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Gamification and multigamification in the workplace: Expanding the ludic dimensions of work and challenging the work/play dichotomy

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Abstract

Gamification approaches in the workplace are encountering strong and passionate critics as well as dedicated proponents as the very notions of games, play, and work are being reconsidered and reframed. Workplaces are incorporating increasing varieties of concurrent and emerging games; some of these games are directly linked to how employees are projected to produce value for an organization and are paid and promoted, while others can be recreational, educational, or even medical (involving health diagnosis or treatment). In effect, many workplace settings have become the platforms for multiple, sometimes interlocking sets of rules, enforcement mechanisms, and related gaming structures. "Multigamification" approaches explicitly recognize game-related complexities and interactions, and provide means for mitigating cognitive overload, character conflicts, and other concerns. Participants can be immersed in technology-enhanced games that infuse social, medical, and economic themes either as a part of strategic initiatives in gamification (and multigamification, as described in this paper) or through emergent and less-tightly structured efforts. The overall wellbeings of organizational participants may relate in some way in how they engage in specific games as well as to how they deal with multiple games either in sequence or simultaneously; one or more games can be designated as "work" and others as "play," sometimes reflecting traditional narratives that contrast labor deemed as "productive" with recreation. Developers can become active in exploring and tailoring games for specific workplace contexts, addressing issues of intergame compatibility, theme interaction, and synergy as well as participant overload. Multigamification can involve forms of competition among the games themselves as they compete for the limited attention of participants. This paper also addresses the challenging policy and design issues related to workplace games' effects on participant wellbeing. Emergence of nested and overlapping gaming spheres can increase the complexity of organizational life as well as expand its ludic dimensions.

Keywords: gamification, surveillance, workplace recreation, serious games, multigamification, employee wellbeing, multitasking

Introduction

Workplaces are the platforms for an assortment of sequential and simultaneous games, whether or not game developers, human resource managers, administrators, or employees themselves work explicitly to model and adapt them. For example, many employees compete for various positions and promotions in organizations; organizational rule structures serve to construct, constrain, and evaluate their activities, thus establishing a kind of game. In the same timeframe, employees can be partaking in "casual games" using mobile devices (Anable, 2013), engaging in "quit smoking" games, or participating in workplace fantasy sports leagues (Howie & Campbell, 2015; Oravec, 2002). For instance, discord could arise in settings in which employees' efforts to compete in fantasy football may serve to undermine their efforts to succeed in obtaining bonuses or promotions. "Games" are human systems of rule setting, enforcement

mechanisms, and emergent processes, along with related forms of rule-following and role-taking behavior. Activities involving play, with its emphasis on creativity, role experimentation, and exploration of environments and artifacts, can work in conjunction with gaming; however, some tightly-structured games may leave less room for ludic behavior and certain kinds of contests can provide less opportunity for emergent activity. By viewing the workplace itself in terms of overlapping and emerging games, developers and participants can be more sensitive to potentials for game-related overload as well as for conflicts and contradictions among roles and rules.

This paper outlines and analyzes a wide assortment of critiques of current strategies for gamification in workplace settings. It also addresses the potentials for "multigamification" approaches, initiatives that explicitly recognize and capitalize on multigame and organizational environment synchronicities and interactions. Although "gamification" has been given an assortment of definitions in recent years, it is generally used to characterize approaches through which video games and other technology-enhanced gaming systems are being used to transform workplace activities. Some approaches to gamification make strong differentiations between games and contests, such as in the paragraph below, while other approaches incorporate both:

Gamification can be differentiated from simple contests ("the best salesperson wins steak knives") because gamification seeks to use elements from designed games (such as video games, board games, and sports) to enhance the fun or effectiveness of a game in a work environment... A game is designed when it is purposefully created with reinforcing contexts, interactions, and mechanisms that create a more immersive feeling of play. (Mollick & Rothbard, 2014, pp. 7-8)

The concepts and related practices involving gamification are in flux as many projects move past the demonstration and trial stages and become more widely disseminated. The upcoming analysis will outline that some of the recent critiques of gamification efforts relate to their current experimental status, with research on the effects of gamification on wellbeing just emerging. The prospects for having careers depend on the capability to engage productively with game-related initiatives that have only recently been field tested may itself be unsettling and affect the wellbeing of employees.

Multigamification approaches have been less well developed than those of gamification (the latter in which the focus is on particular games or approaches), although many developers in effect consider the multiplicity of situated activity structures in their workplace gamification efforts. An assortment of human environments including schools, community centers, and religious organizations support game-style structures; however, the confines established by legal and social stipulations and constraints involving workplaces make them especially suitable for explicit and strategic multigamification initiatives. For example, customer experience gamification often has a strong linkage to employee interaction, and integrating employee-related gaming experiences with those of customers can decrease confusion and overload in the workplace. Many games that link consumers to organizations are being used to enhance customer loyalty and buyer motivation (Conejo, 2014; Sigala, 2015). Employees can be playing one kind of game with customers at the same time they are immersed in one or more other organizational games, often resulting in conflicts and mixed messages; resolution of these problems may require the kinds of game and activity mapping that multigamification efforts can provide. As discussed in an upcoming section, complex questions arise of what participant "wellbeing" constitutes in workplace environments in which multiple games are integrated. Participants can indeed be successful in some gaming efforts while undermining their position in others, potentially increasing their levels of anxiety, confusion, and cognitive overload.

Some workplace gaming initiatives also occur at an intimate level as individuals participate in health-related games (Schott & Hodgetts, 2006), potentially with immediate and long-term impacts for their physical and emotional wellbeing. Employees can use biometric feedback in the context of game-specific rule structures to help with weight concerns, smoking cessation, and related contexts rooted in medical or psychological issues; matters of success and failure (as well as overload) in these health-related contexts can have especially important consequences for individuals' personal interests as well as those of the organization of which they are a part. Multigamification perspectives can help in addressing how "success" and "failure" in some organizational games can affect other games, including games more clearly and precisely labeled as "work." Juul's (2013) *The Art of Failure* outlines some of the negative as well as positive aspects of game play, with an emphasis on video games that include salient visual and aural components. As noted by philosopher John Dewey (2008 [1933]), failure can be "instructive" (p. 206) and elicit insights as to how to proceed in the future, if one is indeed allowed to continue; continuation may not be the outcome in some organizational settings in which failure can entail employment termination. Workplace gaming challenges may appear difficult, but there are many demonstrations of achieving

successes despite simultaneous and overlapping pursuits. For example, Kopec (2014) describes chess masters who are able to win many simultaneous chess games even while blindfolded; however, few of us have such amazing proficiencies. Design of culturally-appropriate and situation-sensitive technology-enhanced games may afford opportunities for optimum human expression in workplaces.

Research Goals and Methods

This research analyzes a set of critiques of some current gamification approaches, drawing from literatures that include the psychological sciences and sociology as well as emerging game studies sources. It utilizes narrative analysis approaches that recognize the complexity of narrative accounts and attempt to focus on selected dimensions (Gubrium & Holstein, 1997). This research also explores emerging directions in multigamification, for which there is still relatively little research production. The articles, presentations, and books incorporated in the research efforts in this article were elicited through exhaustive reading of the relevant literatures, which are distributed in an assortment of academic databases and rosters of professional group proceedings. This research has the limitation that the critiques and other sources analyzed could not have been extracted more systematically, given their scattering in recently-published articles, books, and conferences. This research is designed to shed light on these questions:

1. What themes and debates have been developed in academic and practitioner critiques of gamification initiatives?
2. What multigamification initiatives (efforts that explicitly recognize and capitalize on multigame and organizational environment synchronicities and interactions) are emerging in academic and practitioner research and development efforts?

This research also analyzes the stability over time of the work/play dialectic in the light of the gamification and multigamification initiatives examined in this article, using narrative analysis methods. The research addresses how the work/play distinction can be challenged with the embedding of technology-supported games into workplace activities.

Some Critical Responses to Gamification

The term "gamification" was reportedly coined in 2002 by Nick Pelling, a British video game developer (Marczewski, 2012), although traces of the term were apparently located in writings from the 1980s. Research and development efforts to frame gamification approaches have expanded dramatically in the past decade. Utopian perspectives on workplace gamification present optimistic views of participants who are able to conduct everyday activities in organizations immersed in pleasant and mind-enriching multiuser or individual game environments in which their playfulness and creativity would have large roles. In turn, dystopian scenarios for workplace gamification can also be readily crafted, involving themes of confusion and overload as participants desperately struggle to survive in complex and often-changing gaming contexts, much akin to the *Hunger Games* (Collins, 2010) but enacted in modern workplace settings. In dystopian approaches, frazzled participants may even be forced to appear that they deeply enjoy their ordeals, thus involving aspects of "emotional labor" (Hochschild, 2012) as well as intense cognition. Substantial opposition to gamification as a managerial strategy has been voiced in the past few years: for example, a *Wall Street Journal* article construes the notion as "an ugly neologism that has seen terrific hype and terrific backlash in Silicon Valley over the past few years" (Manjoo, 2014, para. 5). Juul (2011) characterized a "gamification backlash" as early as 2011, when many well-funded gamification efforts were just emerging. Some of the critiques of gamification (with an emphasis on workplace contexts) have fallen along the following lines:

1. The "gamification is bullshit" critique: In a widely-cited conference paper as well as subsequent writings, Bogost (2011, 2015) has outlined the notion that gamification undercuts some of the emergent processes associated with emotionally involving and playful gaming, generally replacing these more spontaneous initiatives with approaches that can be domesticated and monetized by organizations. The "bullshit" term is linked by Bogost with its use in Frankfurt and Wilson's (2005) treatise *On Bullshit* in which it is used to signify coverups and thinly-disguised prevarication, which Bogost asserts is common in many efforts to profit monetarily from gamification.

2. "Ludic engineering" concerns: Some critiques relate to the potentials for "enforced merriment" or "mandatory fun" associated with gamification. Mollick and Rothbard (2014) describe some of the conflicts and contradictions inherent in strategies that impose or require participant motivation and emotional

involvement. As in the dystopian scenario above, participants may be required to conform to game developers' notions of appropriate emotional response rather than to what emerges through participant interaction. Game participation (especially in multiplayer and immersive platforms) can involve complex emotional elements that are just being researched (Waern, 2011), so the engineering of emotional reactions involving "fun" can be challenging.

3. The "zombification" perspective: Conway (2014) presents the idea that gamification strategies often ignore the participants' "context and innate psychological needs," problems that may be mitigated somewhat through motivational psychology and user-centered design approaches. Conway outlines how gamification "must not only transform the way the user is evaluated and rewarded but also the activity the subject is tasked with performing" (p. 129).

4. Construction of gamification as being akin to Taylorization (work routinization): Industrial engineer Frederick Taylor's Scientific Management approaches in the early 1900s were instrumental in steering many industrial managers toward distilling and reframing supposedly essential aspects of work systems. Some of these strategies migrated to other forms of work, including software programming (Kraft, 1979). Efforts to transform often-implicit workplace system components into explicit sets of rules can serve to "routinize" the activities of the individuals involved, often with the effect of removing their current spheres of workplace discretion and initiative. DeWinter, Kocurek, and Nichols (2014) relate Taylorization to gamification efforts in terms of their work routinization approaches, outlining the potential for the "capitalist appropriation of play" as managers design systems to profit from the exploratory and creative aspects of employee behavior. Such historical analogies and contrasts can be especially powerful forms of critique. For instance, Nelson compares gamification to the socialist competition strategies of the last century:

Lenin [1917/1963] proposed a theory of "socialist competition", in which workers, groups of workers, or factories would compete with each other to motivate greater production. A wide variety of experiments followed. A factory might be awarded points for its performance, and win commendations as it surpassed various point thresholds. Teams building a bridge could compete to see which side progresses fastest. Borrowing a symbolic-motivation strategy used by armies, particularly productive factories or workers might be awarded a medal such as the Order of the Red Banner of Labor. (Nelson, 2012, pp. 23-24)

Today's symbolic gaming awards such as badges may indeed be framed as having parallels to Lenin's medals, although they may acquire more constructive and affirmative meanings in some current organizational contexts (as described in Hamari & Eranti, 2011). Related forms of Taylorization and associated competitions can be distilled from the reported experiences of hotel workers at Disneyland in the US:

Employees in the Anaheim hotels are required to key in their ID when they arrive, and from then on, their production speed is displayed for all to see. For instance, the monitor might show that S. Lopez is working at an efficiency rate of 37% of expected production. The screen displays the names of several coworkers at once, with "efficiency" numbers in green for those near or above 100% of the expected pace, and red numbers for those who aren't as fast. (Lopez, 2011, para. 6)

Lopez (2011) reports that some of the workers have labeled this system as an "electronic whip" (para. 3), harkening to oppressive workplace situations from centuries ago.

5. Prospects for surveillance: Potentials for the construction of "quantified selves" with the numeric data collected from games have been analyzed (Whitson, 2013), with gaming initiatives in effect working in conjunction with surveillance and employee individuation efforts in collecting and analyzing data. The experimental nature of many gamification efforts can even intensify these data collection initiatives since increased levels of information may be needed for the conduct of research. Special dangers relate to the collection of information about employees that is generated in such experimental efforts as pilot gamification initiatives, since increased levels of stress or uncertainty may result in aberrations in participant behavior.

6. Issues involving game plots and characters: Interactions among characters in games can also affect employee wellbeing, as overload or character conflicts arise; for instance, individuals may need to perform an activity that is out of character with their roles in another game with which they are simultaneously involved. Game participants may be given the affordances of avatar or other character

selection, while others may be assigned roles as needed by organizations; both of these options can be problematic as participants' role choices can violate various organizational rules or as adopting certain organizationally-approved characters could potentially be uncomfortable for them (Oravec, 2012a). Condis (2014) outlines some of the difficulties in designing non-biased gaming environments that incorporate themes drawn from popular culture.

7. Emphasis on certain commercial game approaches: Some initiatives associated with gamification are apparently attempting to find a few games or approaches that can be readily packaged and marketed, thus eliciting higher economic returns than specially finetuned and carefully implemented organizational efforts. A pioneer in gamification has characterized current approaches as "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" (Deterding, 2014, p. 306). Bogost (2015) coined the word "exploitationware" for some of the commercial products that have resulted from gamification.

8. "Technological imperatives" and emerging "gamification evangelists": Substantial investments in gamification on the part of corporations, educational institutions, and individuals may engender "technological imperative" perspectives that assume that it is inevitable that certain kinds of technology-enhanced games will soon be injected into many facets of everyday life. The context of the gaming industry itself has thus been an aspect of some critiques of gamification, with movement to gamification approaches posited as a means to increase the often-volatile profits of gaming organizations. Many technology-enhanced gaming companies are today currently experiencing financial success, so the desires to expand into workplace gamification may not be immediately based on survival; however, video game developers and producers have encountered substantial variations in popularity in the past few decades (Zackariasson & Wilson, 2012), so the managerial memories of market droughts may still be fresh. Thousands of enthusiastic students have indeed been trained in game development in higher education institutions in the US, Canada, Europe, and Asia (Juil, 2013), providing the means for organizations to transform ideas about gamification into specific workplace strategies. Emergence of sizable numbers of eager "gamification professionals" can trigger worries that over-enthusiastic adherents will impart gamification strategies and perspectives even when they are not in keeping with the needs of workplace participants.

The critiques outlined above are serious and each target challenges that will be daunting for developers and participants even after they accumulate more research and implementation experience. Callan, Bauer, and Landers (2015) explore some related aspects of the "dark side" of gamification, outlining how a "rush to be part of the trend" is resulting in applications of gamification in some organizations without a deep consideration of how the efforts link with other organizational objectives (p. 554). Multigamification efforts relate to these critiques by recognizing that games are being conducted at many, overlapping levels in organizations, including some that involve the movement of capital as well as emergent and less monetized efforts of employees to maintain interpersonal connections and stay sane.

When Games Compete for Attention: Multigamification Scenarios and Multitasking

Game development and participation occurs in the context of complex organizational realms. Labeling some games as "work" and others as "play" can signal larger managerial messages but may not reflect the entirety of the organizational contexts involved. Play can indeed be as important for the organization as work in many contexts, especially in chaotic or disturbed environments in which it may serve to relieve stress and increase employee focus.

Mapping potential interactions between and among games can be critical in multigamification efforts. Forms of game intersection include time and identity overlay. In time overlap, games are coterminous or overlapping, with participants required to engage in significant multitasking. Identity overlay can occur when individuals are linked with characters in two or more games in ways that they find confusing, uncomfortable, or constraining. Games may be intentionally embedded for an assortment of reasons as well, with "games within games" providing less of a burden in terms of training and initiation. Providing warnings or notifications that a participant's attention is needed for another game may help in reconciling the demands and requirements presented by the various games.

Issues of multigamification-related overload (with multiple games producing cognitive overload) may become severe in particular cases. For example, an employee who is participating in a workplace game

designed to help her quit smoking at the same time she is participating in an online game course that teaches accounting could also be participating in a multiplayer sales game to obtain a bonus. The fact that the employee also has to participate in workplace games to secure her upcoming promotion adds another level of gaming. When overload occurs and for whom overload is especially problematic are issues for which research is just emerging. Individual variations in human memory retrieval may play roles in how players confront complex gaming situations (McDermott, Bavelier, & Green, 2014). Educational games can involve complex, immersive aspects as well as entertainment games (as described in Waddington, 2013), so coupling education with other forms of workplace involvement can also be problematic for some individuals in terms of overload.

Self-awareness of individual capabilities for game-related multitasking can enable individuals to utilize their multitasking efforts to their highest advantage (Bannister & Remenyi, 2009). Multigamification approaches can provide the means for participants to do a metacognitive inventory of their own habits and preferences in terms of multitasking, which may change over time along with various environmental pressures (Oravec, 2013). For example, some individuals are very comfortable in texting or playing casual games while walking or driving while others avoid such intersecting activities. Discourse on such inventories among employees and managers can also aid in developing reasonable social expectations for multitasking in various contexts other than the physical workplace, such as telecommuting, in which homelife activities such as raising children and dealing with household upkeep issues simultaneously with organizationally-assigned tasks may result in stress. Developers and administrators of organizational training systems may desire otherwise, but trainees in these contexts will probably still find ways to engage in multigaming, particularly with such entertaining accompaniment as multiplayer video games. Hence, integrating metacognitive exercises involving multitasking into training and educational environments may enhance participants' abilities to thrive in a variety of complex and demanding conditions.

An Organizational "Marketplace of Games"?

In the 1800s, philosopher John Stuart Mill (1982 [1859]) developed notions that have been crystalized as a "marketplace of ideas" (although Mill did not directly use that phrase); cognitive entities in effect compete for the attention of individuals and groups. In a comparable manner, a marketplace of game opportunities is emerging in workplaces, and the decisions of individuals as to how to allocate their time and attention can be critical in the games' successes and failures. There is currently little guidance for employers and employees in this regard, with research on multigamification just emerging and anecdotal evidence about the wide proliferation of gaming "styles" and approaches signaling significant individual variation in this regard (Crawford, Gosling, & Light, 2013; Hamari & Tuunanen, 2014).

Contemporary workplaces have integrated an increasing assortment of influences from online spheres (not just games), including many that are overtly recreational and educational. Participants in organizational life often engage in such interactions as e-commerce, online banking, or home security system checks, often using their own mobile devices or smartphones but sometimes using employer-owned equipment (Coker, 2013). In the 1990s and early 2000s, opposition to these trends on the part of many employers was severe, with penalties imposed especially when employers' computer equipment was involved (Oravec, 2009; Shepherd & Klein, 2012). The ethical and legal arguments that employees were somehow "stealing" from employers for engaging in "cyberloafing" because they did not have a complete focus on workplace activity while on the job were often presented in employee hearings and other formal proceedings. Some employers and administrators were relatively quick to allow "constructive recreation" efforts in their workplaces, often with insights as to how such online interaction could alleviate stress, provide motivation, and increase the perceived autonomy of employees (Oravec, 2002; Singh, 2012; Tay, 2010). In recent years, however, employer antagonism to external online influences has often been moderated in part because access to online influences has become so pervasive in organizations; powerful mobile media are ready at hand to nearly every employee. The value of "serious games" in the workplace is also being demonstrated through an assortment of initiatives (Eichenbaum, Bavelier, & Green, 2014; Landers & Callan, 2011), with uses for training, project management, and related organizational functions, which can help to moderate employers' negative responses toward workplace gaming.

New forms of challenges to workplace gaming efforts are emerging; infusing workplace-sponsored and technology-mediated video gaming into everyday organizational activities can indeed elicit potentials for abuse (as outlined in the next section on game-related policy). Game-related efforts can also produce new opportunities, however. This paper emphasizes critiques involving gaming, but technology-enhanced games may serve to enhance many workplaces (even those that are primarily engaged in manual and routine office labor) and perhaps ultimately make them more productive (Hamari, Huotari, & Tolvanen, 2015). A number of research efforts have focused upon the implications of infusing opportunities for

playfulness into workplace interaction. Some research efforts are showing that gaming can enable the development of innovative solutions to organizational problems. For example, Pellis, Pellis, and Himmler (2014) show ways in which gaming can make human brains more adaptable from a neural standpoint, which may enable gaming participants to model complex and difficult problems from alternative angles. Many organizational roles in contemporary workplaces involve high levels of creativity and mental flexibility, and workplace-sponsored video games can help individuals gain fresh perspectives on such dimensions as time and resource utilization. Gamification of routine mental and physical tasks in organizational contexts can help in decreasing monotony and impart training and education (although many organizational participants find ways of engaging in such activities without the direct consent of management by using their own mobile devices).

Organizational Policy and Design in Multigame Environments

Worklife is tightly constrained by laws and policies established by governments, whether at the local or even national level; some of these laws and policies relate to the acceptable levels of surveillance of employees. In eras and settings in which interactions between the sphere of games and that of work were easier to discern, many managers could easily observe which employees were working and which were relaxing by observing them on the shop floor or in the office. In the past several decades, an assortment of "acceptable use" policies have been designed that deal with the challenges of potential Internet abuse (including inappropriate game activity) among employees in the context of these constraints (Shepherd & Klein, 2012). Multigamification efforts may lend levels of complexity to these policies as interactions between and among games are considered.

Many individuals state that they are somewhat satisfied with their current employment routines (Tiyce, Hing, Cairncross, & Breen, 2013), and game activities may be construed by some participants as challenges to be overcome and not liberating activities in themselves. For example, complex issues have materialized about video game activities that may be seen as distractions by team members. If some members of a project team focus on a particular game while others are more directly involved in various organizational initiatives, allegations of unfairness could result. Potentials for forms of bullying can also provide additional, complex challenges for organizational policy makers as they have in many other Internet arenas, as choices are made between freedom of expression and potential harassment (Oravec, 2012b).

Accounting for individual variations in workplace gaming can be problematic: individuals who have game addiction issues outside the workplace could also experience related issues in certain organizational settings (King & Delfabbro, 2009), possibly leading to human resource concerns. Personality differences can also make gamification and multigamification efforts challenging (Codish & Ravid, 2014). Variations over time and among contexts may also be important to consider: some researchers have shown that participant motivation in gamification efforts may be high at first but subsequently diminish in comparison with non-gamified approaches (Domínguez et al., 2013). Organizational participants can also be concerned as to the roles of video game participation in their overall workplace evaluations, resource allocations (such as travel funding and office space), and monetary compensation, especially when explicit game overlaps occur. The fact that individuals are ultimately paid money in most workplaces and that various governmental regulations relate to this compensation provides some constraints on how gaming systems can develop in these contexts.

Many challenges involving workplace gaming efforts could be approached through participatory means. Game players will develop their own resolutions and innovative solutions to multigamification problems (such as overload); by observing game play and becoming participants themselves in some settings, developers can gain insights that can enhance subsequent gaming initiatives. Developers can elicit participant discourse as to the organizational effectiveness of games in increasing productivity and wellbeing as well as to development and dissemination of effective and fair organizational policies related to their utilization. The "co-creation" of games can be a more time consuming process than the design of games by specially-skilled teams (Banks, 2013). However, such joint efforts may elicit higher levels of participation and introduce aspects of intrinsic rather than extrinsic gratification as creative products emerge. Some of these efforts can occur in tangential online channels as forms of fan co-production, as participants work to extend characters and elaborate on gaming narratives as described in Schott and Yeatman (2011). Developers could work with participants on such efforts as providing signals and notifications in game situations as to when participants' attention is needed elsewhere (in another game or organization setting). Such notifications would be especially important to arrange for informing participants of emergency or disaster-related situations. Developers may also work to develop "dashboard" configurations that would enable participants to cope more effectively with the character and activity demands of various overlapping games.

Multigamification issues present special concerns for the developers and administrators of training and educational systems, many of which will require organizational policy determinations (for example, in dealing with safety and risk assessment) as well as design decisions. The perspective that "ideal" trainees or students are completely immersed in a single, distinct educational task is indeed powerful. However, trainees or students who are utilizing smartphones, playing videogames, and dealing with workplace demands may be in the majority of educational game participants. Safety also becomes a factor as students combine driving or operating heavy machinery with their gaming efforts. Shifting the thinking of developers and administrators toward a game-friendly perspective may involve changes in vocabulary and approach, from referring to non-course activities as "distractions" and "intrusions" to incorporating them into the mainstream of activity. Future research on games should include the notion of "companion" games that allow for optimum compatibility with other games, individual responsibilities, and overall organizational situations. The emerging academic discipline of cognitive engineering as well as research on multitasking will play a role in sculpting game-compatible environments (Bannister & Remenyi, 2009; Rothbart & Posner, 2015).

Reframing Work, Play, and Wellbeing

Introduction of technology-enhanced games such as video games into workplace life can engender organization-wide discourse on the ludic dimensions of work as well as on those activities more directly labeled as play (Sicart, 2014). Even the "casual games" with which individuals spend idle time can elicit fresh thinking about aspects of workplace and off-work experience (Anable, 2013). This discourse as well as intrapersonal reflection can elicit insights as to the nature of work, and possibly place the workplace itself in a new light. Encouraging a healthy psychological distance from organizations appears to be a lofty goal but can be problematic, as employees may need at least some level of engagement in and understanding of organizational objectives in order to be effective organizational participants. The notion that the "work is a game" has a long legacy in research and practice relating to organizations. Construing one kind of social system in terms of another form is common: workplaces have been modeled in theatrical terms and symbols (Yanow, 2001) and even as television situation comedies (or "sit coms"). Some theorists have applied the game theory of John Nash (1950) and other mathematicians to workplaces to emphasize certain aspects of organizational interaction, assisting in the modeling of interpersonal interaction (Whitton, 2014). However, more systematic and nuanced approaches to the infusion of gaming structures into interpersonal exchanges and contacts in the workplace took longer to emerge, and the concept and strategies of "gamification" emerging in the past decade. Linkages between "play" and "gaming" require exploration as well, with the assumption that playfulness and gaming overlap entirely as concepts challenged by such critiques as the "mandatory fun" perspective previously described.

Individuals who have spent a large share of their lives immersed in technology-enhanced games may soon expect if not demand game-related themes, imagery, and approaches in workplace settings. The notion that younger individuals would adopt a perspective in their workplace interactions that is heavily rooted in games was presented in the past decade by John Beck and Michael Wade (2004) in *Got Game: How the Gamer Generation is Reshaping Business Forever*; John Seely Brown and Douglas Thomas (2006) projected that games such as *World of Warcraft* could be a part of selection and training efforts in many workplace contexts in the near future. The notion that younger people are providing the sole direction in terms of workplace game consumption can be problematic in some settings: growing segments of the population who are over forty years of age are becoming avid game players (especially of casual games). New strategies for producing and disseminating games are emerging as a consequence, with many appealing research results concerning health and wellbeing outcomes (as described in the review article by Hall, Chavarria, Maneeratana, Chaney, & Bernhardt, 2012).

Discussion and Conclusions

This paper explores critically the particular meanings and dimensions of gamification and multigamification in workplace contexts. Games are still a "terrifying yet appealing medium for businesses" (Bogost, 2015, p. 65). Many managers are taking them into account because employees, customers, and other organizational participants are apparently drawn to them either as individuals or in multiplayer efforts (Burke, 2013; Edery & Mollick, 2009). The robust international discourse on the problems with gamification just analyzed has helped in identifying troubling issues in terms of employee wellbeing, such as those relating to the experimental nature of many workplace initiatives as well as the potential intrusiveness of their "ludic engineering" and surveillance dimensions. On the positive side, integrating games into everyday organizational activities may serve to empower participants to expand their capacities and evolve their perspectives even in relatively mundane settings, such as assembly lines or routine office work. Strategic and responsive efforts at multigamification (recognizing the multigame

configurations of the workplace) can inspire critical reflection on the nature of gaming and play, assisting with the potential overload and confusion resulting from an assortment of rule systems and role demands.

In multigamification approaches (in which interactions among workplace games are analyzed and mapped), organizational participants themselves are equipped to serve as co-creators. They do so not just through their inventions of new games and development of emergent aspects of current initiatives but also through the methods and strategies with which they balance their forms and levels of participation in the games in which they choose to participate. These workplace games themselves (some that are organization-sponsored and approved and others that are surreptitious) can be construed as competing in some ways for the limited time and attention of participants in a "marketplace of games" configuration. Developers will need to be sensitive to and learn from players on an ongoing basis as to how multigamification can best permeate organizational life.

Distinctions between "work" and "play" have had strong roles in societal and political discourse for centuries (Andersen, 2009). This dichotomy has framed a great deal of organizational and interpersonal interaction, serving to frame and prioritize activities; for developers to expect its rapid dissolution or reframing would be overly optimistic. Recognition of the power of this dichotomy can be helpful in clarifying the difficulties in creating productive workplaces that support gaming as well as other kinds of playful and creative approaches to organizational life.

Future Directions

Co-creating and maintaining situation-appropriate and comprehensible work/play distinctions may be increasingly important in quality of life efforts in workplace contexts, and fruitful research could indeed follow these efforts. Innovative approaches to multigaming are likely to emerge from players' initiatives and interactions in particular settings as well as be instituted by game developers. New sources of stress may indeed surface in some contexts, although in many settings these initiatives could underscore the playful dimensions of work and potentially enhance participant wellbeing. Future research efforts on these themes could include how organizational policies related to emerging gamification and multigamification initiatives will affect how gaming is conducted by participants, with special emphasis on the levels of stress involved. Other efforts could address how the "workplace of the future" will be perceived and described in the advent of pervasive workplace gaming and multigaming initiatives. Future research approaches could capture how organizational life is reframed by individuals in workplace contexts through textual analyses of email and social media discourse. Use of theatre imagery to describe organizational life has been pervasive for decades, with the notion that individuals are "on stage" or "off stage" often expressed (Goffman, 1967; Grandey, 2000). However, individuals who have utilized some form of gaming technology throughout their lives may be increasingly comfortable in using game imagery to frame their organizational experiences, thus engendering new vocabularies and new approaches for dealing with their everyday workplace life. Gamification and multigamification may have increasingly salient roles in workplace wellbeing and creativity initiatives, especially if development approaches are taken that gain from their emergent and spontaneous aspects.

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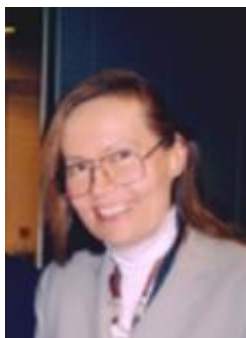
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