

Trinity University

Digital Commons @ Trinity

Library Faculty Research

Coates Library

4-2016

"The Sugar'd Game before Thee": Gamification Revisited

Michael J. Hughes

Trinity University, mobilesworking@gmail.com

Jeff Lacy

Trinity University, clacy@trinity.edu

Follow this and additional works at: https://digitalcommons.trinity.edu/lib_faculty

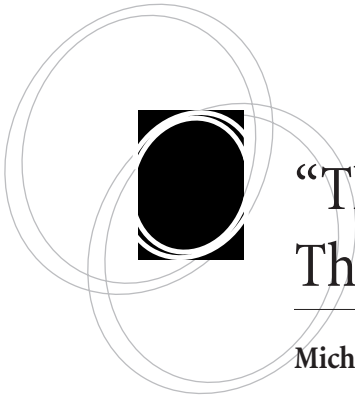


Part of the [Library and Information Science Commons](#)

Repository Citation

Hughes, M., & Lacy, C. J. (2016). "The sugar'd game before thee": Gamification revisited. *Portal: Libraries and the Academy*, 16(2), 311-326. <https://doi.org/10.1353/pla.2016.0019>

This Article is brought to you for free and open access by the Coates Library at Digital Commons @ Trinity. It has been accepted for inclusion in Library Faculty Research by an authorized administrator of Digital Commons @ Trinity. For more information, please contact jcostanz@trinity.edu.



“The Sugar’d Game before Thee”: Gamification Revisited

Michael Hughes and C. Jeff Lacy

... and never learned the icy precepts of respect,
but follow’d the sugar’d game before thee.
William Shakespeare, *Timon of Athens*

abstract: Gamification, the application of game elements to nongame contexts, was recently a subject of great interest in the library literature, inspiring a number of articles. That interest tapered off in tandem with gamification’s wider decline, but signs point to its reemergence. Anticipating renewed interest in gamification, the authors reviewed the literature to determine what has—and has not—been examined by librarianship’s proponents of gamification. They found serious concerns regarding gamification’s practical and ethical limitations. Moreover, the authors believe that the purported benefits of gamification are more readily found in its progenitor—games.

Introduction

Like the fast-talking salesman Harold Hill in *The Music Man*, buzzwords are mostly promise and bluster. Sometimes they deliver on those promises, as Hill does in the musical. Other times, they consist of nothing but hot air and dissipate accordingly. *Gamification* is an example of the latter, or may seem to be.

The decline of gamification in the public discourse is due in part to sustained criticism from those who were not convinced that students, for example, would redouble their efforts in pursuit of digital badges and virtual trophies. One critic, Professor Ian Bogost at Georgia Institute of Technology in Atlanta—himself a video game designer—memorably described gamification as “marketing bullshit, invented by consultants as a means to capture that wild, coveted beast that is videogames and to domesticate it for use in the grey, hopeless wasteland of big business, where bullshit already reigns anyway.”¹ Following the dissolution, foundering, or retooling of gamified “domestications” such



as SCVNGR, FarmVille, and Foursquare, it seemed that gamification’s proverbial fifteen minutes of fame had run out. The technology seemed washed up.

But when a wave recedes, another takes its place. Signs point to gamification’s rebound. Based on the life-cycle stages described in Gartner, Inc.’s Hype Cycle—a

Following the dissolution, foundering, or retooling of gamified “domestications” such as SCVNGR, FarmVille, and Foursquare, it seemed that gamification’s proverbial fifteen minutes of fame had run out.

graphical representation of the life of a new technology, from conception to maturity and widespread adoption²—gamification crested the “peak of inflated expectations” in 2012. Then it fell into the “trough of disillusionment” as people grew cynical about its unfulfilled promise. Now the technology scales the “slope of enlightenment” as second-generation gamifications emerge. Applications such as Duolingo, for learning languages, and Scavify, a mobile scavenger hunt, benefit from the mistakes and miscalculations of their forebears. Scavify, for example, has already infiltrated several college campuses, including Tulane University in New Orleans. Our employer, Trinity University in San Antonio, used the app for student

orientations last fall. Another telltale sign is that the journal *Library Technology Reports* dedicated its entire February 2015 issue to gamification.

In other words, what seemed a fad just a year ago is now poised to make a comeback. In anticipation of the business world’s relentless pursuit of new markets, it is only a matter of time before we again hear inflated claims of gamification’s potential. Given that many libraries today face challenges from budgetary concerns, metric-driven assessment, and a public less dependent on the library as information broker, gamification’s promise to make patrons more excited about and engaged with libraries may sound sweet indeed. The question, then, is whether gamification honors its promises. Does it motivate in the way that its proponents claim? Does it lead to higher levels of engagement, interest, and learning? Or are there hidden costs to the project of making everything fun?

We contend that the literature has not yet adequately addressed the practical and ethical issues that gamification presents. This paper is an attempt to correct this imbalance by reviewing where we have been, that we may better understand where we are headed. If we would transform our libraries in this way, it falls to all of us, but especially to academic librarians, to look hard at gamification’s claims and to square them against the hopes and expectations we have for our students.

A Brief History of Gamification

Gamification as word and concept originates with a British consultant, Nick Pelling, who used the term in 2002 to describe a “game-like accelerated user interface design to make electronic transactions both enjoyable and fast.”² But the potential in that adjective, *game-like*, had far-reaching applications. In 2010, gamification, as we know it today, entered the public consciousness via FarmVille and Foursquare, two wildly successful applications that diverged from Pelling’s conception. Today, FarmVille and Foursquare are passé, but as urtexts of gamification they warrant closer examination.



FarmVille is a Facebook game in which players manage a virtual farm by growing virtual crops that they can sell for virtual currency. A player can do each point-earning or currency-earning activity only once in a set time unless the player: (1) taps his or her network of Facebook friends to “work” on the farm, thus spreading the game to new players, or (2) spends actual money to obviate a so-called cool-down timer.

FarmVille is only nominally a game. Players actually spend more time waiting than playing,³ and the game is designed to actually impede play unless one pesters friends or spends real money to plant a few more electronic carrots in the ground. It may sound boring, but boredom is almost beside the point because FarmVille is designed for compulsion. Its interface is rife with progress meters and timers that constantly remind play-

ers of the points or coins they need to unlock the next reward, which excite dopamine neurons accordingly. In the words of Stephen Totilo, editor in chief of the video game website Kotaku, FarmVille is less a game than “a manipulative horror, a collection of psychological tricks.”⁴

Despite such criticism, FarmVille became incredibly popular, with a peak audience of 80 million active users.⁵ Indeed, the FarmVille model proved so addictive that even Cow Clicker, a game that satirizes FarmVille, became an unintentional hit in its own right.⁶

Foursquare, on the other hand, is a social network and geolocation application for smartphones that lets a user “check in” to various locations. Since its founding in 2009, the company has steadily moved away from its gamified origins, but in Foursquare’s most famous iteration, check-ins earned users points, badges, and titles. For example, a user could become mayor of a local Starbucks provided he or she checked in more frequently than other Foursquare users. It is not a game, then, but it is what Pelling would call “game-like.” Foursquare was never about game design but about building “playfulness into the app” to “[make] social utilities, and [make] those utilities fun.”⁷ Indeed, the difference between Foursquare and similar location-based apps is the inclusion of points, badges, and titles, which incentivize check-ins.⁸

Do these game elements influence consumer behavior? Yes, according to at least one study, which demonstrates that some Foursquare users make decisions on where to eat or shop in order to chase points and badges.⁹ Because users frequently and deeply interact with Foursquare, it quickly became both an advertising platform and a source of marketing data, despite having fewer users than other social networks.¹⁰ Foursquare’s developers eventually focused on its non-gamified features, spinning off the system of points, badges, and titles into a companion app called Swarm, a move that upset some users.¹¹

The success of FarmVille and Foursquare is noteworthy in that both are defined by their reward mechanisms. Neither app has a narrative, nor do they provide the skill-based challenge of video games, the context from which rewards were taken. Instead, they offer rewards—points, badges, or imaginary fiefdoms, and the ability to flaunt these acquisitions on social networks—without the work that makes such rewards

It falls to all of us, but especially to academic librarians, to look hard at gamification’s claims and to square them against the hopes and expectations we have for our students.



meaningful. This success only demonstrates a principle that marketers have understood for decades, namely that gamification motivates consumers by appealing to the brain's reward system. Consider frequent flyer miles, the McDonald's Monopoly sweepstakes, or any of countless other loyalty programs.

Gamification, then, is both new *and* old, a digital gloss on long-standing incentive schemes. With the rise of smartphones, however, the ability to dynamically dispense rewards from always-on apps proved a powerful enticement to some, namely advertisers,

Gamification motivates consumers by appealing to the brain's reward system.

who have a definite interest in reliably and predictably influencing consumer behavior. Thus, entrepreneurs and start-ups began focusing on gamification. Charismatic personalities became prophets of the technology, notably Gabe Zichermann. Zichermann and Joselin Linder's 2010 book,

Game-Based Marketing: Inspire Customer Loyalty through Rewards, Challenges, and Contests, attempts to explicate and reverse-engineer FarmVille, Foursquare, and their ilk into a set of general principles that anyone can apply to a product.¹² Also in 2010, the gamification proponent Seth Priebatsch, founder of the now-defunct app SCVNGR, presented a TED (Technology, Entertainment, Design) talk on adding a ubiquitous "game layer" atop the world, one to match the "social layer" created by Facebook and other social networks.¹³

By 2012, the hubbub caught the attention of think tanks such as the Pew Research Center and the New Media Consortium (NMC), which separately issued reports noting the trend of gamification's adoption and predicted its spread to spheres other than marketing. Surveying a wide range of "technology stakeholders and critics," Pew found that 53 percent of respondents believed that:

By 2020, there will have been significant advances in the adoption and use of gamification. It will be making waves on the communications scene and will have been implemented in many new ways for education, health, work, and other aspects of human connection and it will play a role in the everyday activities of many of the people who are actively using communications networks in their daily lives.¹⁴

NMC's report avoids delving into this kind of specificity but explains rising interest in gamification as a matter of student choice:

Students can accumulate points or other rewards by accepting different challenges, and often have more freedom in choosing what kind of assignments they undertake to earn them. Badging or ranking systems serve to recognize student achievements, and the transparency of student progress inspires competition that can drive more interest in the material among students.¹⁵

The message was clear: gamification was an emerging technology with potentially transformative applications for higher education. If bestowing badges leads to better learning outcomes, why not incorporate them into curricula? Why not, for that matter, use them to improve information literacy instruction? User-centered libraries constantly search for ways to connect the intellectual wealth of their collections to the patrons they serve, often through the technologies of the moment. Experiments with new technologies have come and gone from the stacks. Technologies with short lives in the library include



texting; near-field communication, which enables communication between devices when they touch or come within a few centimeters of each other; and QR (quick response) codes, which, when scanned with a mobile device, download Web pages with information about products or events. Would gamification be any different?

Gamification in the Library Literature

Gamification first appears in the library literature in a 2011 column for *Library Journal* by Liz Danforth. In it, she defines *gamification* as “the application of gameplay mechanics in nongame settings”¹⁶ and notes that gamification is a new spin on customer enticements and loyalty programs.¹⁷ Furthermore, she distinguishes between game mechanics and games by arguing that the superficial application of game mechanics “threatens to overshadow the deeper value of well-designed, substantive games,” such as BiblioBouts, an information literacy social game, and Find the Future, a New York Public Library-

sponsored scavenger hunt, both of which she cites with approval.¹⁸ Though skeptical of the hype surrounding gamification, Danforth concedes that the “line between games and gamification is blurry” and concludes with an appeal for better implementation of gamification in “our schools, the sciences, our businesses, and our libraries” to harness the motivational power of games.¹⁹

Like Danforth, Carli Spina is optimistic about gamification’s potential for helping “libraries engage and excite their patrons in new ways,” but she cautions that the technology is not a “miracle cure.”²⁰ She notes some risks of gamification, including privacy concerns and the motivation-damaging potential of extrinsic rewards, but argues that thoughtful implementation can satisfy these concerns. Such implementation is conceivably supported by the “findings of the many studies that have been done on gamification.”²¹ Spina fails to cite these studies, however.

Moreover, Spina is not as careful as Danforth to distinguish between games and gamification. She describes Librarygame—a reward-based gamification platform—as a game, and refers to Find the Future—a game—as an example of gamification.²² The conflation of games and gamification is not uncommon in the library literature, making an already confusing concept murkier still. Meredith Farkas discusses both game-based learning and virtual rewards platforms under the conceptual umbrella of gamification,²³ and the best parts of Kyle Felker’s article “Gamification in Libraries” concern games instead. The implications of this confusion are discussed at greater length later.

The message was clear: gamification was an emerging technology with potentially transformative applications for higher education. If bestowing badges leads to better learning outcomes, why not incorporate them into curricula?

The conflation of games and gamification is not uncommon in the library literature, making an already confusing concept murkier still.



Other authors use the word *gamification* but refer only to educational games with no mention of reward-based elements such as the points, badges, and leaderboards that define the former. Anne Weaver writes gamification into the title of her article "Gamification: Time for an Epic Win?" which deals primarily with games and game-based education.²⁴ Mary J. Snyder Broussard mentions gamification in her review of instructional video games but uses the word to mean "sound pedagogical practices built into a game-like environment."²⁵ Bernd W. Becker, too, uses *gamification* in reference to pedagogy in his application of James Paul Gee's principles of game design to information literacy instruction.²⁶ Even an annotated bibliography of games and gamification, edited by Melissa Mallon, consists almost entirely of educational games.²⁷

J. Dale Prince, on the other hand, is one of the few authors to clearly distinguish between the two.²⁸ In a useful *nota bene*, he avers that "gamification is not to be confused with gaming," not even with what some call "serious games,"²⁹ which gamification proponents sometimes invoke as evidence of its potential. The rest of Prince's 2013 column is largely an introduction to gamification and a summary of the library literature up to that point. It is valuable for pointing out, as Danforth does, that *gamification* is a new word for an old technique. (Prince likens it to S&H Green Stamps, a rewards program operated by the Sperry & Hutchinson company from the 1930s to the 1980s.) Crucially, he notes that already gamification's proponents had "produced publicity that may be out of proportion to the concept's actual utility or ability to maintain user interest."³⁰

Two authors convinced of gamification's potential for libraries are Bohyun Kim and Kyle Felker. In her 2012 article, Kim covers the major (and aforementioned) touchstones in the history of gamification—FarmVille, Foursquare, Gabe Zichermann, and Seth Priebatsch. She is particularly impressed by Zichermann and rewards-based gamification, advocating the use of gamification to increase engagement through fun, goals, and rewards.³¹

Both Kim and Felker find in games an ideal vehicle for engaging students, spurring their motivation, and awakening interest in material that might otherwise put them to sleep. Invoking Jane McGonigal's dubious dictum that "reality, compared to games, is broken," Kim asserts that "people are more motivated, engaged, and often achieve more in games than in the real world."³² She explains that games "offer an environment intentionally designed to provide people with optimal experience by means of various gaming mechanisms and dynamics."³³ In such an environment, video games "present players with scenarios in which they need to learn a skill or piece of information, and then successfully apply it, in order to progress to the next stage or level of the game."³⁴

Such learning scenarios are ripe for library content, according to Kim and Felker. Kim asserts, "Game dynamics can raise library users' level of engagement with library resources, programs, and services. They can help library users to solve problems more effectively and quickly by making the process fun."³⁵ She provides several "thought experiments" that detail ways different library services could be gamified, including a ranking system whereby library users would earn points for completing activities such as logging into a proxy server or browsing a database. Over time, these points would trigger promotions like the "level-ups" in role-playing games, moving students from "novice to super researcher."³⁶



Felker, despite the title of his article “Gamification in Libraries: The State of the Art,” is more interested in the potential of games for library education. In fact, he criticizes shallow gamification of the aforementioned variety when he writes, “This form of gamification is usually simple and easy to apply, but it often feels artificial and doesn’t really change the nature of the underlying experience.” He adds, “Students may well ignore the badging system in favor of the final grade if they feel it isn’t offering anything meaningful.”³⁷ Instead, Felker advocates designing “learning experiences from the ground up as games.”³⁸ This would be an unremarkable statement were his article titled “Games in Libraries,” but it is not. Again we run into a problem of semantics that contributes unnecessary confusion to the discussion on what role gamification should or should not play in the provision of library services. For example, when Felker writes about gamification as a teaching strategy, he writes persuasively about the role that games rather than gamification can play in library education. Earlier in the article, he tries to clarify what he means by *gamification*, writing, “It’s important to separate the concept of gamification from the discrete forms it can take. Gamification may involve leaderboards, badging, or points. Or it may involve none of those things.”³⁹ Perhaps. But however one defines *gamification*, it is not the same as a game.

However one defines *gamification*, it is not the same as a game.

Distinguishing Gamification from Games

Gamification is not just a “deliberately ugly word”⁴⁰ but a confusing one, too. Brian Burke, a Gartner analyst and the author of *Gamify: How Gamification Motivates People to Do Extraordinary Things*, concedes that “no broadly accepted definition of ‘gamification’ exists.”⁴¹ Some lexical authorities have done their best to pin it down, however. The *Merriam-Webster Online Dictionary* describes it as “the process of adding games or gamelike elements to something (as a task) so as to encourage participation.”⁴² On the other hand, digital media researcher and game designer Sebastian Deterding and his coauthors propose this alternative: “Gamification is the use of game design elements in nongame contexts.”⁴³

If anything, such attempts to sum up gamification merely illustrate how broad the concept is, incorporating almost anything that combines games or elements from games to improve participation and engagement in nongame activities.

Deterding’s explication of this definition is worth exploring in full, but for our purposes here, suffice it to say that Deterding drops the engagement or participation angle used in earlier definitions, allowing for the application of gamelike design and game elements to purposes other than motivation. Furthermore, Deterding’s definition focuses specifically on game design elements, distinguishing gamification from actual games (including simulations and serious games) and other forms of playful interaction.

Although Deterding’s definition is widely cited, the matter is far from settled. Rowan Tulloch, for example, “disputes the current framing of gamification, and indeed the very



validity of the terminology," arguing that *gamification* actually refers to the use of games and game design in pedagogy.⁴⁴ If anything, such attempts to sum up gamification merely illustrate how broad the concept is, incorporating almost anything that combines games or elements from games to improve participation and engagement in nongame activities.

Games, meanwhile, suffer little of this definitional confusion. The pioneering game theorist Roger Caillois, expanding on the work of the Dutch cultural thinker Johan Huizinga, defines a *game* as an activity that is free, separate, uncertain, unproductive, governed by rules, and make-believe.⁴⁵ Compare his conception to the *Oxford Dictionaries'* succinct take, which emphasizes the role of competition: a game is "a form of play or sport, especially a competitive one played according to rules and decided by skill, strength, or luck."⁴⁷ Whether either definition settles for all time what games are is almost beside the point. For the moment, what matters is that both exhibit clear and important differences from the derivative term *gamification*.

The library literature on gamification is largely informational, not investigative. Many of the aforementioned papers are not research-oriented, and so some vagueness—owing to constraints of time, space, and purpose—is understandable. Nevertheless, when discussing gamification we should henceforth strive to avoid definitional obscurity, which thwarts any attempt to determine the role that gamification can or should play in the academic library.

Sebastian Deterding and his coauthors advise against "limiting the term gamification to specific usage contexts, purposes, or scenarios" and further advise against "limiting it to digital technology [which] would be an unnecessary constraint."⁴⁸ This puts Deterding's definition at odds with other attempts to crystallize the concept, notably Gartner's 2014 attempt to redefine *gamification* as "the use of game mechanics and experience design to *digitally* engage and motivate people to achieve their goals" (emphasis ours).⁴⁹ Deterding's definition is the better one, owing to its flexibility, and not least because it recognizes gamification's extensive predigital history.

Yet the rationale behind Gartner's redefinition is illuminating. "Gamification is often loosely defined, leading to market confusion, inflated expectations, and implementation failures,"⁵⁰ all three of which appear in the library literature. The first of these—let us just call it confusion—is commonplace. As discussed earlier, many authors use three different concepts interchangeably: gamification; gamification, defined as the process by which a nongame is made into one; and finally, games as such. The result? Confusion over what gamification is, how or whether it should be implemented, and what effect it might realistically have on the provision of library services.

Felker, for example, opens with a definition of *gamification* that hews closely to Deterding's and adduces several examples of the application of "game mechanics and game thinking to the real world to solve problems,"⁵¹ such as an app-based scavenger hunt at North Carolina State University in Raleigh and *Librarygame*, a "game" developed by the British company Running in the Halls Ltd., which calls it a "bespoke library enhancement product that adds game elements directly into the library experience to make it more fun, engaging and delightful."⁵² The most compelling section of Felker's paper, however, concerns games, specifically an imagined game in which "players might take on the roles of researchers and publishers within a rules framework that models information scarcity and control" to teach students "about the importance and implications of open access."⁵³



Gamification and Motivation

Gamification or games: is this just semantic quibbling? Far from it. As established earlier, games are not gamification and vice versa. Any attempt to understand the benefits, limitations, uses, or drawbacks of either concept must begin with an understanding of the thing itself. Gamification efforts fail precisely because they misunderstand what games are and how they work on player psychology to produce motivation, diligence, and learning. In other words, players do not necessarily care about points, levels, or badges but instead value the choices or the agency that produces those symbolic rewards. What are points, after all, but a way to indicate achievement? As gamification critic Evgeny Morozov puts it, “Are we really expected to believe that accumulating frequent flier miles . . . is the same as playing chess?”⁵⁴

Gamification efforts fail precisely because they misunderstand what games are and how they work on player psychology to produce motivation, diligence, and learning.

Moreover, gameplay (emphasis on *play*) occurs in a space somewhere between the real world and a virtual one in which mistakes are blessedly free of real-world consequences.⁵⁵ The work of play, to use a seeming oxymoron, is undertaken voluntarily, a feature that should give pause to anyone hoping that a sprinkle of gamification will make students more likely to enjoy learning about citation styles or other conventions of scholarly research.

Consider the statements of students who participated in focus groups designed to improve BiblioBouts, an information literacy game that models the research process. One student told researchers, “I don’t really know if there could be like [sic] a fun factor added . . . I don’t even know what could make it more fun to be honest. It’s like a research [sic] . . . There’s really not a fun aspect to that.”⁵⁶ Other players voiced doubt that BiblioBouts could ever be fun “because essentially it is going to be graded . . . The BiblioBouts game itself, it’s a part of our grade so that’s why I saw it as an assignment.”⁵⁷ In other words, the game does not offer play but its opposite. It is mandatory, only partially voluntary, and freighted with the possibility of real consequences, however low the stakes.

Furthermore, the grade in question, already an extrinsic motivator, will always take precedence over the extrinsic motivators of a gamification scheme. In critiquing pay-for-grades programs, Ruth Grant explains, “Paying for grades is offering an incentive for an incentive. Grades are an incentive to learn—an extrinsic reward for academic achievement—and ‘grade-grubbing’ students have always been distinguished from those who learn primarily for learning’s sake.”⁵⁸ Gamification adds the same unnecessary layer: an incentive for an incentive. Swap out cash payments for the less compelling reward of badges or points, and you have a recipe for serious concern over the long-term efficacy of such programs.

What is gamification, after all, but an extrinsic reward scheme? Gamers spend dozens of hours earning high scores or “leveling-up” characters—that is, bringing characters through stages of development, in which they acquire new powers. Therefore, the thinking seems to go, transposing the superficial elements of this activity to a nongame



task will motivate players to work just as hard at that effort. The problems with this assumption are twofold. In the first place, it misunderstands how games work. It also overlooks the complex relationship underpinning a game’s symbolic rewards and the actions a player takes to earn them. It is not the trophy that a player chases, per se, but what that trophy represents: mastery of a skill.

Secondly, the assumption ignores decades of research in psychology that document the negative effects of extrinsic rewards when not used carefully and in limited ways. Ruth Grant describes these effects in her book *Strings Attached*. In a chapter on incentives in education, she uses the example of children solving puzzles to demonstrate the corrosive effect of rewarding such behavior rather than allowing children to discover the inherent pleasure of solving a puzzle. According to Grant, if

you tell [the children] that they will be rewarded for completing some puzzles, they perform less well and lose interest sooner than children who are not rewarded or expecting a reward. The incentive, or extrinsic motivation, diminishes the intrinsic motivation. *It turns play into work*, decreasing both enthusiasm for the task and the level of performance. In this way, *incentives can be counterproductive with respect to learning* (emphasis ours).⁵⁹

This alchemy, whereby play is turned into work, is precisely the challenge faced by would-be designers of learning games. How do you preserve the autonomy and agency of play within a context where play is required? Gamification has no game component,

It is not the trophy that a player chases, per se, but what that trophy represents: mastery of a skill.

so play never enters into the equation. It only remains for the incentive, the badge or gold star, to decrease, as Grant says, “both enthusiasm for the task and the level of performance.”⁶⁰ While research has established that extrinsic rewards work in the short term, particularly with “intrinsically boring, routine tasks and to increase behavioral compliance,” the improvement is fleeting. “When the incentive is removed, the subject reverts

to the original performance level or behavior.”⁶¹ And this is a best-case scenario, one unmarked by the “spillover effect,” a term coined by the Swiss economist Bruno Frey to describe a situation in which a person, rewarded for one task, comes to expect a reward for all tasks.⁶² Grant uses the example of a child paid to mow the lawn. The child begins to resent doing the dishes for free, rather than seeing dishwashing as a contribution to the family’s welfare and a task worth doing for its own sake.⁶³

Underneath it all is the inescapable fact that the rewards of gamification are simply old incentives proffered under a funny new name. Jesper Juul explains how they come to seem otherwise:

Clear goals and feedback are important in games. They create a general measure of our performance; they let us know how we are progressing; and they communicate when we fail and when we succeed, so let us apply them to an otherwise uninteresting work situation. Yet . . . there is little substantial difference between [for example, call center metrics] and the game terminology of points, ranks, and virtual currencies. The example inadvertently reminds us that many organizations and companies are already using goals and feedback, known not as elements of “games” but as *performance measures*.⁶⁴



However initially fresh, however seemingly different, students will quickly see badges and points for what they are: performance measures, whereupon their totemic value will evaporate. As the BiblioBouts player pointed out, “Essentially [the game] is going to be graded.” In the context of the classroom, a grade incentive will nearly always trump other motivations attached to it.

The Ethics of Gamification

There are other, arguably more important, reasons to scrutinize gamification than whether or not it works. What are the ethical implications of its use? Do incentives encourage attitudes and behaviors other than motivation and compliance? Yes, according to Morozov: “Games are not neutral tools for getting things done but incentive schemes that might be transforming the gamers, by manipulating their emotions and attitudes.”⁶⁵ Morozov is wrong to conflate all games with “incentive schemes”—there is a rich and diverse world of games beyond the slot machines in Las Vegas—but he is correct that games can manipulate or engender emotions and attitudes in players, feelings and beliefs that may run contrary to the purposes of education. For one thing, incentives can supplant other motives, such as curiosity, which is essential to lifelong learning. Incentives of a mercenary character do not accommodate or sit alongside other motives; rather, they overwrite them. Grant explains:

The evidence suggests that when ethical motives and self-interested motives are both present, they do not act independently or reinforce each other. Instead, introducing self-interested incentives has negative effects, “crowding out” ethical motives while failing in themselves to produce the desired behavior.⁶⁶

These negative effects include the unintended lesson that “the only question it is important to ask is, ‘What’s in this for me?’”—an orientation that leads “to an increase in cheating as well.”⁶⁷ Here, Grant critiques the use of cash-for-grades schemes, such as those employed in New York City and Memphis circa 2007. Cash, with its obvious tangibility and value, may encourage these corrupting attitudes to a greater extent than gamification’s symbolic rewards, but the message they send is the same: do your work, not because it is worth doing for its own sake, but because you will earn a gold star. In its worst forms, gamification tampers with the building of character, much of which is done in primary, secondary, and postsecondary classrooms. We want students to “do the right things but also to do them for the right reasons.”⁶⁷ We instruct students to cite their sources, for example, not because it earns them experience points in a chintzy gamelike experience, and not even because the failure to do so will

In the context of the classroom, a grade incentive will nearly always trump other motivations attached to it.

We teach citation because it is ethical to acknowledge the use and influence of others’ words and ideas on our own thinking—in other words, because it is the right thing to do.



cost them points on a grade. We teach citation because it is ethical to acknowledge the use and influence of others’ words and ideas on our own thinking—in other words, because it is the right thing to do.

Conclusion: Let the Games Begin

Is there, then, a future for gamification, one that actually motivates people to do extraordinary things, to borrow the title of Burke’s book? One answer can be found in the past, in gamification’s precursors. Consider the gold stars that a child receives in return for meeting some goal and how those stars form constellations on classroom leaderboards. Or think about the merit badges on a Boy Scout’s sash. Such examples are rightly adduced as evidence that gamification is hardly the revolutionary phenomenon that proponents claim it is. But such familiar cases also exemplify the best aspect of gamification: the bestowing of symbols that recognize achievement, make it manifest, and nothing more. Thus reduced, there is hardly any reason to use the “ugly word gamification.”⁶⁸

Instead, let us return our focus to games. Unlike gamification, well-designed games do not operate exclusively along an axis of external motivation but instead act on one set of intrinsic motivators (curiosity, playfulness) to encourage others (the satisfaction

Unlike gamification, well-designed games do not operate exclusively along an axis of external motivation but instead act on one set of intrinsic motivators (curiosity, playfulness) to encourage others (the satisfaction of overcoming challenges, the pride of skill or mastery).

of overcoming challenges, the pride of skill or mastery). Games are learning environments in which skills are taught either passively, via trial and error and intuitive design, or actively, via tutorials, and then refined through play. To the extent that they include extrinsic motivators, such as points and audio cues, they are intended to provide feedback on player performance and thus to encourage continued play. They are not, in other words, rewards in and of themselves, and divorcing them from this context robs them of their motivational power.

Provided a game is fun, players are neurochemically motivated to keep playing, which is less sinister than it sounds. As Judy Willis explains:

The fuel that compels computer game perseverance and can also motivate academic or other skill learning is the brain chemical, dopamine. Dopamine is a neurotransmitter that, when released in higher than usual amounts, goes beyond the synapse and flows to other regions of the brain producing a powerful pleasure response . . . This increased release of dopamine is the brain’s reward response to achievement of a challenge—*intrinsic reinforcement*.

During the play of computer games with progressing levels of challenge, the progressive achievement feedback, such as getting to a higher level of play, is the feedback to the brain that it succeeded in the challenge and made the correct response. These bursts of pleasure drive the brain to seek the next burst, so gamers upon reaching the next level want to continue on playing, even through increasing challenge and frequent failure.⁶⁹



Educational games (such as *Oregon Trail* or *Where in the World Is Carmen Sandiego?*) have a long history of capitalizing on this intrinsic reinforcement, one that stretches back to the 1970s, or even further if one includes analog games. In John Locke's letters on education, published in 1693, he recommends that children play with alphabet dice to learn letters and spelling, a straightforward example of harnessing intrinsic motivation to help children learn through play.⁷⁰ Play is an appealing way to learn, one that is neither coercive nor prescriptive. It lacks the bitter tinge of will-thwarting authority and thus engenders less resistance in the learner. "Children, like everyone else, resent constraint," Grant explains. "Being told that you must do something will diminish your desire to do it."⁷¹

Again, BiblioBouts provides an instructive example. The student who correctly viewed it as "part of our grade" and "an assignment" was, in so many words, explaining that BiblioBouts is not really a game. Developing a game that is voluntarily undertaken, educational, and fun to play is a challenge of design—curricular design and game design—but crucially, one that concerns games. We know that games are effective pedagogical instruments, and we know that under the right circumstances they can provide alternative methods of learning—spaces in which to review, rehearse, or test concepts learned from lectures or other educational activities. Why divert attention from this rich and established practice, which could powerfully supplement asynchronous or long-term information literacy development, in favor of a reductive version—gamification—that fails to account for the complexity of game design, never mind the underlying brain chemistry that makes the proposition work in the first place?

Gamification is an end run around this complexity. Its proponents advocate that we appropriate rewards from games and dispense them in other contexts without understanding why they have value in the first place. To do so is "to persuade without allowing players to deliberate, [which is] just another form of coercion."⁷² And coercion is fundamentally incompatible with libraries, which celebrate freedom of inquiry and stimulate the curiosity that we call lifelong learning. Creating games that develop these attitudes, and the skills that underpin them, is not a simple proposition. It requires expertise and funds that few libraries have. But games are where the opportunity lies, and we should look to them—not gamification.

Michael Hughes and C. Jeff Lacy are instruction librarians and assistant professors in the Elizabeth Huth Coates Library at Trinity University in San Antonio. Professor Hughes may be reached by e-mail at: mhughes@trinity.edu. Professor Lacy may be reached by e-mail at: clacy@trinity.edu.

Notes

1. Ian Bogost, "Gamification Is Bullshit" (2011), accessed August 2, 2015, http://bogost.com/blog/gamification_is_bullshit/.

Play is an appealing way to learn, one that is neither coercive nor prescriptive. It lacks the bitter tinge of will-thwarting authority and thus engenders less resistance in the learner.

2. Gartner, Inc., "Gartner Hype Cycle," accessed August 2, 2015, <http://www.gartner.com/technology/research/methodologies/hype-cycle.jsp>.
3. Brian Burke, *Gamify: How Gamification Motivates People to Do Extraordinary Things* (Brookline, MA: Bibliomotion, 2014), 5.
4. Small wonder that FarmVille and other games that feature click-then-wait mechanics are sometimes called *idle games*.
5. Stephen Totilo, "Cash Crops, Emphasis on the Cash," *New York Times*, September 21, 2012, accessed August 2, 2015, http://www.nytimes.com/2012/09/22/arts/video-games/the-farmville-2-video-game-is-released.html?_r=0.
6. Oliver Chiang, "FarmVille Players Down 25% since Peak, Now below 60 Million," *Forbes*, October 15, 2010, accessed August 2, 2015, <http://www.forbes.com/sites/oliverchiang/2010/10/15/farmville-players-down-25-since-peak-now-below-60-million/>.
7. Jason Tanz, "The Curse of *Cow Clicker*: How a Cheeky Satire Became a Videogame Hit," *Wired* (January 2011), accessed August 2, 2015, http://archive.wired.com/magazine/2011/12/ff_cowclicker/all/.
8. Dennis Crowley, "Interview with Dennis Crowley of Foursquare: Turning Life into a Game," *Intruders: Inside Innovation*, December 17, 2010, accessed August 2, 2015, <http://intruders.tv/en-tech/interview-with-dennis-crowley-of-foursquare-turning-life-into-a-game/>.
9. Jason Kincaid, "SXSW [South by Southwest]: Foursquare Scores Despite Its Flaws," *Washington Post*, March 18, 2009, accessed August 2, 2015, <http://www.washingtonpost.com/wp-dyn/content/article/2009/03/18/AR2009031802819.html>.
10. Jordan Frith, "Turning Life into a Game: Foursquare, Gamification, and Personal Mobility," *Mobile Media & Communication* 1, 2 (2013): 248.
11. Kunur Patel, "As Foursquare Moves beyond Hipsters, Big Brands Check In," *Advertising Age* 81, 6 (February 28, 2010): 8.
12. Kevin O'Grady, "Foursquare Changes Are Classic Case of Fixing What's Not Broken," *BDlive* [Business Day online], July 30, 2014.
13. Gabe Zichermann and Joselin Linder, *Game-Based Marketing: Inspire Customer Loyalty through Rewards, Challenges, and Contests* (Hoboken, NJ: Wiley, 2010).
14. Seth Priebatsch, "The Game Layer on Top of the World," TEDxBoston [Technology, Entertainment, Design], July 2010, accessed August 2, 2015, http://www.ted.com/talks/seth_priebatsch_the_game_layer_on_top_of_the_world?language=en.
15. Janna Quitney Anderson and Lee Rainie, "Gamification: Experts Expect 'Game Layers' to Expand in the Future, with Positive and Negative Results," Pew Research Center, May 18, 2012, accessed August 2, 2015, http://www.pewinternet.org/files/old-media/Files/Reports/2012/PIP_Future_of_Internet_2012_Gamification.pdf.
16. Larry Johnson, Samantha Adams Becker, Michele Cummins, Victoria Estrada, Alex Freeman, and Holly Ludgate, NMC [New Media Consortium] *Horizon Report: 2013 Higher Education Edition* (Austin, TX: New Media Consortium, 2013), accessed August 2, 2015, <http://www.nmc.org/pdf/2013-horizon-report-HE.pdf>.
17. Game mechanics are "methods invoked by agents, designed for interaction with the game state," according to Miguel Sicart, "Defining Game Mechanics," *Game Studies* 8, 2 (December 2008), accessed August 2, 2015, <http://gamestudies.org/0802/articles/sicart>.
18. Liz Danforth, "Gamification and Libraries," *Library Journal*, February 15, 2011: 84.
19. *Ibid.*
20. *Ibid.*
21. Carli Spina, "Gamification: Is It Right for Your Library?" *AALL* [American Association of Law Libraries] *Spectrum* 17 (April 2013): 10.
22. *Ibid.*, 9.
23. *Ibid.*, 8.
24. Meredith Farkas, "Just a Game?" *American Libraries*, January/February 2014: 26.
25. Anne Weaver, "Gamification: Time for an Epic Win?" *Access* 25, 3 (September 2011): 20–23.



26. Mary J. Snyder Broussard, "Digital Games in Academic Libraries: A Review of Games and Suggested Best Practices," *Reference Services Review* 40, 1 (2012): 75–89.
27. Bernd W. Becker, "Gamification of Library Instruction," *Behavioral & Social Sciences Librarian* 32, 3 (2013): 199–202.
28. Melissa Mallon, "Gaming and Gamification," *Public Services Quarterly* 9, 3 (2013): 210–21.
29. J. Dale Prince, "Gamification," *Journal of Electronic Resources in Medical Libraries* 10, 3 (2013): 162–69.
30. Serious games are those "designed for a purpose beyond pure entertainment" such as FoldIt, which "attempts to predict the structure of a protein by taking advantage of humans' puzzle-solving intuitions and having people play competitively to fold the best proteins." "Serious Games," *Financial Times Lexicon*, accessed August 2, 2015, <http://lexicon.ft.com/Term?term=serious-games>.
31. Prince, "Gamification," 168.
32. Bohyun Kim, "Harnessing the Power of Game Dynamics," *College & Research Libraries News* 73, 8 (2012): 465–69.
33. *Ibid.*, 465.
34. *Ibid.*
35. Kyle Felker, "Gamification in Libraries: The State of the Art," *Reference & User Services Quarterly* 54, 2 (2015): 19–23.
36. Kim, "Harnessing the Power of Game Dynamics," 466.
37. *Ibid.*
38. Felker, "Gamification in Libraries," 20.
39. *Ibid.*
40. *Ibid.*
41. Nick Pelling, "The (Short) Prehistory of 'Gamification,'" *Funding Startups (& Other Impossibilities)*, August 9, 2011, accessed August 2, 2015, <https://nanodome.wordpress.com/2011/08/09/the-short-prehistory-of-gamification/>.
42. Burke, *Gamify*, 7.
43. "Gamification," *Merriam-Webster Online Dictionary*, accessed August 2, 2015, <http://www.merriam-webster.com/dictionary/gamification>.
44. Sebastian Deterding, Rilla Khaled, Lennart E. Nacke, and Dan Dixon, "Gamification: Toward a Definition," in *Proceedings of CHI [Computer-Human Interaction] 2011 Gamification Workshop* (Vancouver, BC, Canada: CHI, 2011), 13.
45. Rowan Tulloch, "Reconceptualising Gamification: Play and Pedagogy," *Digital Culture & Education* 6, 4 (2014): 317–33.
46. Roger Caillois, *Man, Play, and Games* (New York: Free Press, 1961), 9–10. Caillois's definition of *play* in full is as follows:
 1. *Free*: in which playing is not obligatory; if it were, it would at once lose its attractive and joyous quality as diversion;
 2. *Separate*: circumscribed within limits of space and time, defined and fixed in advance;
 3. *Uncertain*: the course of which cannot be determined, nor the result attained beforehand, and some latitude for innovations being left to the player's initiative;
 4. *Unproductive*: creating neither goods, nor wealth, nor new elements of any kind; and, except for the exchange of property among the players, ending in a situation identical to that prevailing at the beginning of the game;
 5. *Governed by rules*: under conventions that suspend ordinary laws, and for the moment establish new legislation, which alone counts; and
 6. *Make-believe*: accompanied by a special awareness of a second reality or of a free unreality, as against real life.
47. "Game," *Oxford Dictionaries*, Oxford University Press, accessed August 2, 2015, http://www.oxforddictionaries.com/definition/american_english/game.
48. Deterding, Khaled, Nacke, and Dixon, "Gamification: Toward a Definition," 2.



49. Brian Burke, "Gartner Redefines Gamification," *Gartner Blog Network* (April 4, 2014), accessed August 2, 2015, http://blogs.gartner.com/brian_burke/2014/04/04/gartner-redefines-gamification.
50. Ibid.
51. Felker, "Gamification in Libraries," 20.
52. Running in the Halls Limited, "What Is Librarygame?" accessed August 2, 2015, <http://librarygame.co.uk>.
53. Felker, "Gamification in Libraries," 21.
54. Evgeny Morozov, *To Save Everything Click Here: The Folly of Technological Solutionism* (New York: Public Affairs, 2013), 306.
55. The *Oxford English Dictionary* defines *gameplay* as "The tactical aspects of a computer game, such as its plot and the way it is played, as distinct from the graphics and sound effects."
56. Karen Markey, Chris Leeder, and Beth St. Jean, "Students' Behaviour Playing an Online Information Literacy Game," *Journal of Information Literacy* 5, 2 (2011): 62.
57. Ibid.
58. Ruth Grant, *Strings Attached: Untangling the Ethics of Incentives* (Princeton, NJ: Princeton University Press, 2012), 113.
59. Ibid., 115.
60. Ibid.
61. Ibid.
62. Bruno S. Frey, "Motivation as a Limit to Pricing," *Journal of Economic Psychology* 14, 4 (1993): 635–64, doi:10.1016/0167-4870(93)90014-C.
63. Grant, *Strings Attached*, 116.
64. Jesper Juul, *The Art of Failure: An Essay on the Pain of Playing Video Games* (Cambridge, MA: MIT Press, 2013), 119.
65. Morozov, *To Save Everything Click Here*, 309.
66. Grant, *Strings Attached*, 116.
67. Ibid., 112.
68. Morozov, *To Save Everything Click Here*, 310.
69. Judy Willis, "Neuroscience Insights from Video Game & Drug Addiction," *Psychology Today*, October 29, 2011, accessed August 2, 2015, <https://www.psychologytoday.com/blog/radical-teaching/201110/neuroscience-insights-video-game-drug-addiction>.
70. Grant, *Strings Attached*, 118.
71. Ibid.
72. Morozov, *To Save Everything Click Here*, 334.