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Article

Getting Played: Gamification, Bullshit, and the Rise of Algorithmic Surveillance

Casey O'Donnell

Michigan State University, US.
caseyod@msu.edu

Abstract

Gamification, the idea that game mechanics can be integrated into assumed "non-game" circumstances has gained ascendance amongst champions of marketing, behavior change and efficiency. Ironically, some of the most heated critique of gamification has come from the broader community of "traditional" videogame developers. Connecting broadly to projects surrounding "big data" and algorithmic surveillance, the project of gamification continues to expand and intensify. This paper examines the complex relationship between game designers and the rise of arguments in support of gamification. I analyze the various actors and interests mobilizing arguments, deconstructing their underlying assumptions about the relationship between games and social phenomena. Turning to an analytic framework rooted in the Assemblage of Play (Taylor 2009) and emergent coercive forms of (played) control (Taylor 2006), the essay critiques assumptions on either side of the debate on the role of games and play. The strained connections between debates on gamification and broader interest in serious games offers an important moment to explore algorithmic surveillance.

Introduction

Gamification, the integration of game mechanics into "non-game" activities, deserves a great deal of analytic unpacking.[1] It is a historically situated phrase rooted in a complex connection between a variety of industry and academic work around games, learning, educational technology, social psychology and a host of other fields. The essay begins by exploring what is meant by "game mechanics," as defined by the field of Game Studies. The essay then turns to contextualizing the historical context of gamification. This essay works to situate the term with reference to specific historical moments and debates. Finally, the essay frames what became a very public discussion about the ideas, presentation and possibilities of gamification by examining a series of videos, editorials, blog posts and public debates.

Two different, but connected, ethnographic projects inform the material presented in this essay. The first was a three-and-a-half year (2004-2008) exploration of a "AAA" ("triple-A" or mid-sized console-focused) game studio. The second project, the study of a community of scientists, educators, game developers, teachers and students involved in the development of a variety of science-learning Serious Games, began in 2009 and ran through 2012. However, the essay is more a cultural history of the early

[1] It could be argued that everything is always a game in our current socio-technical-political context (Wark 2007). But I think surrendering everything to a massively multiplayer not-so-alternate reality game should be resisted. There are contexts that perhaps are not games, though we might imagine them as such. Looking to work by game theorists, would suggest that too broadly construed, marking everything as a game breaks the "optional" or "willingness" components so crucial to their play (De Koven 1978; Suits 1978).

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debates around gamification, rather than an ethnographic account. I attempt to point to video-clips of the individuals discussed in this essay talking about their perspectives and online resources that denote additional materials. The purpose of this is to provide entry points to where these reflections come from and historicizing the events that became important markers throughout my research. They are not chosen randomly, but as important indexical moments that flag emergent core categories in my research.

On Game Mechanics and Analytics

Other scholars have done exemplary work describing the means and methods by which games structure and systematize the play activities of the user and how ultimately those games also exceed those boundaries (see Whitson 2013). Yet, often there are a variety of different frames through which a game's mechanics are being described. As such, I will briefly explore my perspective on the relationship between game design, game mechanics and the role of systems in the building of games.

Game design, in addition to the development of stories and visuals for which they are most frequently noted for, is about designing a system that provides meaningful feedback to a player exploring that system (Sicart 2008). Games are often a collection of systems and subsystems that provide a variety of feedback loops that respond to a single player or many (Hunicke et al. 2004; Salen and Zimmerman 2004). Games can be relatively simple or complex. It isn't the goal of this essay to define or review this literature. Rather it must be noted that games are always already information systems. Even non-digital games have a state and a player's actions shift that state according to a predetermined set of rules. In the case of digital games, the number and variety of feedback loops can be numerous, as the computational side of the computer can be leveraged in ways that players of a non-digital game might find daunting.

Games are always already a series of algorithms that respond to a user's input. Or, more eloquently, games are, "uniquely algorithmic cultural objects" (Galloway 2006: 86). Games leverage a variety of data sources as input to make these interactions meaningful. In a way, games cannot help but surveil the user: it is how a game reacts to its player. Especially in the case of games that persist over time or platform, they increasingly store data in a variety of locations, presenting a variety of interfaces to the user. A player's in-game avatar can be customized on a mobile device, the character's inventory managed from a website and the game played on a console or personal computer. Each of these interactions inherently involves the monitoring and storage of information about the player.

Beginning as early as 2000, games began incorporating a variety of "analytics," ostensibly to better understand how a given game was being played. As other researchers have noted, many console manufacturers viewed this as simply "closing the loop" with their players (Kline et al. 2005: 120), though at the time those loops were primarily through the use of a monthly magazine and telephone support system. In some cases the metrics were as basic as the capabilities and capacity of the computer it was running on. This information helped game developers to know what kinds of hardware their games were being played on. Crash logs were used by teams to fix errors in a game or respond to bugs that may not be reproducible outside a player's highly specific context.

As the power and potential of this kind of data gathering and analysis increased, games expanded their use of analytics. For example, information about play time and the number of times a player succeeded or failed at a given task provided insight into whether a given game level was too hard or easy; or if some in-game items were too weak or too powerful; what levels or areas within an online game were the most frequently visited; and what players were doing in those areas. This information was used to adjust the underlying systems and rules within games. Indeed an entire sub-discipline within Game Studies and game development emerged (El-Nasr et al. 2013). Games were already surveillance systems and the expansion of that surveillance in the name of "fun," seemed a small trade-off for players. The opacity of these systems was no different than the opacity of a game's underlying rules and systems. It was normal.

The Rise of Serious Games

A discussion of gamification should begin with the rise of "serious games." Games, and particular games such as *Go* or *Chess*, have long had ties to war and warfare (Peterson 2012). War games have been serious business for military leaders over the years. The ascendance of military simulations and military attention to game theory have also proven influential. In 2005, two "Serious Games Summits" were held. These events were organized in collaboration with UBM Tech, a company spun out of the CMP Media organization, which was responsible for the organization of the annual Game Developers Conference (GDC). One of these summits was held as part of the larger conference, while the other was organized as a stand-alone event in Washington, D.C. Coincidentally, the later event coincided closely with the release of the Xbox version of the *America's Army: Rise of a Soldier* game, which resulted in a significant military focused marketing campaign (and thus military presence) at the event.[2] It was this event that prompted me to bracket Serious Games from my first ethnographic project, an exploration of the "AAA" videogame industry (O'Donnell 2008). A more detailed version of this account can be found in this monograph (O'Donnell 2014).

Image 1.

However, rapidly after the inadvertent military focus of the initial summits, the role of Serious Games in other realms spread. Emerging work included the use and potential of games in the classroom (Gee 2007)

[2] For a more detailed account of the development process surrounding *America's Army* see Allen (2011).

and the role that games could play in teaching habits of mind for scientific practice (Steinkuehler and Duncan 2008).[3] During the same period of time, with the help of funding from the Robert Wood Johnson Foundation, a sub-community around Games for Health also emerged. These gatherings of researchers and practitioners focused more explicitly on the possible health implications that games could have for patients. With the majority of "effects" focused research up until this time examining only violence, aggression and other negative implications of games, this strain of research offered new avenues of inquiry and funding.

It was during this time that I began the second ethnographic project, amongst a group of scientists, education researchers, game developers and teachers working to develop a new series of science learning games. Serious Games presented an opportunity for researchers, developers and funders to cast their games in a significantly different light from traditional "entertainment" games. Within a short few years, new academic and professional conferences emerged focused specifically on these new research and creative trajectories. Games for Change, Games Learning and Society, and Games for Health conferences provided opportunities for researchers and practitioners alike to explore the creative and impactful possibilities of new play-based experiences.

The ascendance of Serious Games came at a time of significant flux within the game industry. Changes surrounding players' choices of gaming platforms, with a significant shift from a console-focused industry to one equally focused on mobile and tablet devices, as well as web-browser-based games, often linked to social network platforms, such as Facebook. Thus, gamification also came at a time of significant game developer concern and anxiety surrounding the future of the game industry.

The Co-Ascendance of Social and Free-to-Play Games

If the time between 2005 and 2008 marked the upward swing of Serious Games, 2009 to 2011 was the reign of so-called "Social Games." Social Games became a blanket term for many of the games found within the walls of the online social network of Facebook. These games, generally written for Adobe's Flash animation system, made use of the external Application Programming Interfaces (APIs) that Facebook made available to developers. These allowed game developers to encourage uses—via simple prompts or rewards—to spread games to their "friends" within the walls of Facebook. The most frequently referenced example of this kind of game is *FarmVille*, which debuted on Facebook in 2009.

It wasn't so much the "viral" aspect of Social Games that prompted initial concern amongst game developers, though for many users that was the most noticed effect; it was that nearly all of these games were free to play (F2P) and required monetization through other means. In most cases, the games made use of "appointment" mechanics that required a user to return to the game periodically to use accumulated resources that took time to replenish. Players could avoid those time delays by purchasing credits through the game (initially) or via Facebook's credit system (later). Other special or limited items could also be purchased. These items often provided limited in-game benefits which, when depleted or consumed during gameplay, could be purchased repeatedly.

Ultimately, it was the combination of two energetic talks by Jesse Schell that resulted in a rising tide of debate and conversation amongst game developers about gamification (Schell 2010a; Schell 2010b). The first of these, "Beyond Facebook" was delivered to an audience of the game development elite at the Design, Innovate, Communicate, Entertain (DICE) Summit in 2010. In his talk, Schell discussed the

[3] It is important to note that Serious Games are not "edutainment," or the educational games of the 1980s and 1990s. As other analysts have noted, most edutainment exhibits only the worst traits of games, education and software based experiences (Charsky 2010), no matter how fondly a generation of players looks back at Oregon Trail.

upheaval that Facebook games caused game developers. He indexed the "strange" elements of Facebook games, such as their F2P character, micro-transactions and what he referred to as "Lead Generation" or the payment of virtual goods within a game in exchange for the player's signing up for goods and services. Put another way, players could sign up for a credit card and in exchange would receive virtual goods. Schell also indexed a variety of "psychological" aspects to these new games, which game developers had not previously really engaged with.

Schell came to the conclusion that what many of these strange games had done was make a connection to reality. He quipped, "Game designers aren't comfortable with reality." But it's precisely an increasing sense of disconnection from reality and a desire for the (imagined) "authentic" that was now being used to entice people. He continued, "We live in a bubble of fake bullshit. There is a hunger for reality." He argued that when you combine this hunger with things like gas points, shopping points, fantasy football, Weight Watcher points, geo-caching and virtual pets in hybrid cars, which were more accidental than designed, the implications were daunting (Schell 2010a). More so: what would happen if you let game designers in on this?

It was at this point in his DICE talk that he launched into a presentation, which he expanded upon later that year in a talk for the Long Now Foundation titled, "Visions of the Gamepocalypse." In this talk he tracked a variety of elements that marked waypoints along the path to the Gamepocalypse. Much of this was linked to pervasive cameras, sensors and disposable computational technologies that would enable a world that provides a kind of gross reward system for doing and recording our everyday lives. "Your toothbrush can sense that you're brushing your teeth. Ding, five points for that. Oh, and you brushed your teeth every day this week. Ding, 20 points for that. And the toothbrush and toothpaste company love this, because it means you'll buy more toothbrushes and toothpaste." Yet, it was the linkage between Facebook games and the Gamepocalypse that was particularly critical (Schell 2010b). It was highlighted further in his slides accompanying the talk. Yet, in some ways this talk was a gambit, a feint hoping to out the extremes of early gamification pundits.

2011 marked the release of the book, "Reality is Broken," which queried the potential positive real-world change potential of games (McGonigal 2011). The popularity of the book and the mantle of games making a "broken reality" better was quickly absorbed by a growing number of entrepreneurs and authors interested in combining marketing and games. The interest in "engagement" by those approaching games from this perspective was clear throughout their materials. While many commended the goals of this work, it was its uptake amongst proponents of gamification that made some shy away from the otherwise hopeful tone of the text.[4] Much like Schell's Gamepocalypse, the claims that games could fix everything were as extreme, though their heart in a different place.

The rapid rise in popularity of Facebook games, as well as the financial windfall that Facebook and companies producing these games garnered, drew considerable scrutiny from academic and professional game developers alike. Some developers were critical of the operant conditioning that these games exhibited and one developed the satire game *Cow Clicker*, which lampooned the underlying mechanics of these games (Tanz 2011). *Cow Clicker* was an early bluff-call on the part of critics of gamification. Concern about Social Games and F2P games was pervasive at GDC in 2010 and 2011. Many of those working in the "social" space were simultaneously demonized and lauded as the future of games. I have long maintained that to get a sense of what collectively concerns game developers, one need to look only as far as the perennial "rant" sessions at this conference, which is why it remains an annual field-site for

[4] This perspective was further complicated by events that unfolded after the "Game Design Challenge—Bigger than Jesus: Games as Religion," panel at GDC that year. In that session, Jason Rohrer's winning entry, a modified single-player version of *Minecraft* on a USB drive was quickly leveraged as a fundraising measure, in which McGonigal was presented as a lure (Fagone 2011).

my work. The attacks on the ethics of social games were so resolute during GDC 2010, that the 2011 rant session was titled, "No Freaking Respect! Social Game Developers Rant Back." Perhaps most pointedly critical was the GDC rant delivered by Ian Bogost in 2011 titled, "Shit Crayons," where Facebook games were likened to the prison-poetry of Wole Soyinka written with "improvised ink" on scraps of toilet paper (Bogost 2011b). Many game developers echoed these thoughts and remained skeptical.

The Allure of Analytics in Games and Gamification

The intertwining of game mechanics and analytics became increasingly salient in my fieldwork in 2011 as the research team developing science learning games was increasingly pushed, both internally and externally, to track more and more data about how the various games and technologies were being used by students. For the more traditional educational software being developed, the metrics were fairly straightforward: answers to questions, percentage completion and so-on. For game technologies, the questions were more nebulous, as those committed to games as a viable learning technology were pushed to insert quizzes and other more traditional models for demonstrating learning outcomes.

On the other hand, all of this data tracking and monitoring takes on a different flavor when extended into gamified contexts. Even in what might be subjectively considered a "good" context, just as games for learning, the question of what does this data mean or what it might be used for becomes more complex. Simultaneously, the desire on the part of educators for information about what learners are doing is almost hypnotic. Combining this new-found data source with the engagement offered by gamed experiences elucidates why the appeal of the marketers' argument was embraced by numerous entities. Especially in the educational context, as I saw in my fieldwork, often times these efforts can have both positive and negative effects on outcomes (Friesen 2013).

If anything, it was the illusion that player metrics and analytics that beguiled proponents of gamification. As developers, interested in serious games or games for impact, began to distance themselves from the term, new ones emerged. Yet, the allure of having metrics or analytics stand in for an actual meaningful conversation with players is at the heart of what made gamification exploitative. The promise that one might "know" the player, without ever talking to her/him, is a much cleaner solution to getting to knowing ones' players. Who needs "community management" when the numbers can tell you what you need to know?

Especially in the context of serious games, analytics, surveillance and algorithmic analysis of this information is appealing. Often these efforts involve funding agencies that desire "proof" of impact. While there are numerous forms that this proving process could take, increasingly, analytics as part of that answer has proved tempting. There are numerous examples of the growing primacy of testing as critically rooted to our modern surveillance-based experimental turn.

> If today's world is ruled conceptually by the primacy of testing—nuclear testing, drug testing, HIV admissions, employment, pregnancy, SAT, GRE, MCAT, DNA, testing limits, testing a state's capacity for justice, as I just read in today's paper, and so on—then this growing dependency on the test is coextensive with Nietzsche's recognition of the modern experimental turn. The experimental turn, as we now know it from a history of flukes, successes and near misses, in its genesis and orientation, travels way beyond good and evil.
>
> (Ronell 2005: 157)

Once that door had been opened, it could not be shut. Even with the best of intentions, these systems have at their core an interest in continually monitoring the activity and "progress" of players. Progression in games can mean many things. Percentage completion is a difficult metric for measuring understanding.

While one might argue that these interventions are made with the best of intentions, yet that cannot always be guaranteed. If games cannot help but be systems of algorithmic surveillance, then it makes sense that games would serve as a kind of siren's call to parties interested in bringing shape and form to algorithmic surveillance. Why simply surveil when you can shape or influence those being surveilled to behave "properly"?

The Thingification of Gamification

Gamification, presented as such, has enjoyed a variety of formats, ranging from texts, to videos, to conferences. This essay attempts to pull at some of the threads that make up this assemblage. The uptake of gamification makes it important to explore the term and its broader context. Early texts that used the term drew heavily upon marketing literature. Indeed, the materials were primarily targeted at advertisers, marketers and business executives, rather than at designers. It was this particular bent that led many game developers and game academics in particular to deconstruct the term. It was ultimately the blog post title, "Gamification is Bullshit," that came to personify the debate surrounding the term. Drawing on the work of moral philosopher Harry Frankfurth, Bogost wrote:

> [B]ullshit is used to conceal, to impress or to coerce. Unlike liars, bullshitters have no use for the truth. All that matters to them is hiding their ignorance or bringing about their own benefit.
>
> Gamification is bullshit.
>
> I'm not being flip or glib or provocative. I'm speaking philosophically.
>
> More specifically, gamification is marketing bullshit, invented by consultants as a means to capture the wild, coveted beast that is videogames and to domesticate it for use in the grey, hopeless wasteland of big business, where bullshit already reigns anyway.
>
> (Bogost 2011a)

Almost nascent in the blog post is the idea that games are something bigger, broader and more important. The presumption that games are "wild, coveted beasts," that must be tamed for the kind of ends found in the world of the Gamepocalypse is presented. It was this argument that garnered the attention of a variety of game developers. Many looked at what was being presented as "games" was largely devoid of the expertise and craft of game development. "Exploitification" became the word leveraged by game developers against what they saw as a kind of occupation or co-optation of a medium (Kazemi 2011).

It wasn't so much that gamification was "bullshit," but rather that it wasn't really about games. It never took the game part of the "-ification" process seriously. Many game developers were quick to point this out and even developed browser plug-ins to highlight the issue (Kazemi 2011). Counter arguments included many examples of game-based experiences that have significant and helpful outcomes for those that make use of those interactions. Yet, even those arguments came rooted in a market-focused argument with money at its core rather than games (Zichermann 2011). While *Nike+* efforts to gamify running may have motivated people to be healthier, it also worked to enhance Nike's brand and sell more shoes. *Nike+* isn't so much a game as it is a running log with some added on points, badges and social elements. By contrast, *Zombies Run!*, a game released in 2012 for iOS devices made running a core mechanic within the game. The story and mechanics allowed players to gather supplies for use within the game. Of course, it also requires the player to run from pretend zombies piped into their ears when playing.

Exploring the use of gamification, one finds that often what is being touted is the sense of engagement that games provide. This is quickly followed by the wave of a hand or an anecdote about gamed experiences

and a statement about "imagine if you could harness that for X?" Even the Gamification Summit shifted away from the term beginning in 2012, rebranding itself as the GSummit, with the emphasis placed on engagement rather than gamification. Yet, the allure and seed of bringing games, reality, and capital together had already been planted.

It is common practice to see examples of game-based systems such as learning games, health games, games for change, and serious games, being touted as "examples" of gamification, when often the developers of those games might not identify with the more commercial interests of the formal gamification movement. The contentiousness of the term seems to have largely tainted a variety of game-based experiences, and not by the choice of their creators. Throughout my work with teams developing serious learning games, there was a constant tension between the desires of design teams working to make fun games and those seeking to leverage them to meet the demands of the United States educational context (which provided funding for gamification). For many game developers, gamification came to elicit extremely negative reactions. Gamification was an idea that attempted to enroll the work of others into its own wheelhouse, without having done the adequate enrollment necessary to function as a thing (Callon 1989). As such it too became disassociated into its aggregate elements, dashed against the sea of criticism from game developers.

Designers and developers in the mainstream game industry were committed to games as cultural artifacts in and of themselves, not in service of some other means. This is the difference that makes a difference in terms of members of the game industry's unwillingness to enroll itself into gamification assemblage. Moreover, the assemblage of gamified play often breaks down for players as well. When elements of gameplay emphasizing consumer behavior, testing and monetization trump the meaningful experience on the part of the player, the game system breaks down from the outside in. Players flee the feedback loop.

The Seventh Seal of the Gamepocalypse

To return to Jesse Schell's vision, it was the shifting focus to reality in concert with pervasive "disposable" computers and sensors that heralded the Gamepocalypse. What perhaps makes the vision so horrifying was the consumption-oriented, head-down and proper socially responsible rules behind the thin veneer of a game. Brand loyalty. Environmentalism within acceptable tolerances. Obedience to the rules. Those were the core systems of the game. Yet, as a game, such a thing is atrocious. Points and badges provide diminishing returns on play investment. The time-limited appeal of many social games ought to demonstrate that such a game would have limits. The vision is terrifying, precisely because it might work for a time, until the initial novelty wore off for players. Some might continue to play, but based on my work in the learning games context, an increasing number of people will tire of such a game outside a context where it is required.

> So here I was working on social games, faced with changes required to increase the friction. These changes would get the small group of paying players to pay more but they would also increase the churn across the rest of the player base. I was adding elements to disrupt the play experience—to knock the player out of the Zen state of connection with our game—to get him to pay money.
>
> (McWilliams 2013)

It is the investment of users in the playing of a game that provides it with its social weight. The game's use of surveillance in one form or another is inevitable. It is part of the constructed game. However, the value of the games will be debated when the force of those rules extend beyond the borders of a game, into everyday "real" life. It isn't that a gamified world is inherently good or bad, it is the resultant realities that we can and ought to judge, not unlike the "emergent coercive" systems dictated by raiding teams in online massively multiplayer online games (Taylor 2006). In these cases, teams demanded that players

have very specific game modifications installed to ensure that a team was self-aware enough of certain metrics of performance. Quite similarly, if jobs, healthcare systems or any variety of other real world system that everyday "players" are judged by are given up to opaque algorithmic systems of arbitrary design, the result most likely will be quite dangerous.

The playing of games has never been a simple matter. While Schell might argue that games plug into certain psychological aspects of humans that encourage their play, the relationship is more complex than that. The system (or assemblage) that emerges betwixt the relationship between players, developers, game systems and others must be examined (Taylor 2009). However, this isn't all that different from the kinds of acquiescence that have been made in our deferral to algorithmic judgment. Credit scores, SAT scores, GRE scores, GMAT scores, even degrees, designations and numerous other "badges" by another name involve the judging of individuals on rather opaque scores. At least games can be judged by other factors. Is it any fun? Why are you playing? It would be too simple to say that gamification is bullshit or that games are somehow special and outside a broader set of cultural systems. Rather, these new "gamed" experiences enter into new dialogs with existing forms of power and structure.

Of course, when "work" or "a paycheck," is the answer, the implications of gamification is much more complex. One cannot simply resist or quit the game in this case. It is the "presumption of deviance" until proven otherwise (Monahan 2006: 12) that I find the most problematic. Games at work may be the most troubling aspect of the Gamepocalypse. If work is already increasingly a realm of extensive surveillance (Gilliom and Monahan 2012: 89-107), then, as the data deluge begins, games will be turned to for algorithmic answers. Which, oddly enough makes them game-able for those with an analytic bent. Indeed, it is increasingly the ability to critique and approach the systems all around us like game designers that I find empowering in the massive expansion of algorithmic surveillance. Of course it requires a different system of educational practices, which is likely where US-centric concern is tantamount.

> In the Ludic Century, we cannot have a passive relationship to the systems that we inhabit. We must learn to be designers, to recognize how and why systems are constructed, and to try to make them better.
>
> (Zimmerman and Chaplin 2013)

> To win, you can't just do whatever you want. You have to figure out what will work within the rules of the game. You must learn to predict the consequences of each move, and anticipate the computer's response. Eventually, your decisions become intuitive, as smooth as and rapid-fire as the computer's own machinations.
>
> – Quoting Ted Friedman in Galloway (2006: 92)

It is the sea of users that can dissolve a gamified world into its "associative elements" (Law 1989: 117). As you begin to deconstruct the platforms and oceans that these systems sail within, it becomes less worrisome, at least as they stand currently. Just because an email client can offer me badges or points for how I do or don't perform, in all likelihood my inbox doesn't stand a chance against the deluge. It may offer "gains" for a time, until I recognize how useless the maintenance of "inbox zero" is and I stop playing. At least assuming such a thing is an option.

Games offer a promising realm of inquiry into the relationships we come to form with these new emergent systems. It isn't always clear that they will in fact be systems of domination, but may exhibit emergent new "caring" behaviors around algorithmic systems (Whitson 2014). As other analysts have noted, algorithms (among other things) often become "entangled" with daily practice and reshape them in order to please the algorithms. These are systems that users engage with and take measure of. They attempt to work with, against, or both at once with the underlying systems that make up the algorithm. These "recursive loop[s] between the calculations of the algorithm and the 'calculations' of people," form

emergent new realms of practice (Gillespie 2014: 183).

On the other hand, it is quite possible, if the game elements of gamification, the game design, were taken as seriously as the marketing, brand management and assorted elements that influenced its emergence, a true Gamepocalypse could be at hand. Yet, as I look at the available tools for analytics and surveillance as well as the creative limits of designers, I wonder if it is even possible. Even the best serious games are eventually posed the question, "Well, did you really do X?" At which point, you've broken the game designers' epistemological frame. She will cock her head and ask, "Well, did they play it? Did they have a meaningful experience? What story did they tell?" The person asking for proof will respond again, "But, did they really do it, get it, or learn it?" To which the designer will shrug and walk away.

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