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EUDAIMONIC DESIGN, OR: SIX INVITATIONS TO RETHINK GAMIFICATION

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1   INTRODUCTION

In his seminal book *Flow: The Psychology of Optimal Experience*, Mihaly Csikszentmihalyi writes: "Mowing the lawn or waiting in a dentist's office can become enjoyable provided one restructures the activity by providing goals, rules, and the other elements of enjoyment" found in games (1990, 51). This idea – that game design holds valuable principles for making even the most mundane activity more engaging – has a long history in human-computer interaction, design, and education, regularly re-emerging under names like funology, ludic design, serious games, game-based learning, or playful inter-action (Deterding forthcoming a). Its most recent iteration has come to be known as "gamification": using game design elements in non-game contexts (Deterding et al. 2011).

The title of this volume invites us to rethink gamification, and this is indeed a timely demand. A mere four years ago, in 2010, the main challenge was to *think* gamification, to talk and think and act it into being as a *thing* to begin with. There was no shared *gestalt* yet, no established set of experien-tial and discursive reference points what we talk about when we talk about

gamification – not even agreement whether to use that very word (Deterding forthcoming a).

Things have changed. Today, the main challenge has become to work against the grain of existing preconceptions of gamification (be they apocalyptic or utopian), established by evangelists, critics, industry practices, and mass media reporting. Many have rightfully questioned whether gamification is anything more than a marketing ruse to sell the next digital snake oil (Juul 2011). The current field is certainly littered with shallow interpretations and implementations – essentially incentive and customer loyalty programs repackaged with a superficial "gamy" veneer as software services that disregard decades of research on the limited effectiveness and manifold unintended consequences of such systems. In addition, these forms dominate

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the collective imagination: If one were to elicit the prevalent framing of gamification in industry, design, academia, or mass media today, it would presumably be something like "driving any desired activity by tracking it and adding a feedback layer of points, badges, leaderboards, and incentives ontop" – the blueprint established in 2009 by the social, mobile, local application Foursquare (Deterding forthcoming b).

And that is worrisome. For one, this prevalent conception of gamification doesn't even begin to engage with the psychology and sociology of game enjoyment, let alone realise the promise of translating its insights into other fields (Deterding forthcoming b). Instead, current gamification evangelists have turned away many with troublesome ethics and a disregard for the complexities of design and motivation. And as their overwrought promises will inevitably fail to realise, they risk leaving scorched earth behind.

However, cases like the Quest to Learn schools demonstrate that the very notion and promise of gamification far surpasses the confines of its currently dominant form, and that this promise can be realised (Salen et al. 2011). Thus, the main task of rethinking gamification today is to rescue it from the gamifiers: to provide a positive vision of gamification that addresses the valid criticism it has received, and realises the actual promise of learning from game design as a holistic, systemic practice. Or put differently: to try and establish an alternative, more promising framing of gamification before discourses and institutions have fully solidified.

To this end, this article presents six critiques of the currently dominant rendition of gamification, and six invitations to rethink it. The empirical basis for this critique I draw from previous analyses of gamification rhetoric (Deterding forthcoming a) and gamification design literature (Deterding forthcoming b). I suggest expanding the remit of gamification (1) from the structuring of objects to the framing of contexts, and (2) from game design elements to motivational affordances. In its current form, gamification presents an additive, atomistic and deterministic conception of experience design. Truly learning from game design, I suggest, means to adopt a (3) relational account of experience, and (4) an emergent-systemic method of experience design. When it comes to the ethics and aspirations of gamification, I invite designers to move (5) from avoiding harm and coercion to facilitating the good life, and (6) from the instrumental perfection of existing orders to their critical transformation. A rethought, positive vision of gamification, then, is that of a critical, transformative, socio-technical systems design practice for motivational affordances in the service of human flourishing – in a word, eudaimonic design.

2. FROM OBJECTS TO CONTEXTS: RETHINKING THE SCOPE OF GAMIFICATION

What is the first thing that comes to your mind when you hear the word "video game"? Likely, it will be a box, some square screen, some interface tied to a piece of hardware running a piece of software. That is, you are thinking of a game as a designed object. There is nothing to say against that: It is a lasting achievement of game studies to have demonstrated in detail how the design of games makes and breaks their experience and potential effects – and we are still far from understanding these matters fully.

Still I would argue that this box is what currently most limits our thinking about games and gamified systems, because it disregards what happens outside of it: the specific ways and contexts in which people come to interact with games. Simply put, it ignores that people are usually *playing* them. For although games are certainly designed to be played with, there is no necessary connection between the two. We can do very many things with games – we can build, test, debug, review, analyse and play them, and we can work in them, as gold farming demonstrates. Likewise, there are many things we

can play with – our hands, sticks and stones, passing cars on a long highway drive, games, even work assignments.

Is this a trivial point? Well, a growing number of games scholars urge us to extend our attention "from content to context" (Squire 2006), towards the broader "ecology of games" (Salen 2008), to the many ways games are being played, and to the way both, games and playing, interact to create the unique affordances of fun, motivation, learning that we are hoping to make use of (Taylor 2009; Hung 2011; Sicart 2011). When it comes to gamification, there are at least three crucial ways in which the context mediates the effects of any gamified system: autonomy, situational norms, and embarrassment.

2.1 "The Electronic Whip": Autonomy

In a recent news story in the LA Times, journalist Steve Lopez (2011) has chronicled the use of gamification by Disney: In the basement floors of the Disneyland hotels, large flat screens showed leaderboards pitching the working speeds of the laundry workers against each other. However, instead of the device spurring fun competition – as standard gamification logic would suggest – workers reported that they felt pressured and controlled by this "electronic whip" of their management.

This little story points to a crucial feature of gameplay often overlooked in gamification: As scholars from Johan Huizinga (1955 / 1938) onwards have stressed, playing games is a voluntary activity. And the voluntariness of gameplay is mainly constituted by its social context: to what extent others coerce an individual to do something, and to what extent the individual, in light of such actions of others, comes to define said activity as autonomous, self-determined or not.

Growing empirical evidence suggests that situational autonomy support indeed poses an issue for serious games and gamification: Forced serious game play is less enjoyable and effective (Heeter et al. 2011). When workers do not consent to games at their workplace, their use decreases positive affect and performance (Mollick and Rothbard 2013). Having to play games as part of one's profession is generally described as less enjoyable and less engaging by practitioners, and comes with more frequent unpleasant experiences of being controlled (Deterding 2013).

Why is that? A rich literature in psychology has demonstrated that autonomy – the sense of acting with volition, willingness, and in congruence

with one's own goals, needs, values, and identity – is a basic psychological need and core part of intrinsic motivation: What makes activities feel enjoyable or worth pursuing for their own sake is that they satisfy basic psychological needs like autonomy, relatedness, or competence (Deci and Ryan 2012). Conversely, research indicates that a person's sense of autonomy can be thwarted by attaching material rewards or punishments to an activity – or even just verbal admonitions that evoke internalised controlling voices of guilt, shame, or social pressure. If a child is already intrinsically motivated to read, for instance, paying or reprimanding it to read may paradoxically reduce its overall motivation: It adds some extrinsic motivation (a monetary incentive and guilt), but reduces some pre-existing intrinsic one by the same token (Deci, Koestner and Ryan 1999).

Importantly, the controlling, autonomy-thwarting quality of environmental events – their "functional significance" – results from an active interpretation. Take a supervisor's feedback on worker performance: How that feedback impacts motivation depends on whether the worker understands it as informational ("the supervisor is helping me see how I can improve"), which supports an experience of competence and relatedness, or as controlling ("the supervisor tells me what I ought to do"), which thwarts autonomy (Ryan and Deci 2002).

We typically think that games are so enjoyable that people play them voluntarily. But to a certain extent, the causal arrow points in the opposite direction: Because gameplay is a voluntary activity – something we can choose to do and cease doing – it satisfies our need for autonomy, and that satisfaction we experience as "enjoyment". Several studies have found evidence that playing video games is motivating because (among other things) it delivers strong experiences of autonomy: In games, we can choose who to be, what goals to pursue, and how to pursue them (Przybylski, Rigby and Ryan 2010). Even more fundamentally, playing a game is an autonomous act in itself: Playing games – especially single-player games – is an activity we typically feel we do following our own interest, where we decide what to play, when, how, and how long, with no social or material pressures or consequences affixed (Deterding 2013).

In sum, if gamified systems are deployed for activities happening within mandatory and consequential contexts (such as work or formalised education), they run the risk of being perceived as "electronic whips"

that effectively reduce rather than enhance motivation, enjoyment, and performance.

2.2 Gamespersonship and Gaming the System: Situational Norms

Every society has social norms and conventions how to understand what is happening within different types of social situations, and how to behave "appropriately" in them. Sociologist Erving Goffman (1986) has called these clusters of understandings, norms, and practices around types of situations "frames". In the "doctor's visit" frame, for instance, it is considered appropriate when a patient gets undressed in front of a doctor and understood to be "for medical purposes": whereas the same person getting undressed in front of the same doctor in a public bus would appear absurd and inappropriate.

The same holds for the "playing games" frame (Deterding 2013), which among other things is characterised by a "bracketed morality" (Shields and Bredemeier 1995). In competitive sports and playing games, we are allowed and in fact expected to act as strategic actors single-mindedly focused on maximising our individual payoff – winning. To not overtly care about and try to win characterises the half-hearted spoilsport. The cold-blooded bluffing, double-talking, and out-manoeuvring that is positively valued as "good gamespersonship" in Poker (first half of 19th century) or Diplomacy (1959) would earn us the label "Machiavelli" or "psychopath" if enacted in everyday conversation with friends and colleagues. However, even in playing games, there is a limit: The allowed and valued egocentrism is "bracketed" in a larger care for fair play and the enjoyment of others. If a game player focuses too myopically on winning and their own enjoyment, ignoring her impact on the enjoyment of others, she becomes a "munchkin" (Gribble 1994). This larger bracket of fair play and collective enjoyment is enforced not so much by the rules of the game as by the constant monitoring, enactment, and sanctioning of the "play community" (DeKoven 2013).

Which brings us to the frequently raised gamification issue of "gaming the system" (Werbach and Hunter 2012): Devise a game system of rules and goals, the standard version goes, and some of your users will find a way to exploit any rule loophole and min-max their way through. But following the notion of frames, this is not so much a moral failing of individual users as a systemic issue endemic to the very process of adding rules and goals:

By specifying goals and rules and explicit, quantitative forms of feedback, a gamified system creates social signals that the thus-gamified activity is to be taken as a "gaming" situation, where myopic min-maxing is allowed and expected. Without a play community enacting bracketing values of harmony and fair play, game-like systems on their own exert a strong pull towards strategic action that ignores any "negative externalities" not explicitly internalised in or outlawed by the rule system. And since – following Wittgenstein – no rule can ever fully specify how to be enacted (Stueber 2005), relying on more rules to prevent gaming the system instead of the lived values of the enacting community is a losing proposition: It merely generates more opportunities for gaming (Deterding 2012b).

The opposite is likewise possible: Information systems research has demonstrated the lasting impact of "technological frames" – that is, prevailing organisational understandings, practices, and norms – on the adoption and usage of new technologies (Orlikowski and Gash 1994). Often enough, if these technical frames are not changed, they just absorb new technologies into "business as usual": new, different ways of doing things offered by the technology are never realised. The entailed manifest risk for gamification is that it becomes absorbed by companies as yet another customer loyalty or employee incentive programme, with slightly different language and visuals – rather than an actual transformation of business practices.

2.3   Acting Out of Bounds: Embarrassment

For Goffman and many after him, the central mechanism by which situational norms and conventions are reproduced is embarrassment: Early in our socialisation, we learn from parents and peers how to behave properly in all kinds of situations, and are scolded by them if we misbehave. Over time, this instils an internalised view of others in us: Acting in any situation, we think about how others would think about us if they saw us – if they would approve or disapprove. Pride, in this logic, is the emotional experience of imagined approval of others, and shame of imagined disapproval. Socialised adults observe and regulate themselves in order to act situationally appropriate and avoid feelings of shame or embarrassment (Scheff 2003).

The ramifications for serious games and gamification are obvious: Both by definition take games and game design into "serious", non-gaming contexts, expecting people do playfully and / or gamefully engage with them.

However, if the situational norms of those non-gaming contexts – work, formalised education, politics, public spaces, etc. – do not entail "playing" as appropriate, engaging in play ought to be shunned because it would induce embarrassment. And indeed there is evidence for this. Installing a simple exergame that motivates users to do pull-ups in a public tram, Toprak and colleagues (2013) found that people would not use the game because people found it embarrassing to play-exercise in a public tram.

2.4 Gamification as Socio-Technical Systems Design

Autonomy (and its subjective construal), situational and technical frames (and the communities enacting them), embarrassment: all these point to the importance of the contextual framing of a gamified system. Maybe more importantly, all can be intentionally designed for: Supervisors can do much to create an autonomy-supporting atmosphere even around mandatory work activities (Reeve 2006). Community building and change management acknowledge and entail the change of lived values, practices, narratives, frames, and mental models (Todnem By 2005). And every clown, comedian, or workshop facilitator worth her salt knows how to establish a trusting atmosphere where play is perceived as welcomed and non-embarrassing.

All of these practices operate outside the box of current gamification, which is narrowly understood as the design of (software) systems and interfaces. Thus, rethinking the remit of gamification entails expanding it from the mere re-structuring of activity through (largely software-based) rule systems towards re-framing activity as a specific type of situation (playing games) entailing specific norms, conventions, and understandings, using social signals and actors modelling, enacting, and sanctioning this framing. A good practical example can be seen in the playful performative interventions by former mayor of Bogota, Antanas Mockus, aimed at rebuilding the Bogota's civic culture, by the time of his taking office a city with one of the highest rates of violence and traffic fatalities.

One such intervention involved mimes controlling traffic, helping pedestrians across streets, and mocking misbehaving, aggressive drivers. Instead of harsher rules and fines, the mimes signalled vulnerability and appealed to the drivers' self-esteem as good citizens. They reframed traffic as a realm of civic-mindedness – more than halving the number of traffic fatalities as a result (Singhal and Greiner 2008). Understood as such – a

unified whole of restructuration and reframing – gamification is a holistic socio-technical systems design practice (Withworth and Ahmad 2013), one that understands humans interacting with technology as assemblages, activity systems, or ecologies of heterogeneous and intertwined actors.

3 FROM USING GAME DESIGN ELEMENTS TO MOTIVATIONAL DESIGN: RETHINKING THE GOAL OF GAMIFICATION

Current conceptions of gamification are not only problematic in the object of design they make out, but also in their design goal. They typically frame gamification as the application of elements, patterns, or "mechanics" of game design to motivate desired end-user behaviours (Deterding forthcoming b).

3.1 Experiences Not Elements

The first issue with this framing is conceptual. As many authors have pointed out, it is impossible to clearly identify and distinguish "game design elements" from other design elements, or to identify a gamified system by their presence: Many design patterns commonly sold as part of gamification platforms – such as notification streams – are not game design patterns to begin with (Björk and Holopainen 2005), but rather originate from social software (Crumlish and Malone 2009). Conversely, game designers frequently criticise that core game design concerns and patterns such as interestingly hard challenges and meaningful choices are not even part of standard gamification practice (Robertson 2010, Deterding forthcoming b). Furthermore, it is problematic to make sense of "patterns of source domain X in target domain Y" in general, because patterns and pattern languages are domain-bound and system-bound. It is always a kind of analogy, like speaking of the "anatomy" of a house with a "brain", "lungs", "arteries", and so on. There can be direct morphological or functional symmetries between houses and bodies, and it is sometimes helpful to tease those out to help understanding or provide inspiration. But even if you would build, say, a ventilation system in the direct, immediate image of a human lung, you would not call this the "anatomy design element" of the house. You would call it ventilation, and it would serve a ventilation function. In the same way, it is just nonsensical to speak of the game design pattern "deadly traps" (Björk and Holopainen 2005, 74–75) instantiating the function of "damage" in the context of a mobile e-commerce app.

Finally, many design patterns core to games and gamification have iso-morphic counterparts in other social domains that existed long before the rise of gamification: Goal-setting and quantitative feedback are pervasive in business and education, for instance. Yet isomorphisms across domains do not influences make. Else, we would have to relabel grading systems at schools or targets and key performance indicators in organisations "gam-ification". In fact, much popular gamification writing engages in this sort of facile retro-fitting, describing existing popular application and services (such as LinkedIn, Quora, or OkCupid) as gamification, with no solid ev-idence whether (a) the "identified" design elements actually produce the proclaimed engagement effects through the proclaimed causal routes, nor whether (b) the designers at the point of design were actually and intention-ally taking inspiration from games.

In response to these issues, several scholars have suggested delineating gamification (or gameful design) via the design goal of affording gameful experiences – that is, experiences characteristic for gameplay – rather than through an ill-defined bundle of design patterns (Deterding et al. 2011; Huotari and Hamari 2012; Werbach forthcoming). Yet whereas this does present a conceptual advancement, it remains unsatisfying in its narrow, tactical focus.

3.2   Gameful and Playful Experiences

In his book *Man, Play, and Games*, philosopher Roger Caillois (2001 / 1958) distinguished between two poles of play: *paidia* and *ludus*. Paidia captures the free-form, exploratory, autotelic recombination of behaviors, actions, and meanings prototypically found in children's pretend play, whereas ludus denotes the rule-bound, goal-directed overcoming of challenges. Gamifica-tion in its current form has focused squarely on the ludic: it almost invariably constitutes an addition of structure, of goals and rules to a given activity in order to afford gameful experiences of challenge and competition (Deterding forthcoming b). This focus is apt when competence or recognition are the main targeted motivations, and when the main design problem is that the given activity is poorly structured to afford these motivating experiences – that is, when it lacks clear goals, clear and immediate feedback, a good scaf-folding of challenge, etc. Yet this focus also misses out on the paidic pole of playful experiences, which has been the focus of a significant body of work

in human-computer interaction (see ibid. for a review). Such playful experiences are of utmost relevance when one wishes to tap into motivations like curiosity, or design for exploration, transgression, creativity, or innovation (Bateson and Martin 2013). Conceptually, framing gamification as design supporting gameful experiences may be sound, but practically, it is hard to justify why one would leave such a vast field of learnings and insights from game design untapped. This is why colleagues and I early on spoke of game-ful *and* playful design (Deterding et al. 2011).

3.3   Motivational Experiences

Now following the majority of gamification design literature, gamification practitioners are not interested in creating gameful or playful experiences per se, but in motivating end user behaviours (Deterding forthcoming b). Thus, gameful and playful design describes a subset of *motivational design* (Zhang 2008), which in turn can be understood as a subset of *persuasive design* – for motivation is typically yet another proximate means towards the ultimate goal of some targeted change of behaviour in some targeted audience (Deterding 2012a). However, gameful and playful experiences are only a small subset of desired, enjoyable, motivating experiences (Desmet 2012, Hassenzahl, Diefenbach and Göritz 2010). Many more things (de)motivate human action (Reeve 2009), and many more factors affect human behaviour than motivation (Michie, van Stralen and West 2011).

Thus, relevant as creating playful and gameful experiences is to toy and game designers, and inspiring as it may be for motivational design, even gameful and playful design ultimately remain *tactics*. There is no principled reason – no persistent design problem – for "gamifying" things. The persistent, principled design challenge gamification addresses is motivating users. By the same token, graphic designers can learn a lot from architecture when it comes to spatial drawing or negative and positive space for example. But nobody would expect there to exist an "architecturalisation expert", because "taking design tactics from architecture" or "architecturalising graphics" is no ultimate design goal for graphic design: "communicating and idea" is. This is why gamification in its current form – defined via game design elements or gameful experiences – is destined to be a temporary *gestalt*, whereas motivational design (and / or persuasive design) have the potential to stay: For only the latter articulate a lasting, well-defined, domain-spanning strategic

goal. And just as importantly, if motivating user behaviour is one's goal, it is practically nonsensical to limit the space of possible tactics and solutions to gameful (or playful) experiences. If a designer discovers that fears about the security of an online banking service is the main issue keeping people from signing up – and the most cost-benefit efficient way to fix this is adding trust indicators to the interface –, it would simply be poor design to instead make the experience of the service more gameful or playful. Approaching every motivational design challenge with gamification is a solution in search of a problem: fine for marketers selling said solution, but poor practice for any designer trying to find the best solution to her design problem.

4   FROM STIMULUS-EFFECT DETERMINISM TO AFFORDANCES: RETHINKING "GAMEFUL EXPERIENCES"

Speaking of experiences and design, the existing gamification design literature showcases an additive-deterministic notion of experience design reminiscent of the first generation of serious games. These "edutainment" games were predominantly grounded in behaviourist theories, assuming that instrumental activities like learning or work entail certain inherently unpleasant and games certain inherently enjoyable elements (Egenfeldt-Nielsen 2007). By analogy, sugar has inherent chemical features that, when imbibed by a living being with the respective dispositions (taste receptors, etc.), will infallibly result in the experience of sweetness. The resulting design paradigm has been called "chocolate-covered broccoli" (Bruckman 1999): A presumed-inherently unenjoyable activity (learning) is made appealing by adding presumed-inherently enjoyable gameplay. This is precisely the model of current gamification: It assumes that game design can be broken down into isolatable atomic units ("elements", "patterns", "mechanics"), whose addition reliably produces one and only one motivational effect across users.

However, based on years of research and failing applications, game-based learning has largely abandoned the additive-deterministic paradigm. Instead, the current third generation of serious games subscribes to emergent theories of game enjoyment (Egenfeldt-Nielsen 2007, Squire 2006). By analogy, whether a piece of pastry tastes good or not does not depend on its sugar content, but on the specific mixture and preparation of all the ingredients, and how the resulting whole suits the sensitivities of the specific person eating it. This aligns well with current views of user experience as subjective,

holistic, emergent, situated, and dynamic, afforded by and realised in the interaction of specific, situated human beings with the systemic whole of a designed artefact in its socio-material environment (Hassenzahl 2010, 6–31).

Now what does this mean applied to gamification? First, the motivational valence (or "functional significance", cf. Ryan and Deci 2002) of a stimulus or design element depends on its situationally appraised meaning. Paying a waiter at a restaurant is proper and motivating, paying your friends for cooking you dinner at their home is a social affront. One and the same dollar bill can evoke different, situationally negotiated and appraised meanings: I might angrily smack down a dollar bill as tip and signal social disapproval, and the waiter may or may not pick up on that (Benkler 2006, 92–99).

Second, one and the same stimulus or design element can have multiple different motivational functions. As Antin and Churchill (2011) outline, the seemingly straightforward design pattern "badges" can tie into at least five possible different motivational processes. There is no deterministic one-to-one relationship between design elements and motivational effects (though there can be tendencies, see Hassenzahl 2010, 4–8). Vice versa, one and the same motivational process can be supported by very many different design elements: Quests, badges, leaderboards, high score lists etc. all can (but need not) be functionalised for goal-setting by a user.

Third, any motivational valence emerges from the relation between the object's properties and the actor's dispositions. This relationality is enshrined in the ecological concept of *affordance* (Gibson 1986, Chemero 2009), today widely used in human-computer interaction, communication research, and sociology to model the interaction of humans and technology. An affordance is not an objective feature of a design element, but a relational quality of both object and subject. Relative to my skills, a Sudoku puzzle affords frustration or competence experiences. Relative to my current level of satiety, a slice of cake looks like the most delicious thing in the world, instilling a strong motivational pull, or induces sickness because I am currently overfed (Deterding 2011).

Fourth and finally, such motivational affordances emerge not from a single stimulus or design element, but the total animal-environment system. Whether slamming down a dollar bill on a table constitutes a rage-inducing insult or an unintentional slip of the hand depends on the total chain of previous and following interactions and social signals in which the slamming is

embedded. How satisfying beating a boss monster in a game is depends on the number of previous failed attempts and the actual challenge of beating the boss monster, which again is an emergent quality of the relation of player skills and monster difficulty, etc.

In sum, (motivational) experiences are emergent properties afforded (not determined) by the relation of actors and their total environment, arising from situated, subjectively appraised valences relative to multiple motivational processes. And yet, the majority of gamification design literature claims or implies that one and the same game design element deterministically produces one (and only one) kind of motivational experience across users and contexts (Deterding forthcoming b).

5 FROM PATTERNS TO LENSES: RETHINKING GAMIFICATION DESIGN

The obvious conclusion from an emergent, relational, systemic affordance view of motivation is that motivational design should revolve around designing whole systems for motivational affordances, not adding elements with presumed-determined motivational effects. And yet, this is today's standard operating procedure in gamification. Instead of outlining motivational processes, the currently available gamification design literature largely consists in the cataloguing of patterns like "points", "achievements", "leaderboards", etc., and portrays gamification as the choice and customisation of pre-existing patterns (Deterding forthcoming b). The following quote is exemplary: "Putting all these [game] elements together is the central task of gamification design, and having knowledge of these game elements will make your gamification project compelling" (Werbach and Hunter 2012, 81). In essence, current gamification design literature recommends a pattern-based design approach (Seffah and Taleb 2011) – which as we have seen is at odds with an affordance perspective on motivation or experience more generally.

So what to do instead? It turns out that a promising answer is right before our eyes: game design. Rethinking gamification design means taking game design as a practice seriously. For game design has long acknowledged the emergent, systemic quality of experience, formalised in the MDA model (Hunicke, LeBlanc and Zubek 2004): A game's *mechanics* – the rules specifying possible player actions – together form a system that players interact

with, giving rise to interactional *dynamics*, which in turn give rise to experiential *aesthetics*. And game design has answered to this systemic quality with a series of methods and tools that can fruitfully inform gamification, two of which are worth calling out (see Deterding forthcoming b for a fuller account).

The first are *design lenses*. Initially developed by Jesse Schell (2009) for game design, this concept was quickly adopted in interaction design, specifically to transfer concepts from game design (Scott 2010). Lenses provide general guidance in generating and evaluating design in a manner that design patterns do not. Design patterns articulate proven solutions to reoccurring problems – yet as such, they are ultimately prescriptive, with little room for innovation or context-sensitivity (Seffah and Taleb 2011).

Furthermore, as we have seen patterns are domain-bound, system-relative elements, often meaningless and non-functional outside this context: Just as it is nonsensical to speak of the game design pattern "deadly traps" (Björk and Holopainen 2005, 74–75) in the context of a mobile app, just adding a "deadly trap" to any given game (like Scrabble, 1948 or Poker) does not automatically make sense or generate a desired experience either.

In contrast, a design lens articulates a single design perspective in a form that is both inspiring and guiding. As Schell puts it, a lens is "a way of viewing your design" (2009, xxvi). Practically, a lens combines (a) a memorable name, (b) a concise statement of a general design principle, including a rationale for that principle, and (c) a set of focusing questions that allow the designer to take on the "mental perspective" of the lens, "illuminating issues that may have been invisible before" (Scott 2010). By focusing a specific quality of a total system, design lenses avoid the decontextualised, additive-deterministic design paradigm of contemporary gamification. By binding together said quality or principle with a rationale and focusing questions, they become self-contained, and thus easy to transfer from game design into other design disciplines.

The second game design method worth calling out is "playcentric design" (Fullerton 2008): A designer starts with specifying a target experience for a target audience. In an abductive process, she then ideates first systems of mechanics that might generate the desired experience. But because of the double emergence of player-system dynamics and resultant aesthetics, results cannot be reliably predicted. Instead, the designer creates and tests

functional prototypes of the total system as quickly as possible to observe what dynamics and aesthetics actually emerge. Based on their evaluation and analysis of how and why these diverge from the intended experience, she then ideates promising design changes and revises and tests the prototype again, repeating this process until the delta between desired and actual experience is satisfactorily closed.

Summarising once more, if the re-envisioned scope of gamification are socio-technical systems, if its re-envisioned goal is motivational experiences, and if motivational experiences are systemic, emergent affordances, then a promising re-envisioned gamification design method would entail formalising desired motivational experiences in the form of design lenses, using these lenses to analyse target activities, and then engage in iterative experiential prototyping until the total prototyped socio-technical system affords the targeted motivational experiences (Deterding forthcoming b).

6   FROM AVOIDING HARM TO LIVING WELL: RETHINKING GAMIFICATION ETHICS

Almost from day one, gamification has been criticised as inherently manipulative, exploitive, or coercive (Bogost 2011, Rey forthcoming). On the one hand, given the statements of some gamification evangelists, this backlash is warranted. But on the other, it reveals a narrow conception of design ethics. As communication scholar Paul Watzlawick once put it, "one cannot not communicate" (Watzlawick, Beavin Bavelas and Jackson 1967, 51). In much the same way, one cannot not influence others: Any communication (and non-communication), any action (and inaction), and any shaping (and non-shaping) of the environment affects ourselves and others. Intentionally or not, every designer is "materializing morality" (Verbeek 2006): Every designed object makes certain actions and experiences easier or harder to realise, communicates certain ways of being as normal or good, and opens or closes certain realms of being to ethical deliberation and decision-making. Gamification is therefore not inherently "more" unethical or even "more" ethically relevant: Its overt persuasive intent simply brings the ethical unconscious of all design to the fore.

And indeed, gamification designers (like persuasive designers) have found themselves compelled to engage in a constant (legitimising) ethical discourse around their practice (Berdichevsky and Neuenschwander 1999;

Fogg 2003; Zichermann 2012). This is to be welcomed. However, both condemning and legitimising voices typically frame design ethics in a bound, defensive, other-centred fashion: Acting ethically is construed as avoiding coercion or harm on others. Thus, gamification (and persuasive design) are ethical if they do not produce negative effects for users, and come with informed consent (Fogg 2003; Zichermann 2012). The prototypical expression of this view is Thaler's and Sunstein's "libertarian paternalism," which "tries to influence choices in a way that will make choosers better off, as *judged by themselves*" (2008, 5).[1]

Against this stands a wider, positive framing of the morality of design grounded in Aristotelian virtue ethics and its contemporary descendants (Aristotle 2002, May 2010; Hursthouse 2013). Virtue ethics start not with the question what we owe to the other (be that a god or our fellow human beings), but with the self and the question: What constitutes the ultimate goal of all our action? What is it that we do for its own sake, and everything else in the sake of it? According to Aristotle, this ultimate *telos* of human beings is not hedonistic sense pleasure, but *eudaimonia*, "the good life": flourishing, bringing to full fruition and refinement our capacities as human beings (and modern virtue ethical interpretations allow for wide individual and cultural differences in what that entails). In this framing, we treat others well because as social animals, we could neither survive nor flourish without them: Living well with others is a condition and component of living well ourselves.

Viewed through this lens, "the ethical" is not a bounded domain of "negatively impinging on others", but an all-pervasive, positive dimension of life: *Every* human act and object is ethical because it partakes in life, and can be performed or made in a way that realises fruition, refinement, excellence, *eudaimonia*: an act or thing done well for its own sake. Ethical gamification (as any other design practice) would thus mean (a) being a potential tool for "positive design" (Desmet 2013) actively supporting human flourishing, (b) a practice performed virtuously, excellently in itself, (c) something that realises, furthers, or is at least congruent with living a good life with others.

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1   Thaler's and Sunstein's emphasis.

7 FROM INSTRUMENTAL PERFECTION AND TOKENISM TO CRITICAL TRANSFORMATION: RETHINKING GAMIFICATION'S PURPOSE

Minimally, any such ethical design practice involves (a) deliberating what constitutes the good life, and (b) understanding how design has an impact on it. Contemporary gamification has been criticised for doing neither: Whereas many art and persuasive games emerge from and facilitate the critical reflection of values, ideally opening a space for the exploration and transformation of human practice (Bogost 2007; Raphael et al. 2009), current gamification merely promises technical solutions to achieve the given goals and perfect the given procedures of businesses, governments, and other institutions (Deterding forthcoming a). And instead of actually addressing the root cause of an issue, it presents a tokenist exercise in "virtualpolitik" (Losh 2009) that merely signifies taking action, coolness, hipness, etc. (Bogost forthcoming).

A perfect case in point: the PlayPump (1994), a contraption for water supply in developing nations popularised by retired advertising executive Trevor Field (Borland forthcoming). The pump replaces traditional pumping mechanics with a roundabout for kids to play with. Water would be pumped easy as child's play, and advertising billboards on the reservoir tower would pay for the pumps. The images of happy African kids playing on a roundabout made for good media both in popular and design press. Thus, Field managed to get a commitment of 60 million US dollars in aid for installing PlayPumps. But in 2009, problems started to surface: The pump was more costly and less efficient than existing solutions. It required maintenance by specially trained and approved PlayPump mechanics, resulting in many being left defunct once they broke. Advertisers interested in rural African populations did not materialise. One calculation showed that children would have to operate the pump 27 continuous hours to pump the daily water demand of an average rural African village. Thus, women ended up working on the inefficient roundabouts, resulting in strained backs because they had to constantly bow down to operate a child-sized roundabout. In a word, the main purpose and success of the PlayPump was media attention and good feelings in the developed nations, while the pump was an utter failure for the actual people having to use it in developing nations (ibid.). This illustrates not only gamification as *virtualpolitik* in full bloom, but also that

successful design interventions require a deep understanding of and continued engagement with the actual people, sites, and systems they target – with the help of tools and frameworks for participatory design, sustainability, and systems thinking.

In an early classic of design ethics, Victor Papanek's *Design for the Real World* (1971, 47), one finds an interesting diagram. It is a plain pyramid with a little horizontal line that separates a small tip from a vast body. The tip of the pyramid Papanek labeled "the designer's share", and its body, "the *real* problem". Over the course of several pages, Papanek reapplies this diagram again and again to demonstrate how designers typically focus their energy and time on trivial matters: on what their clients want, not what their users need; on what a small, privileged consumer class wants, not what the whole population of their country needs; on the first world problems of their country, not the global challenges of hunger, war, inequality, or global warming. To this list we can add: on alleviating the symptoms of a societal issue, not eliminating its root causes. Rethinking the ethics of gamification, then, means seeing the whole pyramid: distancing ourselves from the day-to-day in order to work through, on all of these levels, what we as designers and scholars understand and aspire our vision of the good life, "the real problem", and our share in solving it to be.

8   CONCLUSION: TOWARD EUDAIMONIC DESIGN

If there has been one recurring theme of the preceding pages, it was to move outside the literal and figurative box: to abandon a narrow, atomistic, decontextualised notion of gamification as the implementation of technical design elements, and take into view the wider systems and contexts in which designed objects and their features are indexically embedded and implied: social situations, frames, meanings, norms, and practices; affordances as actor-environment relations; whole systems of game mechanics giving rise to gameplay dynamics that, in turn, give rise to experiential aesthetics; our individual and collective notions of the good life; our understanding of the root causes thwarting its realisation; and our moral share in striking at these roots.

So how would a rethought, positive vision of gamification look? It would aspire to critically understand, reflect, and transform the goals and systems of our society to facilitate human well-being, targeting motivation

as its main strategic lever. Well-aware of the situated, socio-material quality of human motivation and action, it would take into view objects and people and their interactions, paying as much attention to the structuring of the material environment as to the framing of social contexts. Cognizant of the emergent quality of motivational experiences, it would use design lenses and iterative prototyping to design these total socio-technical systems for motivational affordances. One might call this re-envisioned, positive gamification eudaimonic design.

In closing, let us return to Paul Watzlawick once more: "These are two types of change: one that occurs within a given system which itself remains unchanged, and one whose occurrence changes the system itself [...] Second-order change is thus change of change" (Watzlawick, Weakland and Fish 1974, 10). If anything, this article has been attempting to reframe gamification – on any level of theory and practice – from a first-order to a second-order change practice.

Now in one sense, this is what current gamification already engages in. "Traditional" serious game design deployed games as interventions within existing contexts like educational institutions to convey attitudes, knowledge and skills, hoping and praying that these learnings might transfer into a different, final context of application: using condoms, being an active citizen, noticing and counteracting discrimination, etc.

In contrast to this stands the recent line of reasoning in policy and design circles heavily informed by behavioural economics that goes under names like persuasive technology, choice architecture, or nudging (Thaler and Sunstein 2008; Deterding 2012a). It argues that traditional measures in health communication, civic engagement, and consumer education have seen only limited success not so much because people do not learn, or learning does not transfer, but because emotion, habit, cognitive biases and material environments strongly shape and bound our conscious action and decision-making. In other words, we do not necessarily do better just because we know better. Instead, proponents of persuasive technology argue that we should try to affect decisions and actions directly when and where they are happening, operating on the level of emotions, habits, cognitive biases, and material environments (Deterding 2012a).

This is exactly what current gamification attempts: It implements features of games that are presumably conducive to desired actions right where

these occur: Instead of building a simulation game about personal budgeting to improve financial literacy, provide a personal financial management tool informed by good game design to make it fun. Thus, gamification is already a move from change in the system to change *of* the system: from designing games as interventions deployed within certain contexts to designing contexts as interventions, informed by game design.

Again, there are legitimate doubts as to whether this strategy is ultimately effective and sustainable on its own: Should we not empower people to reflect on and self-regulate their own conduct, rather than making them ever more dependent on technological environments "nudging" them? There is evidence that the abundant use of outer measures of control forestalls the development of people's ability to autonomously self-regulate (Deci and Ryan 2012). Then again, embodiment and distributed cognition have taught us that thinking, learning and acting always already involve tools – done well, gamification "just" improves the tools at our disposal. As Heath and Anderson (2010) suggest, for us humans to get anything done at all, we always did and always will rely on the "extended will" provided by social and material devices like to-do lists and public commitments. Ideally, gamification not only "offloads" self-regulation, but helps us to develop the skills to self-regulate and enrol the tools our environment provides in the course. As such, gamification would immediately support a good life as understood by virtue ethics: For realising *eudaimonia* crucially requires the *virtues* to act in accordance with reason – that is, the trained, acquired habits or dispositions necessary to perform deliberate, planned, goal-directed, self-determined action even against our impulses (May 2010).

On the one hand, then, gamification is *conceptually* a move towards second-order change in support of human flourishing. On the other, current gamification very much remains an exercise in change in not of the system: Calling key performance indicators and targets "experience points" and "levels" and tracking and displaying them via a new software-as-a-service platform to increase "employee engagement", as so many business gamification initiatives do, merely deploys a novel technical system for a given purpose in a given institution, instead of taking into view and re-designing the larger socio-technical system itself. It uncritically fits itself into and is co-opted by standing goals and procedures in businesses, governmental and

educational institutions. Instead of transforming society through and in the image of play, it instrumentalises play – and this is anathema to *eudaimonia*.

Following Aristotle, *eudaimonia* is the autotelic, self-determined exercise and perfection of one's innate capacities for its own sake and "proper pleasure" – in a sense, play is the prototypical realisation of *eudaimonia*. But more importantly, if such autotelic pursuit of excellence is the good life, then as long as we work for the sake of play, or play for the sake of work, as long as we instrumentalise one for the other, rather than cherish each for the excellence we find in it, we are living the false life. We realise the good life to the precise extent that we are able to transform whatever situation we find ourselves in into a self-determined pursuit where we find some measure of excellence, some focus on mastery and joy, some connection to our goals, needs, and values – as if it were a game we chose to play.

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