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# Ludic interfaces

## Driver and product of gamification

The recent success of non-standard and playful interface devices like Wii Remote, Move, and Kinect is an indicator of a process that demonstrates that ludic interfaces might be the core driver for a transformation in the sector of video games cultures and beyond. Yet, ludic interfaces are drivers—as well as driven by social developments known as the ludification (Raessens, 2006; Fuchs & Strouhal, 2008), or the gamification of society (Schell, 2010; Bogost, 2010; Ionifides, 2011; Deterding, Khaled, Nacke, & Dixon, 2011). The interfaces hold up a mirror to social processes that are reflected within recent interface design. The changes we are about to see are of relevance to age and gender-related issues, to the attitude and the style of the gaming community, and to a gamification of non-gaming cultural groups and settings. Ludic interfaces demonstrate how playfulness is about to intrude systems, devices and relationships that were once governed by determinism, control, and straightforward teleological thinking.

It is not so much computer hardware or the computer's software, and to a disputable amount only the user, that determines direction and pace of gamification, but in the first instance the interfaces that mediate in between human and machine. The interaction of (wo)man-machine systems is at the core of a “co-evolution” (Grunwald, 2002) of human-machine systems. Gamification processes that alter the mode of this very interaction between humans and machines are indicators—on a superstructure level—of how basic relations amongst humans are changing. It seems therefore not sufficient to study the effects of gamification on an object level by investigating images, sound, and the textuality of games, nor does it seem sufficiently encompassing to study playfulness as a subjective property of the player individual. We suggest studying gamification at the point where game and players meet: the interface.

Historically, this approach responds critically to earlier theoretical positions within Game Studies that grasped video games from an object-based viewpoint (the video game image, the video game text, the video game algorithm) (Aarseth, 1997; Bogost, 2006) or from a player-based viewpoint (types of players) (Juul, 2003; Strouhal & Fuchs, 2008; Newman, 2001). We suggest here

that video games can best be understood by an analysis of the interface (Fuchs, Mañas & Russegger, 2011).

One of the questions that arise from such a methodological framing is about which instance in the game–interface–player system owns ludicity. Is it the game where playfulness resides? Is it the interface? Or is ludicity encapsulated within the player’s attitude? The questions posed here are of relevance for the young medium of computer games, they are however related to a discourse that is known as the expressionist–arousalist dispute in musical semantics. The old question of whether the musical piece owns an emotional quality that expresses the composer’s feelings or whether emotions aroused in the listener are owned by him, or herself, has been dealt with by musicologists like Davies (Davies, 1980, 1994) and Kivy (Kivy, 1980, 2002) amongst many others. The problem reappears dressed in new clothes within the medium of videogames. It would be too early for the assumption that we can unfold the discourse by proposing an expressionist or arousalist theory of ludicity. Games inhabit a media-specific context, that is different to the musical context. As a consequence a theory of gamification would have to embrace game-specific foundations to arrive at valid assumptions on what happens with games and what games are about to effect on non-gaming sectors of society.

### GAMIFICATION, LUDIFICATION, UNAWARE GAMING AND LUDIFIZIERUNG

Johann Huizinga’s suggestion that play was an essential—if not a primary condition—for the development of culture, has been stated in prominent form as early as 1938 (Huizinga, 1938), and been rephrased and modified by Caillois (Caillois, 1958), Sutton-Smith (Sutton-Smith, 1997) and others. The notion of a “gamification” or “ludification” of our society became however popular less than a decade ago. The view of games as the lead medium that drives our social development has only emerged recently. Our society is not any longer mainly influenced by the products and decisions Hollywood makes or by the formats and content the television industry imposes upon us, but by innovation and ideology that stems from video and computer games. If one wanted to describe gamification as the penetration of our society with methods, metaphors, values and attributes of games—as I suggest here—then ludification would be the infiltration of society with play-related aspects, i.e. methods, metaphors and attributes of play<sup>1</sup>. What is a ludic method? Let us for example assume that an airline has flights for sale. Let’s furthermore assume that these flights are not sold at a fixed price, but that the airline offers to sell the flights according to a pricing scheme that is regulated on the following basis: the earlier you buy the flight, the cheaper it is. The later you buy the flight the more expensive it gets. If you try to buy your flight too late, i.e. after all the other players in the game have already bought their flights, you cannot buy the flight at all. This is a rule-set that works as the basis for a method to exchange services against money, and it is a rule-set that fulfills all of the criteria for a game<sup>2</sup>(the magic circle included,

1. These preliminary proposals for a definition of gamification and ludification stem from considerations explained in detail in an unpublished hand-out for a lecture on Mediated Reality by the author, University of Potsdam, 2011.

2. A set of rules, a set of players, competition or strife towards a discrete outcome, a starting point and an end of the game.

because the method only works inside the magic circle. You would not be able to buy potatoes on the basis of the airline's ludic setting). That is what I would like to call a *ludic method*. A *ludic metaphor* is a literary figure of speech that is built upon connotations to the semantic field of games and play. If I call a non-mandatory university lecture that students can select at will, a “wildcard” module, I use the notion of the wildcard metaphorically and I create connotations to card games, poker, sports, aso. A game-related constituent, to finish with this, could be a pawn, a token, a dice, or the graphic layout of a board game. A *ludic attribute* would be the property of such a constituent, e.g. colour-code and typeface associated with a roulette table. If a spreadsheet that is used in work-related processes is adopting the attributes of game-related objects, and appropriates—to stick to the example—the look and feel of a roulette table, we might talk about the gamification of a software product. Accordingly we might talk about gamification of cultural processes or social activities. There is a massive amount of activities that are shaped according to gaming cliché or gaming tradition: university ranking tables, employee of the month contests, user-interfaces for company webpages, academic assessment regulations, aso. Jesse Schell goes as far as stating “...every second of your life you're actually playing a game in some way” (Schell, 2010). Even if one does not want to follow him there, it will be possible to detect gamification at many occasions in the sense that Deterding, Khaled, Nacke, and Dixon define it. They talk of gamification as “the use of game design elements in non-game contexts” (Deterding, Khaled, Nacke & Dixon, 2011). This definition is assuming that a design process and an intended transfer of design elements take place when gamification happens. I prefer to speak of the “penetration” of society or the “infiltration” of social sectors, to point out that ludification and gamification happen most often unconsciously and that they spread like wildfire. To paraphrase a statement of William S. Burroughs that he made on the nature of language, one might say that “Gamification is a virus”<sup>3</sup>. Penetration, infiltration and viral behaviour are features that point out that gamification might not always be valued in a positive manner. Ian Bogost became provocative in that regard when he sarcastically stated in a Gamasutra feature: “I had been trying to ignore gamification, hoping it would go away, like an ill-placed pimple or an annoying party guest or a Katy Perry earworm” (Bogost, 2006). Of course Bogost knew that this pimple would not go away.

In the German-speaking academic world the notion of *Ludifizierung* has been used in a way that is not synonymous to ludification. Authors like Böhm place Ludifizierung in close vicinity to pedagogy. Their research is a dialectical investigation into “Pädagogisierung des Spiels” and “Ludifizierung der Pädagogik” (Böhm, 2007, p. 225). In other words, they observe the ludification of pedagogy just as one side of the coin that says on the other side: let us turn play into pedagogically relevant activity (*Serious Games* as it is called now). The reason why German theory is so much concerned with pedagogy when talking about ludification lies in the history of Game Studies there, that is heavily influenced

3. Original quote in Burroughs, W.S. (1962). *The Ticket That Exploded*. Paris, France: Olympia Press.

by German idealism and in particular by Friedrich Schiller's *Letters upon the Aesthetic Education of Man*. In the 15th letter he states: "For, to speak out once for all, man only plays when in the full meaning of the word he is a man, and he is only completely a man when he plays"<sup>4</sup> (Schiller 1795, transl. Harvard Classics, Letter XV p. 9, 1909). For Schiller education was inextricably connected to play.

There is another notion introduced by Markus Montola, Annika Waern and others that holds a close relationship to gamification and stresses the fact that we do not always notice when we are gamified or when the software we use is gamified. This is the notion of *unaware gaming* (Montola & Waern, 2006). The authors suggest that we often play, even if we do not consider it as being involved in a game. This is an interesting counter-strike to the theoretical approach that proposes that gamification is consciously consumed. The concept of unaware gaming leaves it open whether the process of gamification leads towards increased usability and user-friendliness or whether gamification could under certain circumstances be considered as ideology.

#### LUDICITY IS A PROPERTY OF THE GAME

Much of the rhetorics the games industry uses is based on the assumption that there are applications or devices that are playful *per se*. *FarmVille* or other add-ons to facebook and similar social media tell us that the application is fun to play. The smiling faces on the package of a *WiiRemote* controller want to tell us that by using the controller we will encounter a joyful playtime. Playfulness is marketed as a property of the game itself. The reification of playfulness as a property of an object is of course a seductive suggestion. It suggests that everybody can buy pleasant ludic experience by buying the object. But can an object of any kind be playful?

At first glance it seems that objects do not have a potential for playfulness *per se*. A wooden stick can be a toy. A stone can be a toy. A cunningly-designed toy can be a toy—or it can in praxi not be a toy. It depends on whether the object is used playfully or not. It is not a property of a stone or a stick to be a toy, as anything can be played with. It seems to be rather the application context that makes an object a toy in a given situation and at a given moment. Take a handful of LEGO bricks as an example and drop them in a 1970s European child's bedroom. Then take the same bricks and place them in an Egyptian temple in 2000 BC. Finally, try placing the LEGO bricks in front of the curator of a contemporary design museum in central Tokyo. What you will find is that the bricks will be used as a toy in one of the cases and as a sacred object or a piece of design history in the other cases. It seems that playfulness can never be owned by the object alone.

4. In the German original: "Der Mensch spielt nur, wo er in voller Bedeutung des Wortes Mensch ist, und er ist nur da ganz Mensch, wo er spielt".

#### LUDICITY IS OWNED BY THE GAME-DESIGNER AND COMMUNICATED VIA THE GAME

It seems therefore reasonable to locate the ludicity not in the object itself, but in the intention of a designer who expresses his or her ludicity *via* an object, a

piece of software, or a device. This model of understanding how ludicity comes into play is close to the concept of expressionist theory in music, where musicologists like Bouwsma (Bouwsma, 1950) and Meyer (Meyer, 1956, 1973) proposed a transfer mechanism of composers' emotions into musically communicated emotional patterns. Musical expressionist theory was criticized for not taking into account any misinterpretations or deliberate deconstructions of musical meaning and musically mediated emotions by the listener (Fuchs, 2010b). The same criticism would hold true for a ludologist, expressionist approach. Even if the game designer wants to convey joy to the player, the emotion felt could be sadness, frustration or anger instead. It is well known that America's Army did not succeed in delivering the message or the emotional bias intended to be received by all of the players (Wilson, 2008; Huntemann & Payne, 2010). Ludicity might be a designer's state at a certain time in the design process, but who tells us that this will be picked up by the user in the end? If a playful state is felt by the game designer, ludicity might be his, but we can not expect that the game is able to transfer the existential orientation or mental state.

### IT'S THE PLAYER, WHO OWNS LUDICITY

Let us have a second look at the LEGO bricks mentioned above. It looks as if the very same bricks can carry a higher or lower degree of playfulness in different contexts and for different recipients. Therefore, it seems reasonable to locate the ludicity not in the object itself but in a potential user at a given time and space instead. It has been suggested by Salen and Zimmerman (Salen & Zimmermann, 2004), who themselves refer to Bernard Suits (Suits, 1978), that we can assume a *lusory attitude* as the main driver for playfulness *vis-à-vis* a toy or an object of any kind. In musical semantics a related approach is known as *arousalism*. According to that it is the recipient and not the performer or composer that creates and owns affects, emotions, and connotations. In its most radical form arousalists believe that the whole universe of feelings and ideas is constructed in the head of the listener, with no signifying based on the sign-signifier relationships intended by the author. In musical semantics this approach would find it difficult to explain why most of the listeners read similar emotions, and even musicologists that are often called arousalists, prefer to declare themselves as "almost-arousalists" like Jerrold Levinson (Fuchs, 2010b) or "weak arousalists" like Aaron Ridley (Beever, 1998).

In Game Studies, an arousal approach would be equally problematic. What is a toy if objects are assigned ludic potential exclusively by their user? If a toy is an object that can be played with, a stone is also a toy. By taking a user-centred approach in the style of Salen and Zimmerman and extending their notion in the direction of intentionality, one would have to say that an object becomes a toy when users decide to play with it. Does this imply that objects that are not played with cannot be called toys? That would indeed make the LEGO bricks in the design museum non-toys. A consequence of such an approach would be

a split in the world of LEGO bricks, with some of them being toys at a given time and others being non-toys.

We seem to be caught in a dilemma! If we suggest that playfulness is owned by the object, we cannot explain how stones and sticks can sometimes become toys. If we suggest, on the other hand, that playfulness is constituted by the player's attitude, we declare that everything on this planet is a potential toy. There seems to be a way out, however.

### THE INTERFACE IS THE ULTIMATE LUDIC DEVICE

In order to understand the potential of interfaces for any human-machine interaction, it makes sense to look at games as a rich field of interaction set-ups and concepts. We conceive a game as a system of rules, a player, physical or virtual objects to play with, and a regional and historical context to be played in. When we try to find out what's in a game, we might look for meaning on different levels of the game. We could find meaning in the rules and the development of moves within the rule system. We could alternatively search for meaning in the role the player adopts in the game. In particular, the player's position in a socio-historical context could be interpreted as the meaning of the game. However, another approach is to interpret the interface between man and machine, machine and machine, or woman and machine as the crucial element in the production of ludic experience and ludic meaning. We want to call these approaches:

1. ludocentric,
2. role-based,
3. socio-historical, and
4. interface-led (Fuchs, 2010a).

Ludic interfaces lend themselves to shifting focus from rules and roles to processes of the deconstruction of rules, roles and socio-historical settings. For this reason game art often focuses on the interface or on an apparent lack of interactivity within the interface provided. Both approaches, i.e. the deconstruction of interfaces and the destruction of meaningful interface functionality, are artistic strategies to criticize commercial interface design and to suggest provocative alternatives to middle-of-the-road interface standards. Ludic interfaces and zero interfaces contain artistic statements intended to oppose ideological concepts in HCI (human computer interaction) and to set free playfulness in the process of (wo)man-machine communication (Fuchs, 2010a).

It seems that interfaces always have a ludic potential because they are pivotal points between two systems. This seems to be the position where slack, to-and-fro or "Spiel"—as Gadamer calls it (Gadamer, 1977)—can take place. This is especially true with regard to computer-based interfaces. An essential quality of the digital medium is its ludic potential. Not only can it connect anything to anything, if the necessary interface protocol is developed, but it also makes everything that is translated into its language highly malleable. Ludic interfaces

appropriate what today's computer games, artistic experiments, interactive media, media conversion, social networks and modding cultures have at offer. The new and innovative types of interfaces might influence how gender-related, age-related, and ethnically specific play can develop new forms and hopefully emancipate from mainstream commercial gaming.

## CONCLUSION

Our interest in the ownership of ludicity is motivated by the question of how gamification works, and by the related question of what instance in the human-interface-machine system is most vulnerable to infiltration by gamifying processes. Gamification spreads from entertainment to war, from war to work, and from work to the web, and back. The critical investigation of the potential ownership of ludicity by toys and games, or alternatively by the player has demonstrated that the interface in between game and gamer is most likely to be infected by the virus of gamification. It seems that a society is best prepared to be gamified if the lusory attitude of the whole society is on a high level. It is not the playfulness of the individual gamer or of a group of gamers that gets gamification going. By assigning lusory attitude to a social setting or a social group—and not to an individual player—one clearly escapes the dangers that the notion of lusory attitude holds when interpreted on an individual player level (Salen, Zimmermann, 2004). Salen and Zimmerman leave it open where the attitude comes from and hint—without stating it explicitly—that there might be an instinctive drive to play, not unlike Friedrich Schiller's *Spieltrieb*<sup>5</sup> (Schiller, 1795). Schiller's concept of an instinctive drive is not far from Suit's, Salen's and Zimmerman's lusory attitude. Both suffer from the same problem: Where does the drive come from? Societies are historically constituted and therefore do not follow any preprogrammed drive. We will therefore have to find the mechanisms that make certain historical states of society or sociological settings receptive to play and receptive for gamification. A preparedness for connecting any social activity with game-related rules, behaviour and paraphernalia is the breeding ground for gamification on a wide scale.

As a consequence, societies with high lusory attitude will turn anything into games or into toys. This is where it becomes apparent that talking about Gamification is talking about core driving mechanisms of a society or predominant social groupings within. Gamification is a trend of dramatic changes that take effect on technology, work, war, sports, politics aso. Our hypothesis is that interfaces tend to turn into playful objects of their own, to successfully follow the trend of gamification. And in using these ludic interfaces, we increasingly turn work, war, sport and health into gamified processes.

5. Schiller's *Spieltrieb* should not be interpreted in a Freudian way. Schiller uses drive or *Trieb* in the way Leibniz understands it. For Leibniz *Trieb* is a substantial individual force that is in accordance with reason.

## REFERENCES

- Aarseth, E. (1997). *Cybertext: Perspectives on Ergodic Literature*. Baltimore, MA: Johns Hopkins University Press.
- Beever, A. (1998). The Arousal Theory again?. *British Journal of Aesthetics*, 38(1), 82–90.
- Bogost, I. (2006). *Unit Operations. An Approach to Videogame Criticism*. Cambridge, MA: MIT Press.
- Bogost, I. (2011, May 3). *Persuasive Games: Exploitationware*. Retrieved from: [http://www.gamasutra.com/view/feature/6366/persuasive\\_games\\_exploitationware.php](http://www.gamasutra.com/view/feature/6366/persuasive_games_exploitationware.php)
- Bouwisma, O. K. (1950). The Expression Theory of Art. In M. Black (Ed.), *Philosophical Analysis* (pp. 71–96). Eaglewood Cliffs, NJ: Prentice-Hall.
- Böhm, W. & Lischewski, A. (1997). *Entwürfe zu einer Pädagogik der Person. Gesammelte Aufsätze*. Bad Heilbrunn, Germany: Edition Klinkhardt.
- Davies, S. (1980). The Expression of Emotion in Music. *Mind*, 89(353), 67–86.
- Davies, S. (1994). *Musical Meaning and Expression*. Ithaca, NY: Cornell University Press.
- Deterding, S., Khaled, R., Nacke, L.E., & Dixon, D. (2011). Gamification: Toward a Definition. *CHI 2011 Gamification Workshop Proceedings*. Retrieved from <http://gamification-research.org/wp-content/uploads/2011/04/02-Deterding-Khaled-Nacke-Dixon.pdf>
- Fuchs, M. & Strouhal, E. (2008). *Games. Kunst und Politik der Spiele*. Wien, Austria: Sonderzahl Verlag.
- Fuchs, M. (2009). Ilonpilaajia ja pelihaita – Spoilsports and Cardsharps. *Proceedings of the Playfulness Conference*.
- Fuchs, M. (2010a). Ludic Interfaces. In R. Catlow, M. Garrett & C. Morgana (Eds.), *Artists Re:thinking Games*. Liverpool, UK: FACT.
- Fuchs, M. (2010b). *Sinn und Sound*. Berlin, Germany: Wissenschaftlicher Verlag.
- Fuchs, M., Mañas, M. & Russegger, G. (2011). Ludic Interfaces. *Proceedings of the Conference Videogames Cultures*.
- Grunwald, A. (2002). *Technikfolgenabschaetzung*. Berlin, Germany: Edition Sigma.
- Gadamer, H. G. (1977). *Zur Aktualität des Schönen*. Stuttgart, Germany: Reclam.
- Huizinga, J. (1955). *Homo ludens. A study of the play element in culture*. Boston, MA: Beacon Press (Original work published 1938).
- Huntemann, N. B. & Payne, M. T. (Eds.). (2010). *Joystick Soldiers: The Politics of Play in Military Video Games*. New York, NY: Routledge.
- Ionifides, C. (2011). *Gamification: The Application of Game Design in Everyday Life* (Doctoral thesis, IT University, Copenhagen, Denmark). Retrieved from [http://itu.dk/people/chio/Thesis/Thesis/Latest\\_rev/Gamification-TheApplicationofGameDesignofEverydayLife.pdf](http://itu.dk/people/chio/Thesis/Thesis/Latest_rev/Gamification-TheApplicationofGameDesignofEverydayLife.pdf)
- Kivy, P. (1980). *The Corded Shell*. Princeton University Press.
- Kivy, P. (2002). *Introduction to a Philosophy of Music*. Oxford, UK: Clarendon Press.
- Meyer, L. (1956). *Emotion and Meaning in Music*. The University of Chicago Press.
- Meyer, L. (1973). *Explaining Music*. The University of Chicago Press.
- Montola, M. & Waern, A. (2006). Ethical and Practical Look at Unaware Game Participation. In M. Santorineos & N. Dimitriadi (Eds.), *Gaming realities. A challenge for digital culture* (pp. 185–193). Athens, Greece: Fournos.
- Newman, J. (2001). *Reconfiguring the Videogame Player*. Paper presented at the Games Cultures Conference, Bristol, UK.
- Raessens, J. (2006). Playful Identities, or the Ludification of Culture. *Games and Culture*, 1(1), 52–57.
- Salen, K. & Zimmerman, E. (2004). *Rules of Play. Game Design Fundamentals*. Cambridge, MA: MIT Press.
- Schell, J. (2010, July). *Visions of the Gamepocalypse* (Lecture at Novellus Theater in San Francisco, CA). Retrieved from <http://longnow.org/seminars/02010/jul/27/visions-gamepocalypse/>
- Schiller, F. (1909–1914). Letters upon the Aesthetic Education of Man. In C. W. Eliot (Ed.), *The Harvard Classics: Literary and Philosophical Essays: French, German and Italian*. New York, NY: P.F. Collier & Son (Original work published 1795).
- Strouhal, E. & Fuchs, M. (2008). *Games. Kunst und Politik der Spiele, Wien, Austria: Sonderzahl Verlag*.
- Suits, B. (1978). *The Grasshopper*. University of Toronto Press.
- Wilson, L. (2008). Serious Play: Counter-actions and Interventional Dissent in the Game Space. *Proceedings of the 14th International Symposium on Electronic Art ISEA2008*.