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Gamification as Simulatization of the Real
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[**Auhor's note**: *This is an only slightly revised version of my original manuscript. It's not intended as a full paper, but as a workshop-contribution to start a discussion. If you want to use its content, please contact me:* niklas.schrape@inkubator.leuphana.de]

Introduction
In this talk, I would like to propose a simple argument: *If the concept of gamification describes how certain spheres and contexts of social reality become gamified – that is to say, they become game-like – and if we understand games in accordance with Bogost (2006 & 2007) and Frasca (2001) as simulations, then it follows that these spheres and contexts of social reality become simulation-like. In short: Gamification is the simulatization of social reality.*

　　This claim might seem quite tautological and unclear at the same time. Moreover, its consequences are not evident. To some degree, this might be, because my line of thought is still work in progress. More importantly, however, the concept of gamification as well as the one of simulation is yet too undefined. In a first step, I will therefore try to narrow them down.

Modes of Gamification

What is Gamification? There exist several definitions, but in its broadest sense scholars like Deterding et al. (2011), Fuchs (2013) and Escribano (2012) agree: Gamification describes the permeation of non-game contexts with game elements. But this claim can be interpreted in various ways. There exist at least three very different understandings of the term:

1. *Gamification as cultural trend*. It describes how society is becoming game-like. To some degree this mode corresponds with Escribano's (2012) notion of "natural gamification".

2. *Gamification techniques as method to stimulate playful behaviour*. This understanding focuses on the motivation of unregulated play – "paidia" in the sense of Roger Caillois (1961). It corresponds with the notion of playification that is also sometimes used in the discourse.
3. *Gamification techniques as strategic method of control*: This usage describes how specific game-elements are put to use for strategic purposes in order to motivate and regulate intended social behaviour according to a designed rule-set – e.g. in marketing. This mode corresponds with Escribano's (2012) notion of "forced gamification", and the understanding of the term by the likes of Zicherman.

In this talk, I focus on the third notion. It's the dominant usage in marketing discourse. To quote the whitepaper "Gamification 101" by the company Bunchball:

> "At its root, gamification applies the mechanics of gaming to non- game activities to change people's behavior." (Bunchball 2010, 2)

What is fascinating about gamification, from this perspective, is that its methods do not aim to change the way in which people think, but how they behave. The importance of this fact can't be overstated: Most advertisements aim to change my thoughts, my beliefs and my feelings about a certain product – in short its image in my head. My behaviour (e.g. to buy regularly) comes second (even if there exist advertising techniques, which stem from behaviourism). In most cases, behaviour is a derivate – so to speak – from an attitude towards a product. Gamification processes promise to offer a more direct way to the behaviour of the consumer. Here's how Bunchball's whitepaper describes the benefits of miles-and-more programs of airlines, which it depicts as early form of gamification:

> "And they'll (the passengers) go out of their way to stick with the vendor where they have the most points and status — even when disappointed with the actual service." (Bunchball 2010, 3)

So, brand-loyalty doesn't seem to be a consequence of a company's image anymore. From this point of view, gamification processes are strategic instruments to manipulate the behaviour of people towards products while circumventing their attitudes towards them. But what does this have to do with simulations? Again, it might help, to discuss the term.

Defining the Simulation

In "Unit Opperations", Bogost gives a very specific definition of "simulation":

> "A simulation is a representation of a source system via a less complex system that informs the user's understanding of the source system in a subjective way." (Bogost 2006: 98)

This is not a bad definition, but still a bit muddled, so let's take it apart: It's easy to see that a simulation is a system. But it's not any kind of system. It's a cybernetic one, constructed in accordance to the conditions of the digital computer. The most important consequence: all relations between the system's parts have to be quantified in order to be potential objects of calculation.

It's also obvious that a simulation is a representation, as it needs to simulate something. Otherwise it wouldn't be a simulation. But a simulation is not a direct representation; its representational quality must be established first. As Eric Winsberg (2010) points out, such an "external validation" depends on very specific background knowledge – about the processes and the reliability of computational simulations and formal modelling of natural and social contexts.

One example: An agent-based simulation of a buying behaviour (with the purpose to predict the consequences of - let's say - a product launch) would consist of defined agents, representing potential consumers, with certain parametric states, representing income, needs and attitudes like e.g. brand-loyalty, as well as quantified relations to objects, representing goods.

Such a simulation would depend on the believe that it is (1st) adequate at all to model psychological states through numeric values, and (2nd) that the chaotic complexity of buying behaviour can be isolated from its social embededness and modelled as a closed system. The important question now is how a complex psychological attitude like brand-loyalty can be isolated, formally modelled and put into discrete numerical values, calculable by a computer.

The fascinating thing about such an attitude is that it doesn't fit into the idea of the purely rational *homo economicus* that still is the preferred psychological model of a consumer in economic theory (even if it is quite contested now within the field). According to this model, consumers make decisions after rational trade-offs: they compare values and prices – things that can be measured and processed by a computer. But unlike prices, a factor like brand-loyalty is complex and vague – it can't be measured and formally defined so easily. It is, to some degree, an irrational psychological state – and therefore quit unfit for computational modelling. Nevertheless, economists try to account for such factors. They define indicators, make polls, do statistics, and at least try to represent them through numerical parameters. But, if they are honest to themselves, they know that these are quite desperate measures.

The point is that in the numerical and formal models used in computer simulations, real complexities are reconstructed according to the logics of the computer. And quite often, there's not a good match between the operations, the computer can perform, and the social phenomenon that is being modelled – the simulation is inadequate to the chaos of real life.

Formal Models in Gamification Processes

At this point now, Gamification comes into play. It is no wonder that Zicherman & Cunningham (2011) talk much about the effects of Gamification on "status" and "brand-loyalty". They define loyalty like this:

> "What we will look at is a form of loyalty that gets users to make incremental choices in your favor when all things are mostly equal." (Zicherman & Cunningham 2011, XVIII)

For Zicherman & Cunningham, loyalty seems to be just another factor in a trade-off. It is a variable that predicts consumer behaviour. For them, game mechanics like scores, leaderboards and badges are tools to foster the experience of status and thereby loyalty to a certain brand.

But the effect of such mechanisms can also be understood in the opposite way: not to motivate loyalty to a brand, but to change the very concept of it – in accordance to what a computer can process. In real life, neither status nor loyalty can be put into numbers and publicly compared. But thanks to gamification, that's possible now – and this is very clear to Zicherman & Cunningham, as this quote attests:

> „In the old days (pre-2008) if a person preferred Cuisinart over KitchenAid, for example, how was that bias expressed? How did she get her friends to understand this loyalty choice? First, her friends needed to be standing in the kitchen near the product itself. Then, a conversation would have to introduce the subject. This process was called word of mouth marketing. (...) Loyalty is no longer private. It is no longer a matter of standing in a kitchen next to your favorite mixer. It is public, and millions are viewing it." (Zicherman & Cunningham 2011, 9)

But this is only possible because complex concepts like status and loyalty are reconceptualised as discrete, numerical values that can be calculated. As the whitepaper by Bunchball makes clear: "At its core, gamification is all about statistics." (Bunchball 2010, 4)

The Feedback Loop

To summarize: *In Gamification complex psychological states are being remodeled as discrete numerical values – and thus made computable*. This is actually quite an extreme act: Again, think about loyalty. It's a pre-conscious state. That is to say, if you reflect hard on your emotions and thinking, you probably could understand and describe why you are loyal to someone. The point is: it is something that manifests in your head.

Now, you could assume that in order to motivate loyalty in someone's head, you have to change the way he or she thinks and feels. This would be the traditional way of advertising. But with gamification you just do it the opposite way: You construct game mechanics that stimulate a behaviour that is somewhat *similar* to the one, loyalty would inspire. And then you *brand* it as loyalty. Let's call it *loyalty 2.0*. The great thing about

loyalty 2.0 is that it can be perfectly measured and thus be computed. You can feed this data directly into your business simulations – and predict the outcome of your next business decision.

[**Author's note**: *Interestingly, Rajat Paharia, one of the founders of Bunchball, published a book, shortly after the Workshop, named "Loyalty 3.0. How to Revolutionize Customer and Employee Engagement with Big Data and Gamification", where he describes a hierarcky between different kinds of loyalty. In his terminology, miles-and-more programs would foster a loyalty 1.0 and more complex gamification systems a more engaging loyalty 3.0. As this wasn't known to me at the time of the workshop, I decided to keep my original terminology in the manuscript, and also in order to highlight the difference between a gamified and a non-gamified concept of loyalty.]*

Now, there are two ways to look upon this: One could say that loyalty 2.0 isn't real, that it's just a metaphor. If you collect points in some miles-and-more program – do you really feel loyal to this airline? Or do you understand this usage of the word in a playful, metaphorical way – as a "doing as if"? One could speak about *gamification metaphors* in quite a similar way as about interface metaphors: A well-known concept – like loyalty – is fused with an abstract mechanism – in this case the miles-and-more program.

There is, however, a fundamental difference between a *gamification metaphor* and an interface metaphor: The *gamification metaphor* directly feeds back into reality. It motivates behaviour outside of the interactions with the computer. And isn't it plausible to think that the way we talk about this behaviour influences the way we think about it?

If this is true, than the permeation of society with a loyalty 2.0 concept changes the concept of loyalty 1.0. There's a feedback loop: loyalty 2.0 is modelled to be similar to loyalty 1.0, but it's just a simulation. And then our experiences with this simulation, this gamified loyalty 2.0, feeds back into our understanding of "normal" loyalty. Could this be?

Now, think about Ryan Bingham, the character George Clooney plays in Jason Reitman's film "Up in the Air" (2009). He's a frequent flyer and a participant in the miles-and-more program of his favourite airline. He dearly loves his gold status and feels a deep sense of loyalty towards the airline, and also to the hotel chain, which participates in the program. He feels rewarded for his loyalty and draws his self-esteem from this recognition. His one life-goal is to gather more than 10 Million miles as one of just seven persons in the world. In fact, his sense of identity stems to a certain degree from his understanding as being loyal. Ryan Bingham believes in loyalty 2.0. For him, it's real.

Ryan Binghams concept of loyalty is a product of the gamified marketing programs of airlines and hotel chains. For him, loyalty can be measured in points. It can be calculated, and fed into computational models. For Ryan Bingham, loyalty became not only gamified, it became simulationized – reconceptualised and rebranded in accordance to the needs of formal modelling and the digital computer. This is what I mean with my claim: Gamification is the simulatization of social reality.

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