influences their behaviour in playful ways. The toy toothbrush has a built-in microphone, so if the child does not complete a two-minute brushing cycle, a pre-recorded voice of the character could

encourage them to finish the otherwise mundane task. The characters may be further brought to life in a corresponding smartphone or computer application, which enables the competition between friends. Each account is assigned to a selected toothbrush character. On the level of the system, PA Consulting's gamified application does not seem to differ from the previous example. However, by placing the activity of brushing teeth in a wider context, building storyline and fostering emotional attachment to characters, the Brusheads concept creates ample space for playful behaviours, also literally outside of the provided structure. For instance, the design of the toothbrush makes it possible for the child to take it outside of the bathroom scenario. The brush is encapsulated in a handy portable structure resembling a marker pen, and has a suction cup underneath, so it may be applied to different surfaces.

The Brusheads case emphasises the fact that a game design process involves not only a formal rule-based system, it should also incorporate playful experience set in a socio-cultural context. I would like to conclude this section with the definition of a meaningful game design as understood by Zimmerman:

Game design involves math and logic, aesthetics and storytelling, writing and communication, visual and audio design, human psychology and behavior, and understanding culture through art, entertainment, and popular media. (Zimmerman 2009, 29)

After all, design is a holistic process and only when it is kept as such, emergent playfulness has the chance to develop. Reapplying a uniform well-tailored point system to all possible contexts does not create enough space for fun to arise.

CONCLUSIONS: FUN IS THE FUTURE

The broad importance of playfulness as a socio-cultural concept was raised as early as in 1938 by Johan Huizinga (*Homo Ludens*). However, as this article demonstrates, almost a century later it continues to be a highly disputed topic in game studies. Fun, although originally deriving from the ludic system, remains an aspect of play, which is not easily encapsulated within and replicated by rigid structures. Additionally, various genres of gamified practices

may implement different strategies leading to emergent playfulness. Thanks to Zimmerman's understanding of what any game should comprise of, this ephemeral quality becomes translatable to practical design hints, which take into consideration the complexity of ludic entertainment. In order to make more engaging gamified experiences, it is crucial to understand the phenomenon of game-related fun not only as a quality deriving from their systemic nature, but equally importantly from the playful engagement with that very system. If fun is the future as Gabe Zichermann assures us (2010), it should become apparent that successful and fun-driven gamification can no longer be the result of a simple replication of the standard point-based structure in accordance with the one-size-fits-all rule. Whether it is described as a voluntary activity (Huizinga 1950/1938, 7), an autonomous experience (Deterding 2012) stemming from games of emergence (Juul 2002 and 2005), play with or within the system (Zimmerman 2009), or emergent playfulness, fun is a quality which should inform the post-bullshit era of gamification and pave the way towards more meaningful and enjoyable design. The path may be a little more serpentine than the marketing gamification gurus expect. After all, drafting emergent playfulness requires a mind-set of an artist, not necessarily that of a craftsman.

BIBLIOGRAPHY

- BADGEVILLE. 2014. "Game Mechanics." Accessed March 21.
<http://badgeville.com/products/gamification>.
- BARTLE, RICHARD. 1996. "Hearts, Clubs, Diamonds and Spades: Players Who Suit MUDs." Accessed April 7, 2014.
<http://www.mud.co.uk/richard/hclds.htm#1>.
- BOGOST, IAN. 2011a. "Persuasive Games: Exploitationware." *Gamasutra*, May 3.
http://www.gamasutra.com/view/feature/6366/persuasive_games_exploitationware.php.
- BOGOST, IAN. 2011b. "Gamification Is Bullshit! My Position Statement at the Wharton Gamification Symposium." *Ian Bogost Blog*, August 8.
http://www.bogost.com/blog/gamification_is_bullshit.shtml.
- CORRY, WILL. 2011. "Games for Brands Conference, Launching in London on October 27th." *TheMarketingblog Extra*, September 13.
http://wccorry.blogspot.de/2011_09_11_archive.html.
- Deterding, Sebastian. 2012. "Paideia as Paidia. From Game-Based Learning to a Life Well Played." Accessed April 7.
<http://www.pinterest.com/pin/471118810989035304/>.
- DRAGONA, DAPHNE. 2013. "Counter-Gamification. Emerging Forms of Resistance in Social Networking Platforms." Accessed April 7.
<http://projects.digital-cultures.net/gamification/files/2013/05/Daphne-Dragona--rethinking-gamification.pdf>.
- FLEMING, NIC. 2012. "Gamification: Is It Game Over?" *BBC*, December 5. Accessed March 14, 2014.
<http://www.bbc.com/future/story/20121204-can-gaming-transform-your-life>.
- GAMIFY. 2014. "Gamify." Accessed January 24, 2014.
<http://gamify.com>.
- GARTNER INC. 2011. "Gartner Predicts Over 70 Percent of Global 2000 Organisations Will Have at Least One Gamified Application by 2014." Accessed April 7, 2014.
<http://www.gartner.com/newsroom/id/1844115>.
- HUIZINGA, JOHAN. 1950/1938. *Homo Ludens: A Study of the Play Element in Culture*. New York: Roy.
- JUUL, JESPER. 2005. *Half-Real: Video Games Between Real Rules and Fictional Worlds*. New York: The MIT Press.
- JUUL, JESPER. 2002. "The Open and the Closed: Games of Emergence and Games of Progression." Accessed April 7, 2014.
<http://www.jesperjuul.net/text/openandtheclosed.html>.
- KOSTER, RAPH. 2012. "Theory of Fun 10 Years Later." Accessed April 7, 2014.
<http://www.gdcvault.com/play/1016632/A-Theory-of-Fun-10>.
- KOSTER, RAPH. 2005. *Theory of Fun for Game Design*. Phoenix: Paraglyph Press.
- LIVECUBE. 2014. "Home." Accessed January 24.
<http://www.livecube.co>.
- NEWMAN, JAMES. 2008. *Playing with Videogames*. New York: Routledge.
- RADOFF, JON. 2011. *Game On: Energize Your Business with Social Media Games*. Indianapolis: Wiley.
- REEVES, BYRON. 2011. "Work Is a Serious Game." Accessed April 7, 2014.
<http://www.businessinnovationfactory.com/iss/video/bif7-byron-reeves>.

- ROBERTSON, MARGARET. 2010. "Can't Play, Won't Play." *Hide and Seek*, October 6.
<http://hideandseek.net/2010/10/06/cant-play-wont-play/>.
- SALEN, KATIE AND ERIC ZIMMERMAN. 2004. *Rules of Play: Game Design Fundamentals*. Cambridge: MIT Press.
- SMITH, HARVEY. 2001. "The Future of Game Design: Moving Beyond Deus Ex and Other Dated Paradigms." Accessed April 7, 2014.
http://legacy.igda.org/articles/hsmith_future.
- TKACZYK, PAWEŁ. 2012. *Grywalizacja: Jak Zastosować Mechanizmy Gier w Działaniach Marketingowych*. Gliwice: Hellion.
- YEE, NICK. 2004. "Through the Looking Glass: The Daedalus Project." Accessed April 7, 2014.
<http://www.nickyee.com/daedalus/archives/print/000755.php>.
- ZICHERMAN, GABE. 2010. "Fun is the Future: Mastering Gamification." Accessed April 7, 2014.
http://www.youtube.com/watch?feature=player_embedded&v=6O1gNVeaE4g.
- ZICHERMANN, GABE AND CHRISTOPHER CUNNINGHAM. 2011. *Gamification by Design: Implementing Game Mechanics in Web and Mobile Apps*. Sebastopol: O'Reilly Media.
- ZICHERMANN, GABE AND JOSELIN LINDER. 2013. *The Gamification Revolution: How Leaders Leverage Game Mechanics to Crush the Competition*. New York: McGraw-Hill.
- ZICHERMANN, GABE AND JOSELIN LINDER. 2010. *Game-Based Marketing: Inspire Customer Loyalty Through Rewards, Challenges, and Contests*. Hoboken: Wiley.
- ZIMMERMANN, ERIC. 2009. "Gaming Literacy. Game Design as a Model for Literacy in the Twenty-First Century." In *The Video Game Theory Reader 2*, edited by Mark J. P. Wolf and Bernard Perron, 23–32. New York: Routledge.

LUDOGRAPHY

- ATTENT. 2014. Seriosity.
<http://www.seriosity.com/products.html>.
- BEHAVIOR PLATFORM. 2014. Badgeville.
<http://badgeville.com/products/behavior-platform>.
- BRUSHEADS. 2014. PA Consulting Group.
<http://www.paconsulting.com/our-thinking/meet-the-brusheads>.
- KOLIBREE. 2014. Kolibree.
<http://www.kolibree.com>.
- LIVECUBE. 2014. Gabe Zichermann, Aaron Price and Justin Schier.
<http://www.livecubeapp.co>.
- READSOCIAL APP. 2014. Travis Alber and Aaron Miller.
<http://readsocialapp.com>.
- WORLD OF WARCRAFT. 2004. Developed by Blizzard Entertainment. Windows, OS X. Blizzard Entertainment.