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## **Taylorism 2.0:**

### **Gamification, Scientific Management, and the Capitalist Appropriation of Play**

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#### Abstract

By making work seem more like leisure time, gamification and corporate training games serve as a mechanism for solving a range of problems and, significantly, of increasing productivity. This piece examines the implications of gamification as a means of productivity gains that extend Frederick Winslow Taylor's principles of scientific management, or Taylorism. Relying on measurement and observation as a mechanism to collapse the domains of labour and leisure for the benefit of businesses (rather than for the benefit or fulfillment of workers), gamification potentially subjugates all time into productive time, even as business leaders use games to mask all labour as something to be enjoyed. In so doing, this study argues, the agency of individuals—whether worker or player—becomes subject to the rationalized nature of production. This rationalization changes the nature of play, making it a duty rather than a choice, a routine rather than a process of exploration. Taken too far or used unthinkingly, it renders Huizinga's magic circle into one more regulated office cubicle.

Keywords: gamification, scientific management, business games, simulation, surveillance, ethics

*'Technology, publicity and propaganda everywhere promote the competitive spirit and afford means of satisfying it on an unprecedented scale' (Huizinga, Homo Ludens, 199-200)*

*'Everyone loves to play games, whether it is something more intellectual like Trivial Pursuit or more on the collaborative side, like Charades. This affinity to be challenged and to win, translates perfectly into marketing and turning consumers into brand advocates by offering them engaging games and interesting content' (Kates, 'Gamification for Marketers')*

Corporate training theory and practice appears to be embracing ‘gamification’ as a means to train employees to their expected work. That computer games teach is nothing new. As Rolf Nohr notes, ex-military people, academics, and businessmen started to develop business games after WWII in response to ‘a break of society’s steering logic’ (2011: 2). Yet notably, in the 1950s, the economic developments that were accelerated during WWII—war economics, economic theory, engineering, and mathematics—coalesced into a new branch of Operations Research for which games were a perfect simulated expression.

Further, computer games bring together psychology, sociology, and cultural anthropology, and the development of these games is closely connected to the history of computerization (ibid). Indeed, edugames had an early start with the personal computer in 1974 with the publication of *Oregon Trail* (MECC 1974) and nearly a decade later, *Where in the World Is Carmen Sandiego* (Brøderbund 1985) started another popular edugame franchise to teach cultural geography. Games teach more than content. In a 1994 *Washington Post* article, Joel Garreau speaks to the function of games such as *Minesweep* and *Solitaire* to teach interface skills: ‘Microsoft originally put Solitaire into Windows to soothe people intimidated by the operating system, according to Duzan [lead product manager for entertainment at Microsoft]. It gave them something familiar and fun to do with their computer while it also taught them how to use a mouse’ (C1). In other words, these games didn’t teach content; they taught hardware skills that were still relatively new at the time. And the success of this strategy is attributed to people’s willingness, even compulsion, to play the game—the game provides a rewards structure that is divorced from the actual lesson being taught.

Gamification, on the other hand, closely links the structural content of the game to productive outcomes. Indeed, at the start of the twenty-first century, the concept of gamification—as imagined by McGonigal (2011), Zichermann and Cunningham (2011), Kapp (2012), and Werbach and Hunter (2012)—serves a similar function for the networked, knowledge economy component of capitalist production. Gamification is based on similar principles of measurement and observation with a focus on both the reorganization of work and leisure. In McGonigal’s (2011) foundational work, this is made possible by blurring the question of games and work, suggesting that work should be more like play but opening the door to make play into productive work. The emphasis on play leisure time is significant because it drastically

broadens both the amount of time and the ways in which one can be productive. In this way, gamification serves as a mechanism of networked capitalist expansion and what Jodi Dean (2010) terms communicative capitalism.

In this article, we contend that computer games superficially look and act as a type of scientific management as advocated by Frederick Winslow Taylor;<sup>1</sup> however, because of the computerized medium itself, gamified training serves as an expansion of scientific management into new spaces while effacing the politics of class and access in the workforce. This engagement dangerously collapses the domains of labour and leisure by combining the domains of play space and the real world. While the frames that people navigate are often transgressed or hybridized, the frames are still separate. Thus Csikszentmihalyi's warning is particularly poignant here: 'The problem with institutionalizing alternative realities in art or in games is that they become co-opted by the system, subordinated to the prevailing world view' (1981: 14). The effects of this expand beyond traditional critiques of Taylorism and scientific management by disrupting the safe spaces of play and lodging them into the highstakes spaces and expectations of work. While businesses have always included games of sorts—sales competitions, playing the market, and ropes courses, games under a Taylorist model shift the competitions from how well you sell to the specific mechanics of selling—micromanaging producers and consumers on an unprecedented scale. Indeed, what we find most disturbing here is not just that Taylorism as gamification extends micromanagement to incorporate the practices of leisure time, attempting to make work seem like fun (even when it's not inherently, like counting the number of olives allowed on a Subway sandwich), but also that it opens the potential to force leisure time to become productive, whether in relation to one's own work or as an extension of some outside agent's need for production. Characteristics of this process include:

- Rationalization through standardization of processes via algorithmically defined procedures;
- Compulsion to play-work to generate data, giving data to management and businesses about a wide range of player actions or traits; and
- Articulation and eventual collapse of values between play and work and the agency of player/worker.

This practice ideologically presupposes that everything people do is subject to productive forces and controllable production. The intertwining of games and work, then, suggests explicitly that

work should be more like play but implicitly seeks to make play into productive work via games. Ultimately, we see gamification and its intersection with scientific management as a process that leads to a values collapse—the values of the workplace and the values of play are the same. Before exploring the bullets above, we first provide an overview of Taylorism and gamification, focusing specifically on the creation and control of rules.

### **Controlling the Rules of the Game:**

#### **Taylorism, Gamification, and the Rationalization of Production**

To suggest, as this study does, that gamification is an extension of a century-old management technique might seem surprising. Taylorism (or scientific management), after all, was envisioned as a means of making labour time more productive. Introduced by Frederick Winslow Taylor in his 1911 work *The Principles of Scientific Management* (2006), the processes were designed to address inefficiencies in production systems by breaking them down into component actions, which could be perfected through measurement. Under this system, each discrete action in a production process—each move of the body, each turn of the screw—would be optimized to maximize productivity.

Though Taylor himself sought to rethink scientific management to make it more open to democratized and creative workplaces, Taylorism has been criticized as both authoritarian and mechanistic, reducing human agency in production to the level of cogs in a machine (Nyland and McLeod 2007). Others have attempted to dismiss scientific management as fairly narrow in its scope, though it has been effectively expanded on by other managerial innovations (Paxton 2011). Through these expansions, the principles of scientific management have become both ubiquitous and expected in all facets of modern business, from the industrial to the creative (Black and Mosely 2011). As such, Taylorism has assumed a hegemonic positioning in the world of labour, an unconscious and expected face of our productive lives.

The expansion and acceptance of the scope of Taylorism have been useful, particularly in the realm of information and creative industries, in part by directing the types of information produced and the ways it is interacted with (Brennan 2011). The affinity applicability of scientific management for information production suggests the degree of connection between scientific management and gamification. More readily apparent than this, however, are Taylor's own views concerning the creation and controlling of rules. These views first expressed

themselves in his childhood. As Judith Merkle (1980) explains in *Management and Ideology: The Legacy of the International Scientific Management Movement*:

It is Copley [biographer Frank B. Copley] who notes that Taylor's childhood behavior was marked by passionate attachment to rule structures as a means of social control. He was not a boy who took his ball home when he did not win the game. Instead, he made a practice of devising elaborate rules for the game so that, win or lose, his friends were playing on *his* terms. Once he had harassed his companions into playing according to his rules, insisting on the rightness of his decisions, he was then 'generous' about conceding them the rest of the game. As one childhood friend, who later became an artist, remarked: 'Fred was a bit of a crank in the opinion of our boyhood band, and we were inclined to rebel sometimes from the strict rules and exact formulas to which he insisted all our games must be subjected'. (35)

According to Merkle, this history points to the combination of a New England conscience coupled with Yankee ingenuity—that is, 'righteous' and 'rigorously self-disciplined' coupled with 'mechanical inventiveness' (ibid.). While Merkle's project in this early chapter is to trace the archeology of scientific management, what is important to note here for our project is the game itself.

Taylor and his contemporaries responded to what they perceived as the inefficiencies of labour and power belonging to the skilled tradesman rather than with management (where it belonged). These scientific managers participated in a larger cultural movement that E. P. Thompson (1967) calls 'time-thrift' or 'time discipline'. As part of this disciplining, Taylor and others observed exemplary and fast workers in factories to describe and then prescribe the proper and appropriate actions that one can take. They developed careful procedures concerning not only the task but also the placement of the body in performing the task. This approach disciplined the body in the shop and office. The managers governed by scientivism created complex charts of each action broken into component actions, and those component actions were given a time allocation.

At its heart, Taylorism championed a rationalization of production through standardization of process, which serves as one of the crucial starting points for gamification. Where gamification differs is that it moves beyond Taylorism's emphasis on production in work

environments, particularly industrial production, to examine the ways in which leisure time and work time can be rendered one and the same. Work can be made to seem more like play and, so, potentially more productive through enjoyment, while leisure time can be made productive by turning leisure habits into usable data for production. Consider the analysis offered up by Enterprise Gamification Consultancy (2013), which offers a cursory overview of Amazon's customer reviews, LinkedIn's personal profile percentages, and Yahoo! Answers points system as evidence of gamified interfaces. More complex, however, is the creation of procedural games that embed corporate processes into the games themselves. This type of gamification is often theorized through Bogost's operationalist approach to persuasive game design (2006; 2007). Players subject themselves to the logic of the game, and through participating in the algorithmic processes of the game, those same players become trained. To learn the rules of the game is to learn the (transferable) rules of a corporate process.

Since these early publications, Bogost has subsequently come out against gamification as it is often practiced, most notably in his *Atlantic* article 'Gamification is Bullshit' (2011). In response to the For the Win symposium, Bogost argues that businesses are taking the mysterious power of games and leveraging that power in a poor imitation for sales and marketing. The focus on points and levels prevalent in many gamification approaches rarely accounts for complexity, behaviour, or community. Nevertheless, games for corporate training continue to receive strong advocates in both academic and corporate institutions. In her comprehensive synthesis article 'A Meta-Analytic Examination of the Instructional Effectiveness of Computer-Based Simulation Games', Sitzmann (2011) examines sixty-five independent academic research samples to determine the effectiveness and efficacy of simulation games to teach materials. She concludes, '[s]imulation games have the potential to enhance the learning of work-related knowledge and skills. Overall, declarative knowledge was 11% higher for trainees taught with simulation games than a comparison group; procedural knowledge was 14% higher; retention was 9% higher; and self-efficacy was 20% higher' (520). She notes that simulation game designers are trying to transfer motivational capacity afforded by games to work-related skills, leading her to call for more research in transference. And it is here that we can see a clear articulation between scientific management and gamification—the assumption that games need to be refined to achieve a game-like space to train employees. Not, as play theorists would call for, a game-like space to provide the scaffolding for play. This, of course, has historical precedence: as Nohr

writes: '[o]peration steering, transformation of knowledge as well as adaption to a new medium and a changed rationality concept were played in the "Serious Games" of the 1950s. The game as corporate trial action is a space of operationality, of adherence to rules and variations, of calculatory finesse and complex processuality' (2011: 3). Thus, Sicart's (2011) pointed criticism in his article 'Against Procedurality' should be underscored. According to procedurality, games are tautologically procedural in that they adhere to algorithms and require players to submit themselves to those simulated procedures. This, according to Sicart, is intimately connected to interpreting games as instrumental, and the instrumental nature of procedural games is subject to reason, not to play. Already, academics have critiqued Taylorism and scientific management for industrial alienation, and to this, we have Fuchs's (this issue) strong indictment against the capitalist ideologies of business games and gamification. Within these historicized trajectories of business games and their contemporary applications, we see the logic of science, of the observable, and the ways in which these ideologies inform simulations, allowing for a new, abstracted logic of standardization and rationalization. But fun. Always fun.

### **Defining the Algorithms: Standardized Processes and the Authority of the Game**

Games are algorithmic, and by this, we do not just mean computer games. Games are sets of abstracted rules and procedures. They are, in Rogers's words, 'a clerical procedure which can be applied to any of a certain class of symbolic *inputs* and which will eventually yield, for each such input, a corresponding symbolic *output*' (1982: 1; emphasis in original). Play could be algorithmic, but mathematically anticipating the freedom and uncertainty of play activities attempts to deny algorithmic representation. Games, according to Caillois (1961), are more restricted than play, adhering to strict ludic rules. To learn to play a game well is to learn the rules of the game and perform well within those rules.

Proponents of gamification start from the presupposition that people will want to play games well. This can be seen in the marketing materials that they provide to external facing clients—citations of the ESA numbers concerning how many US citizens play games, how old the average gamer is, and the fact that people like to play games abound (because it's fun). Such presumption assumes both particular privilege and class positioning. Computers themselves ideologically construct the intellectual labour of the middle class; thus, the supposition is that playing these games prepares all expert game players to enter the management classes. However,

that person who runs a successful guild in *World of Warcraft* (Blizzard Entertainment 2004) will still be limited by the material and ideological class systems in which they are subjected; he or she will be unlikely to move from a construction job to a middle management position at Microsoft, for example. Likewise, by relying on computer-based learning, however ‘fun’, gamification carries with a very particular white-collar positioning even when it approaches blue-collar labour. One example can be seen in the various Cold Stone Creamery games, which marshal computer power as a means to teach manual labour: mixing ice cream. Players practice customer service in a Cold Stone Creamery Store, filling mixed ice cream orders quickly and efficiently with the exact quantities dictated by official recipes. These concerns can be taken to an entirely different level, as has been suggested in criticism of McGonigal’s alternate reality game *Evoke*, which sought to address a range of urgent global problems such as access to clean water or sustainable power production by having players—typically college students—suggest business innovations the World Bank can harness (McGonigal 2010). As such, it constructs a view of the player in line with a particular set of class privileges and capitalist ideology: computer access and facility, participation in social networks, ability to access funds for start-up projects, and the belief that capitalism and capitalists are the best source for solutions to whatever ails the world (Waddington forthcoming).

With this constructed player in mind, companies that create corporate training games provide the algorithms of work in the algorithms of play. We are careful to limit our observations concerning corporate gamification to training games specifically. Corporations use a number of games for different purposes, such as ropes courses to form close bonds between team members or The Marshmallow Challenge, which emphasizes creativity and iterative design by asking teams to build a tower with some spaghetti, tape, and string, and support a marshmallow at the top. We classify training games as games that teach employees specific processes or approaches, such as *Stone City* (Persuasive Games 2005) for Cold Stone Creamery, which focuses on portion and ingredient training, or Kognito’s *The Investigator* (2009), which trains HR professionals to conduct workplace investigations. These are both simulations, but into this category, we would also put quiz games, such as Games2Train’s editable question games (think *Jeopardy* or *Solitaire* with words on the cards). Thus, a player can play a game of *Solitaire* on which all cards have information about leave policies, and he or she would then be ostensibly trained in this set of policies. And to add to the legitimacy of this product, the game developer offers ‘The Certifier’,

which enables companies to track results. In other words, these processes are either embedded in the gameplay as a type of procedural rhetoric, or didactically lectured to people, like memorization games or games that passively insert facts into the interface. For the remainder of this section, we focus primarily on simulation training games.

The simulation training games are attempting to enact what Bogost calls ‘procedural rhetoric’, or ‘the practice of persuading through processes in general and computational processes in particular’ (2007: 3). Throughout, Bogost applies a neo-Aristotelian understanding of rhetoric, one that depends on authorial intentionality coupled with an accepting audience about a topic. However, he does address the manipulation of the audience later in his book, noting that in the game *Tax Invaders* (The Republican Party 2004), ‘the player is encouraged not only to reaffirm a conservative position on taxation, but also to practice using a conservative frame for that position’ (108)—procedural rhetoric as ideological training. This, indeed, is the practice of simulated training games. For example, when we played a demo of the simulation game *The Investigator* (Kognito 2009), we understandably struggled. However, our struggles did not stem from lack of content knowledge but rather an alternative approach to conflict and investigation. At one point, one of the authors of this piece was trying to transfer knowledge from playing a popular investigation game, such as *Max Payne* (Remedy Entertainment 2001), to attempt to open doors and avoid talking with anyone. In another round of play, we were not following exact procedure, attempting to talk with characters too soon. To be clear, we were not trying to game the system, so to speak. We willingly subjected ourselves to the ideal player. However, we found that the game did not allow for our different personality types and approaches to bear on the situation, making all of us feel very uncomfortable with these processes.

This game experience points to a number of challenges faced by companies who want to apply gamification for training purposes. First, it assumes that the game processes are ultimately the authoritative agent in the game experience. This is different from the rules being the authority; we explicitly mean the process. In defining the algorithm of the game, the designers are assuming that those same algorithms are employed in our material workplaces. Thus, the challenges of transference from simulation to production line, for example, are mitigated by the simple belief that the process is the same. It is rational. So rational in fact that it is mathematical in any of its instantiations. If the player doesn’t get it, then the player just needs to play the game

again, learning the logic behind the appropriate choices. In many ways, this is what Nohr argues in his examination of the incorporation of respawning character (going back to save points and trying again): '[i]t is imperative to bring the subject to process the repetitive (re-)runs, to adapt itself to the structures of the computer and its decision trees, and to naturalize the philosophy of efficiency according to (ergonomic) procedures of regulation and the neoliberal promise of improving the effectiveness of the subjective biography of action' (2013: 83). In other words, simulation games are a cheap and low-risk means of ensuring that player-workers learn the processes. If the player-worker makes a mistake—using too much vanilla ice cream as a Cold Stone Creamery worker—then the player can play again and again, meeting the expectations for input and output.

Second, simulation games of this type suggest that processes are both static and achievable by all involved. This mimics many of the core beliefs of contemporary scientific management, such as Lean Process Improvement. One of the fundamental principles in Lean Manufacturing is 'Standard Work', and it is best exemplified in the pig drawing exercise used in Lean training ('Wabash' 2005). In this exercise, all participants are asked to draw a pig in a prescribed amount of time, and the skill levels range from excellent to very bad. Then the group is given a set of instructions to draw a pig, such as 'draw a circle', and 'draw a sideways 3 for the ears'. At the end of this process, everyone's pigs look similar, and this norms the group. What is sacrificed is the outliers, which means that the people who were excellent are also normed to the group. And this is the goal: Standard work should always ensure that everyone is producing the same and the job of managers is to manage and improve the group. This is, of course, different from Taylorism, which looked to the best and codified those processes for everyone to strive toward. Standard work assumes that static operations and normed workers are easier to plan around and manage. So too, we see this form of standardization occur in simulated training games. Processes trump brilliant interpersonal skills. They ignore emotional taxation. Processes can be mastered. However, in the case of computer games developed for training, processes cannot be improved upon because there is no feedback loop in the logic of the game.

Third and finally, these games extend where the rules apply and where the games are played. Many companies that make games for corporate training purposes celebrate the fact that employees can play these games at home. Implied in this promise is free training (masking, as it does, the cost of training). Even if the games are played at work, there is a sense that they will

still be more cost effective because people will play them at their desks—no need to pay a trainer, pay for food, or even break the workflow. Here's the challenge of this promise: The collapse of labour and leisure in game space makes the act of *play* fraught. While people who are told to play these games for training are more likely to grind through training levels, others who opt into training games may play around in the universe. They may decide that there needs to be more ice cream. They may decide to purposefully choose the sexually inappropriate comment in a dialog box. They may choose, to use McKenzie Wark's (2007) terms, troll or trifle in the game space. Or, possibly worse, players may lose. 'To be a gamer', Wark writes, 'is to come to understanding through quantifiable failure' (35). Or, to paraphrase Juul from *The Art of Failure*, people who seek out games, who like to play computer games, seek out failure because they seek out challenge (2013: 5). Yet the algorithms of these games and work do not account for the outputs of failure or the inputs of player subversion. If a player fails at a training game, then the player is at fault—she does not understand the content or she has a bad play style—it's not the game's fault. Thus, in the logic of gamification, the simulation stands in for the values of work; therefore, this approach suggests that if a worker fails at work, it's the worker's fault rather than corporate responsibility (a topic we return to later in this article). We know this because gamified training can and does collect a tremendous amount of data concerning player action and this data can be queried for any number of purposes from player performance to player errors and even time on task.

### **Data-Generating Play: Rationalization, Standardization, and the Work of Play**

Taylor-based scientific management and gamification share a focus on the rationalization of labour processes. In both, labour is broken down into component parts that can be optimized and standardized, and in both, this analysis is completed through a process of data collection that influences the design and implementation of work and training processes. While this rationalization of player/worker performance can effectively identify efficient processes, it can do so only in a general way, which is to say that such analysis of work tends to identify averages and generalities; rationalization can identify the most efficient process for average employees, but it cannot identify the most efficient process for each employee. This is a distinction that, in highly regimented work environments, can result in employees being forced to complete tasks

following the approved processes rather than the processes that may work best based on their particular abilities or skills and results in the hampering of worker-driven innovation.

Producers of employee training games offer data-driven approaches as a net positive, providing highly rationalized, scientific evidence of the impact of such training. True Office, a maker of mobile training games, says their company ‘transforms mandatory compliance training into a fun, intelligible, and quantifiable experience’, and bills their products as ‘compliance games that help companies identify risk & save money’ (True Office 2013). While promising employees the opportunity to learn in a fun, story-driven interactive environment, the company promises quantifiable results for employers as ‘[t]he gameplay generates powerful, real-time analytics that assess risk and measure effectiveness to produce a tangible ROI [or Return on Investment]’ (True Office, ‘About’, 2013). Such results may appeal to employers, but the gameplay can require some training for itself. In a playable demo provided by True Office, ‘Information and Data Security: Employee Responsibility’, players are supposed to aid in identifying a data leak. However, the policies and practices tested by the game are not themselves embedded directly in the game, and players who have not read the included manual or undergone prior training may not do well at the game as the interactive component largely tests rather than trains.

Additionally, the drive towards percentage points, incremental increase, and benchmarks that underlies much of the push towards gamification of employee training does not necessarily produce the intended or desired results. Standardized testing, particularly in primary education but in higher education and other areas as well, has become a contentious topic in part because of the tendency of these types of measures to best evaluate test taking skills rather than other types of practical or theoretical knowledge. Like standardized tests, gamified training often most directly tests whether the player/trainee has effectively learned the rules of the game, not whether he or she will be able to appropriately process and respond to a given situation. This points to a problem of transfer, but it also suggests the difficulty in abstracting knowledge in a way that is meaningful or even useful for workers. Of course, the inherent racial, cultural, gender, and other biases often embedded in standardized tests should also give pause regarding the broad adoption of this type of rationalization. In other words, systems of representation embed in them cultural biases that are ideological. In standardized testing, this means that tests are used to sort groups of people based on measurable ability, which is then used to justify socio-economic inequalities

(Au 2013: 12-13). Knowledge tested, according to Au, attends to mediocrity because the system is unable to respond to the variety of learners and students. Games for training purposes have much in common with standardized tests, we would contend. They predetermine what skills are needed and use the same test to account for all of the workers who are trained under that system.

The processes by which work is rationalized and evaluated—both under conventional Taylor-based management practices and under gamification—are also potentially problematic. The observation necessary to complete analysis of work can easily transition into long-term surveillance, a simple enough feature to integrate into most types of electronic games. While this surveillance may be benign, used only as aggregated data or treated anonymously, employees may not always be clear on what data will be collected and how that data will be used. Because of this, potential surveillance, possibly tapped again at any future time, becomes a constant invisible threat.

People alter their behaviour when they are observed or believe they are observed, a problem that has long dogged both managers and scholars and inspired both Jeremy Bentham's now-infamous Panopticon (Foucault 1975) and George Orwell's *1984* (1950). The suggestion of observation can even be abstract. Researchers found in two separate studies that displays of images of eyes significantly impacted cooperative behaviour. In one, a pair of eyes was placed on an honesty box intended to collect money for drinks in a university coffee room (Ernest-Jones et al. 2011); in a second study, posters featuring images of eyes were displayed in a university cafeteria (Bateson et al. 2006). The honesty box with eyes collected nearly three times as much money as the box displaying a control image, and in the cafeteria, the rate of littering was halved by the display of eye posters, a result which was found to be independent of whether or not the eye posters included an anti-littering phrase or slogan.

Behavioural changes may be a desirable outcome for managers deploying gamified training or work processes, but these changes may be difficult to predict or measure. More importantly, in cases where participation in the game activity is optional, data collected will not only be skewed by the limited pool of participants but will further be skewed by participants' sense that they are being observed. Potential use of this data includes efforts to rationalize policies for workers, such as altering work processes or requiring additional training to cover particular topics, and should be considered carefully not only because of the ethical implications

of surveillance or the potential loss in employee autonomy or innovation but also because of the partial nature of such data.

### **Infiltrating the Magic Circle: Embedding Labour Values into Leisurely Pursuits**

One of the more troubling aspects of gamification deployed as a form of scientific management is the extent to which it can facilitate the collapse of values between play and work and player and worker. In this collapse, the processes and pleasures of work and play are not only entangled, but in fact become—or at least shift towards being—indistinguishable. Similarly, worker/players are rewarded in play and work for the same types of behaviours, skills, and practices. This collapse is not unique to scientific management practice; it has a long-running precedent in the often dubious ‘hobbies and interests’ resume section advised in some fields in which those with appropriately interesting yet relevant hobbies may be professionally rewarded for their out-of-work pursuits. However, the broad implementation of data-driven rationalization of employee/player behaviour both in gamified work and in games ostensibly played for leisure further facilitates this collapse and, in some ways, may encourage employee/player investment in it.

Again drawing on the example discussed earlier, the gamification project, *Stone City* (Persuasive Games 2005), was commissioned by ice cream parlor chain Cold Stone Creamery. The game is ‘an employee training game to focus on the issue [of] portion sizes and their relationship to profitability’ (Persuasive Games, ‘Stone City’ webpage). The game is a training answer to a corporate problem of hard-to-calculate serving sizes. Barbara Rose reported on the game in the *Chicago Tribune*, observing of one player’s experience that, ‘[w]hen the game ended, it told him to the penny how much his mistakes would cost the store if he didn’t correct them’ (Rose 2007). *Stone City* was made available to employees via intranet, and employees downloaded and played it in their off hours. As Reena Jana (2006) reports, ‘[t]he company says more than 8,000 employees, or about 30% of the total, voluntarily downloaded the game in the first week. “It’s so much fun,” says Holshouser. “I e-mailed it to everyone at work.”’ The game provides the system for disciplining the worker, and the worker subjects herself to the system for a reward structure that is fun and recognizable, that of the computer game. In this regard, gamification plays as a sort of white-collar fantasy about not just how games work and what play actually means but also about the nature of how one becomes a leader and innovator. In this

regard, an uncritical use of gamification risks equating gameplay with leadership and IT skill, even as it extends managerial desire for control into areas previously separate.

The success of these games further collapses the delineation between labour and leisure, between work and play. As Wark laments in *Gamer Theory*, ‘[p]lay was once the battering ram to break down the Chinese walls of alienated work, of divided labour [. . .]. Play is no longer a counter to work. Play becomes work; work becomes play. Play outside of work found itself captured by the rise of the digital game, which responds to the boredom of the player with endless rounds of repetition’ (2007: 16). To this, Ruggill and McAllister add, ‘[c]omputer gameplay is capable of producing both wealth and goods—not to mention different kinds of knowledge (e.g., spatial, ludic, problem-solving, and so on)—and thus seems as if it is inescapably work, perhaps even labour’ (2011: 91). This collapse of work and play into game is important to this critique precisely because of the theories and critiques of scientific management. Consider Taylor’s maxim: ‘[i]n the past the man has been first; in the future the system must be first’ (1911: 7). This is perfected in the computer-as-training game.

Training and learning games are not the only games that rely on an adherence to systems or that encourage the cultivation of work related skills. The massively multiplayer online role-playing game *World of Warcraft* is frequently cited as facilitating the cultivation of soft skills, particularly leadership and interpersonal communication skills, that are appealing to employers. At SXSW Interactive 2013, Indiana University Communications Officer Brian Hawkins presented a talk on the leadership lessons he has learned from playing the game; according to Hawkins’s abstract, ‘I didn’t set out to learn how to lead in *World of Warcraft*, but I did. It has paid off in my professional career more than any other training—and I had one hell of a good time’ (2013). Hawkins is not making an anomalous claim. In an article for *Wired*, John Seely Brown and Douglas Thomas (2013) suggest *World of Warcraft* may be an ideal crash course in leadership and management, and *Forbes* (Chiang 2010) has also reported on the way video gaming may develop professional skills. The same people that are most successful in MMORPGs then, may be the same people who are most successful at corporate jobs—for the same reasons.

Entire companies have developed around the gamification of out-of-work social interactions. Klout, one of the best known of these, scores users’ social media presence using an algorithm that evaluates influence. This ‘social’ influence, though, is also of professional value,

both for Klout's users and for the company itself. Users can score free 'Klout perks' like advance movie passes and product samples, which companies, of course, pay to distribute to Klout's list of allegedly powerful social media influencers. In some fields, particularly those that are communications and public relations related, Klout scores are sometimes treated as a valuable metric, which is to say that Klout's 'social' metrics can be used as a measure of professional influence and expertise. That Klout scores can be deliberately gamed presents another example of the ways in which game systems can be leveraged for professional advantage (Rosales 2013). Where Klout, *Stone City*, and the celebration of leadership skills cultivated in MMORPGs converge is in their encouragement of the unified deployment of gamification and game-derived principles and strategies across both labour and leisure. While the distinction between these two as dichotomous may not be as meaningful in the current labour economy as it was in Taylor's era, we would do well to interrogate carefully what is lost or potentially gained when we allow forced fun to creep into work and game strategies to regulate our off hours.

### **Player-Workers: The Values of Work Are the Values of Play**

While much of the literature on gamification has focused on adapting work environments, there are also considerable implications for consumers and citizens as well. We question the underlying assumptions about games and play, which rely on highly procedural and simplified practice, that underpin gamification's usefulness. As a process, gamification relies on two key additions to the Taylorist model: first, that work can be made more productive by duplicating things that are fun in non-leisure circumstances, and second, that play can be made productive by the compulsive and compulsory generation of data which can be fed back into production processes. In both cases, the act of 'play' is only superficially about fun. Instead, its real focus is the generation of data and the norming of leisure time as something that should be productive. In the first case, the hope is that the gamified training devices, marketing materials, and so on will mimic fun well enough that workers will want to participate, perhaps even when they are off the clock. Coldstone Creamery's various gamification experiments serve as excellent examples of this.

As every student knows, things that attempt to make learning fun do not always succeed. In these cases, gamification results in something like a photocopy of fun and games, and just as with photocopies, each version loses a little detail. More problematic for workers, of course, is

the question of what happens when gamified processes succeed and actually result in something so fun that work can creep into leisure time. In such moments, unless workers are compensated for the time spent, companies experience what is essentially a free boost to production. The more successfully fun the game, the larger the uncompensated productive boost.

In addition to the business training games available within organizations, we see crossover of what are functionally training games into the consumer market. And even more interesting in cases like this is that some of these games are corporate branded and emphasize skills necessary to those specific corporations. This was the case with Cold Stone Creamery. The 2005 *Stone City* (Persuasive Games) received tremendous publicity following its internal release. Then, in 2009, a new game entitled *Cold Stone Creamery: Scoop It Up* (Zoo Games) was released for the Nintendo Wii. Sales were modest at best; *Cold Stone Creamery: Scoop It Up* sold approximately 60,000 copies by the end of 2013 (VGChartz 2013). For any other game, those sales would be considered a failure, but because the game is essentially a workplace training game in consumer packaging, any sale marked both a boost to productivity as potential employees might arrive with some training, as well as bonus revenue for the franchise.

This leads to the second case of gamification—rendering leisure time productive. The Cold Stone case is only one example. In other cases, leisure time is typically rendered productive via the gamified use of social media as well as mobile and internet technologies. The data generated via this style of gamification can contribute to better formed production, to consumer generated marketing, as well as to better understanding of consumer behaviour in a variety of contexts. Here, the mobile app *Foursquare* (2014) serves as a compelling example of the ways in which gamified practices extend beyond the workplace. Consumers and workers alike contribute a range of data, including location, time and frequency of visits, and reviews, all of which can provide considerable benefit to businesses.

In both cases, the data and its uses are varied. Data, too, can be repackaged and resold, extending the profit of whoever gathers it, though, of course, gathering data is by no means a guarantee of easy use. Moreover, the range of social forces that makes participation in gamified practices compulsory expand. Not only is one's employment often predicated on participation, but the invocation of social networks also contributes to the need to participate while the heavy reliance on mobile technologies may generate and provide data beyond what participants are aware of and at times they may not consider ideal. Crucially, the combination of gamification

with these technologies renders every act of communication a potential moment of profit, though rarely for the producer of the communication itself. In such cases, gamification exemplifies the dangers raised by communicative capitalism suggested by Jodi Dean (2010) and rarely discussed by proponents of gamification. Dean defines communicative capitalism thusly: ‘I take the position that contemporary communications media capture their users in intensive and extensive networks of enjoyment, production, and surveillance’ (4). In essence, communicative capitalism is the exploitation of communication for capitalist gain. Indeed, gamification is communicative capitalism *par excellence*, promising that they player will enjoy the process of acting and producing in these simulated spaces, and that these processes provide multiple metrics for surveillance. And these forms of communicative capitalism, these games for training, promise a transference to industrial capitalism—doing well in the game ensures that better players become better workers in the intellectual and manual labour workforces.

### **Conclusion**

Scientific management in corporate settings is still embraced as a logical, rational approach to the challenges of large workforces, market demands, and corporate strategy. Indeed, scientific management is so ideologically embedded in corporate management approaches that, in many ways, the very term ‘management’ presupposes scientific rationality. What gets introduced via gamification, however, is the element of enjoyment as the obfuscating factor in training and surveillance. In their article ‘The Plays and Arts of Surveillance’, Albrechtslund and Dubbeld conclude quite strongly that ‘[t]he time has come for Surveillance Studies to recognize and take seriously the fun side of surveillance’ (2005: 220). Albrechtslund and Dubbeld’s argument attends to the computer game in the entertainment industry, arguing that surveillance is used to iteratively make the hedonistic pleasures of play more and more enjoyable. Those same technologies in workplaces are morphed and bastardized—under the (poor) guise of hedonism, gamified training attempts to harness player motivation to improve the player/worker (not the game or the business system). Further, play becomes subservient to work; the very act of codifying play into observable metrics ensures that play loses the power of intrinsic motivation and imagination. The hierarchy of business training games reads thusly: play belongs to games, games belong to algorithms, and algorithms represent the intellectual and manual labour processes of high stakes economics.

We are not naïve enough to believe that critiques of gamification will stop future gamified projects. Yet we would argue for an approach that is less game and more play. To play is to innovate, to frame shift (as the linguists would say; cf. Geertz 1983; Goffman 1986) by asking players to navigate their many subjectivities by layering them (for example, being a mother, an elf, a worker, and a citizen) or by hybridizing them in a flow state. Play requires imagination and rules. But differently from games, within the rules of play the imagination and rules are plastic, changing to situational exigencies that are defined by actors, culture, materials, and ethics. For this, we look to Raftopolous (this issue), who posits a framework for game design in business settings that accounts for players as individual, ethical, and situational beings. Further, if surveillance data must be used (and we know that it will continue to be used in our surveillance society), then that data can be used to critique the system at large, not just the ‘cogs in the machine’. For example, Conway’s article in this issue points to Wall Street investors’ actions within gamified networks, which led to the financial crisis of 2007/2008. In a surveillance game that assesses whether those investors were performing well, the answer was unequivocally ‘yes’. Using that same data, however, to critique the financial system as a whole, we are provided with a different picture that suggests both economic and ethical weaknesses in much larger systems. The iteration and training, then, should not focus on the individual, and it should not focus on standard work; it should focus on systems of labour that enable ‘quality of life’ to be the value-added metric of success.

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<sup>i</sup> The term ‘scientific management’ was not actually popularized until 1910, when Louis Brandeis held a conference and settled on this phrase to encapsulate the many voices working in this area (Drury 1915: 16-17).