1 THE AMBIGUITY OF GAMES: HISTORIES AND DISCOURSES OF A GAMEFUL WORLD

Sebastian Deterding

If there is one catchword for the current moment in the history of media, it is convergence: digital media, computing, and networking are decoupling the entities formerly known as "the media" into their requisite components—content genres and storage media, distribution networks and end devices, producers and audiences—to recombine them into unexpected, fleeting new formations (Jenkins 2006; Storsul and Fagerjord 2008). Thus, games can now be played on almost any digital device, anytime, anywhere. Game distribution is migrating from off-the-shelf physical copies to online streaming and a myriad of app stores across a myriad of platforms, and games are shifting from being finished products to interconnected, constantly evolving online services where "produsers" (Bruns 2008) pay in the form of micro-transactions, personal data, content creation, and marketing work.

Beyond these immediate forms of digital game convergence, several authors have observed a broader "ludification of culture" (Raessens 2006, 2012; Walz 2006; Stenros, Montola, and Mäyrä 2007, 32). From 8-bit music to pixel art, thematic, visual, auditory, and interactive tropes of games are pervading our pop culture and art with a "ludic language" (Flanagan, this volume). Some argue that the formative experience of growing up playing digital games has nurtured a whole "gamer generation" (Beck and Wade 2006) sporting playful media practices, mindsets, and identities. Others have gone so far as to call the twenty-first century a "ludic century" where games become the dominant cultural form because they match the systemic, computational, participatory constitution of our time (Zimmerman, this volume; see already Minnema 1998).

If *ludification of culture* captures how games and play increasingly inform other domains of our everyday life, we also can and must speak of its counterpart: the *cultivation of ludus.* As games and play move from the periphery of playgrounds, living rooms, and arcade halls toward the center of our cultural, social, and economic life, so cultural, social, and economic actors become interested in shaping and harnessing them for their purposes: other realms of life impress their forms on games and play. We see this in the professionalization of digital gaming in e-sports (Taylor 2012) and the economization of play in "gold farming," real-money trading, virtual economies, or game play as user-generated marketing (Malaby 2007; Dibbell 2008). We see it in the rationalization of play, as digital gaming takes on more and more work-like features, such as "grinding" in massively multiplayer online role-playing games (MMORPGs) (Yee 2006; Grimes and Feenberg 2009). We see it in the adoption of game technologies such as

three-dimensional rendering engines by non-game industries. And we see it in the rise of serious games and gamification (Sawyer 2002; Deterding et al. 2011): games and game design elements are increasingly harnessed to improve everything from productivity to marketing, from learning to user experience, from health, happiness, and creativity to civic engagement and governance.

Among game designers and scholars, gamification has been met predominantly with skepticism if not hostility (e.g., Robertson 2010; Bogost 2011a). Many view it as yet another wave of "colonizing attempts" (Aarseth 2001), only this time from marketers and startups with often-doubtful ethics and little care for "games as such." Gamification is painted almost as a desecration of a presumed nature of games and play. Says Bogost (2011a): "gamification is marketing bullshit, invented by consultants as a means to capture the wild, coveted beast that is videogames and to domesticate it for use in the gray, hopeless wasteland of big business." In the same tone, PJ Rey (2012) critiques gamification as producing play labor, or "playbor": "Play loses its innocence. It is no longer an escape from the system, it is just another branch of it. Waste is no longer wasted. Playbor is part of capitalism's effort to colonize every last moment in the waking day."

Yet the discourse around gamification has also managed to widen public interest in games and play rapidly. And whatever the status and longevity of gamification itself, it is only one symptom of the broader digital convergence of games, one little current in the double tide of the ludification of culture and the cultivation of ludus—something one may call the rise of a *gameful world*. Like media convergence in general, this double tide does show no signs of ebbing, and it *is* changing what games and play are.

In the heat of any debate, one task of the scholar is to take a step back and look at the unfolding scene from the outside. Instead of taking a stance in *Gamification: The Rhetoric Wars* (Walz and Coulton 2011),[1] this chapter tries to bring them into view *as* just that: a clashing of rhetorics in Kenneth Burke's (1950) sense, of different worldviews and moral politics, manifest in different languages. This chapter provides such an outside view through a threefold distancing: first, it offers a theoretical language to articulate that and how our views of the gameful world are steeped in specific, modernist conceptions of games and play. Second, it foregrounds the contingency of the gameful world by delineating its historical precursors and enablers: the forms of its current ascendance are neither entirely novel, nor aberrant, nor natural, nor inevitable. Third, the chapter compares and contrasts the various contemporary rhetorics of the gameful world. In closing, it asks what those rhetorics tell us about our contemporary life, what they elide, and how the rise of the gameful world may change play and games themselves.

Liminalities: The Social Place of Play and Games

If the current scholarly critique of the "instrumentalization," "colonization," or "domestication" of play and games highlights one thing, it is that play and games *are* thought to have "a proper place" in society—a designated cultural role, meaning, or function. Is play not *supposed* to be "outside 'ordinary'

life" and "with no material interest" (Huizinga 1955, 13), "separate" and "unproductive" (Caillois 2001, 9–10)—a space free from the demands of social norms and uses?

As the millennia-old use of games for military training and planning demonstrates, such sentiments overlook the fact that the provision of freedom from the instrumental norms and purposes of productive life through play and games is no brute fact of nature, but a contingent state of affairs—characteristic for modern industrial societies: *To us, today*, games and play *function* and *serve* as "escape attempts" (Cohen and Taylor 1992). Whether we praise their value for childhood development or artistic creativity, bemoan their unproductive frivolity, or engage in them as leisurely restoration for work or hobbyist self-realization—even when we romantically long for them as a utopian "otherland"—we reproduce very specific, modernist cultivations and rhetorics of play and games (Sutton-Smith 1997; Malaby 2007). Celebrating play and games as a space free from order, purpose, norm, and consequence, a space "outside of" society, we easily forget that this "freedom from" is *itself* a social norm and purpose. The spoilsport, the powergamer, and the bully remind us that the playground is a place full of rules that are continually expected, demanded, and policed by the play community (Goodwin 2006).

If we want to understand today's transformation of the cultivation of ludus, we need a *theoria*, a distancing from our own modernist preconceptions of the relation of play, games, and society. A useful one can be found in anthropologist Victor Turner's (1982) studies of ritual and liminality. Like Durkheim, Turner argued that in premodern societies, rituals served as the crucial forge and reaffirmation of the bonds and moral order of a community. Of central importance are rites

of passage through which an individual's orderly transition from one social status into another is performed. During these rites of passage, between the individual's separation from and re-incorporation into the group, one finds a phase of transition, of *liminality* (Latin *limen*, "threshold"), where standing orders, behaviors, and meanings are temporarily turned upside down—a space of *play*: "the analysis of culture into factors and their free or 'ludic' recombination into any and every possible pattern, however weird, that is of the essence of liminality" (Turner 1982, 28). Maybe the best-known contemporary form is the *Rumspringa*, observed in some Amish communities, in which adolescents leave their homes for a set period of time to explore the modern world around them and decide whether to return and become a full adult member of their community.

In other words, play in premodern societies is fully contained and functionalized in ritual, fully integrated into social life. There is no distinction between "work" and "leisure": play and games are part of the total ritual "work of the Gods" (Turner 1982, 38). *All* of life is "work" in the sense that it is bound in a non-optional manner to the cosmic rhythms and rules of nature and culture. It is only in modern Western nation-states that we start to find "work" itself separated from the rest of life, religious order kept apart from secular existence, social timing freed from the rhythms of nature, the individual uprooted from the collective—such that "leisure" as a nonwork, secular, optional, individual activity becomes possible. Modern leisure activities like play, games, or art still retain the ludic forms of liminality; but they crucially differ in their social function, meaning, and place. In Turner's phrasing, they become limin*oid*, not liminal.

Liminal phenomena are collective duties embedded in and reaffirming social order. The liminal play

found in rites of passage is part of one play-and-work complex, functionalized as a temporary inversion that conserves the social order by foregrounding the chaos that lies beyond, or by absorbing destabilizing energies. Liminoid phenomena in contrast are individual choices (that may result in temporary collectives), marginalized spaces pocketed away from social order, but therefore also spaces where the order *can* be reflected, critiqued, subverted, and alternative versions explored. Still, their "antistructure" is socially functionalized, geared into the machine of progress as an engine of innovation (Turner 1982, 44–45).

Now Turner's strict historic and cultural dualism between modern and premodern, "the west and the rest," has long been outmoded. But his *theoria* of play still holds value in reminding us that at any time and place, play and games are always cultivated, and in articulating two ideal typical poles of this cultivation, *liminal* and *liminoid.*

Seen through this lens, many of today's serious games and gamification projects present a return to liminality: games are again "centrally integrated into the total social process" (Turner 1982, 54) to reproduce a standing social order that is considered no less good and natural than the cosmos of tribal religion. The modern Protestant work ethic internalized religious duty into secular economic industriousness and disciplined self-betterment, defining and devaluing leisurely play and games as the frivolous opposite of God's work. Today's liminal serious games and gamification dissolve this separation of work and leisure again, only in a secondary, *secular* liminality, a tautological Calvinism without Last Judgment that replaces the work of God with the work of work, and the work of the self. As Goffman (1967) puts it so well: "Many gods have been done away with, but the individual himself stubbornly remains as a deity of considerable importance" (95). And today, the moral value of this self is again tied to the holy work of work. Burning calories at the gym or midnight oil at the office, we bring our daily "little offerings" (95) to prove moral character, so help us our gamified self-tracking device.

Conversely, the reactions against such liminal cultivations reveal themselves as modernist invocations of the *liminoid* as the "proper" role of games and play in society. To use the distinction of Raphael et al. (2009), critics of liminal gamification prefer games to question the ends society pursues, not to optimize the means toward them.

Yet their celebration of games and play as sites of transformation, subversion, autonomy, or empowerment is no less instrumentalizing—it simply instrumentalizes for progressive purposes. Even defendants of games and play as objects of disinterested appeal like Eric Zimmerman or Frank Lantz (this volume), fighting for "games for games' sake," in doing so engage in a deeply progressivist, liminoid project. They reaffirm the modernist notion that society can and ought to have spaces of noninstrumental, nonreligious aesthetics, and that games and play can and ought to be one of them.

Histories of a Gameful World

With Turner's conceptual compass of liminal and liminoid cultivations at hand, we can begin charting the history of the gameful world—to foreground its contingency, to moderate breathless claims of novelty, and to substantiate the claim that the contemporary instrumentalization of games and play is

no unique profanation of their pristine "nature." The following subsections trace important precursors, parallels, and traditions of using games and play beyond leisurely entertainment, followed by a more detailed account of the origins of gamification in the U.S. technology industry around mid-2010. It closes with a look at the wider social transformations that enabled the contemporary rise of a gameful world.

The Serious Games of War, Business, and Education

The first documented instances of games for "serious" purposes date back to the China of the Warring States period around 475 B.C., when the game *weiqi* (Go) began to be used to school strategic cunning for the art of war (Halter 2006, 20–21). In Western culture, war games for strategic training and planning rapidly spread in the nineteenth century from the Prussian army to war academies across Europe (Deterding 2009, 23–24). During the early Cold War years, the U.S. Department of Defense and associated think tanks like the Rand Corporation set up entire gaming and simulation departments, using war gaming, role-playing, simulations, and mathematical game theory to make nuclear war rationally calculable. From there, "serious games" for strategy, foresight, and training expanded into government, business, and education (Abt 1971).

The early 2000s witnessed a digital renaissance of serious games (Sawyer 2002). In education, researchers from sociocultural traditions (see Ramirez and Squire, this volume) began to study and design learning interventions that not only used games as "content conveyors," but also made educational use of the technologies, literacies, communities, and practices surrounding them. As serious games expanded into fields as varied as desensitization

therapy and experimental "petri dishes" for economists, subgenres like newsgames, persuasive games, advergames, and exertion games emerged (Sawyer and Smith 2008).

"Be Happy in Your Work!" Games at the Workplace

Mark J. Nelson (2012) has followed the use of games for productivity back to the unlikely origins of the Soviet Union under Lenin. Looking for a way to motivate workers without capitalist monetary incentives, Lenin proposed "socialist competition": individual workers, groups, and whole factories were awarded points for their performance, earning commendations, banners, and orders for surpassing certain point thresholds or beating other groups.

In the West, the first documented uses of games at work were workers' playful variation, pranking, and goal setting to counter the alienation of factory work (Roy 1960). Csikszentmihalyi's (1975, 1990) psychological studies of play and flow at the workplace painted a more positive picture. He described flow as a subjective state of optimal experience, characterized by autotelic, perceived-voluntary engagement, afforded by activities structured in a game-like manner. Csikszentmihalyi found that workers who arranged and treated their craft as a game they voluntarily chose to perfect would regularly experience flow in its course.

In 1985, one Charles Coonradt published the management book *The Game of Work: How to Enjoy Work as Much as Play.* Yet he was a little ahead of the curve: only in the late 1990s did businesses start to try and co-opt workers' play as resistance or self-determined craft into a corporate productivity strategy in a whole wave of "funsultant" business consultancy, peaking with the *FISH!* management

book and videotape series (Lundin, Paul and Christensen 2000; Nelson 2012). The age of funsultants has also been the age of mind maps, Post-its, and product innovation firms like IDEO. Here, the book *Innovation Games* (Hohmann 2006) introduced the use of games as catalysts for "Creating Breakthrough Products Through Collaborative Play" (the book's subtitle), recently refashioned as *Gamestorming* (Gray, Brown, and Macanufo 2010).

Designing for Playfulness and Motivation in Human–Computer Interaction

If design firms used play and games for product innovation *processes*, researchers in HCI early on started to explore them as inspiration for desirable product *qualities*. In the early 1980s, Thomas Malone wrote seminal papers deriving "heuristics for designing enjoyable user interfaces" from video games (Malone 1982). John M. Carroll (1982) analyzed the design of text adventures such as *Adventure* (Crowther and Woods 1976), leading Carroll and John C. Thomas (1982) to suggest redressing work activities in varying "metaphoric cover stories" to make them more interesting and to urge for a research program on the relation of fun and ease of use (Carroll and Thomas 1988; see also Carroll, this volume). With the expansion of HCI from utility and usability toward user experience (Hassenzahl 2010), more researchers began to study the "hedonic attributes" (Hassenzahl et al. 2008) or "motivational affordances" (Zhang 2008) of "pleasurable products" (Jordan 2002), dubbing the field "funology" (Blythe et al. 2004).

Thus, Luis von Ahn and others developed "games with a purpose" that piggyback game play to solve human information tasks such as tagging images (von Ahn and Dabbish 2008). Others explored the use of game interfaces in productivity contexts (Chao 2001) or studied playfulness as a desirable user experience (Fernaeus et al. 2012; see Holopainen and Stain, this volume). Some equated playfulness with any "pleasurable experience" (Costello and Edmonds 2007) or indeed every interaction that goes beyond utilitarian task completion (Gaver et al. 2004). Others spelled out different types of playful experiences (Arrasvuori et al. 2011).

A second intersection of HCI and games has been motivation, as in the case of online reputation systems. Originally developed to provide trust indicators and information filtering, designers soon found that these systems also had a motivational impact on users (Farmer and Glass 2010, 111–123). With "karma" points, stars, levels, badges, and user avatars, reputation systems took inspiration from games long before the term *gamification* emerged (Lampe, this volume). More recently, researchers like Lockton, Harrison, and Stanton (2010) have begun teasing out design patterns from games to motivate user behavior.

The World Upside Down: Play Forms in Art and Counterculture

The counterpole to the serious games of military, business, and HCI has been the "world upside down" (Curtius 1990/1948, 94–98) prefigured in the exuberant, apocalyptic chaos of medieval carnival and baroque literature (Bakhtin 2009/1965). In the twentieth and twenty-first centuries, several artists and activists have tapped into and extended these early rhetorics of frivolous play (Sutton-Smith 1997, 201–213). Literary examples are the playful automatic and aleatoric writing of surrealism and Dada or the gameful *contraintes* of the group OULIPO (Ouvroir de

littérature potentielle). From the 1950s on, the Situationist International developed artistic tactics and theories for "constructing situations" that embraced play as a central concept (Andreotti 2000; Wark 2011). Chief among them are *détournement*, the appropriation of other materials irrespective of authorship or copyright, *psychogeography*, the explorative mapping and creating of new experiences of a cityscape, and *dérive*, the playful drifting through cities. All three aimed at the creation of new atmospheres or scenes, new ways of seeing and living that would ultimately *dissolve* the modernist separations of classes and of work and leisure: "The central distinction that must be transcended is that established between play and ordinary life, play kept as an isolated and provisory exception" (Debord 1958). In parallel, the Fluxus movement erased the boundaries between art and life with designed boxes and instruction pieces—little written rules for action—that turned the audience into performers, guiding them toward new real-life behaviors and experiences.

In the 1970s, the New Games movement formed as a countercultural response to the Vietnam War and civic unrest in the 1960s in the United States (New Games Foundation 1976; Pearce et al. 2007). Its large-scale physical games created bodily experiences and spectacles with ecological themes that did not pit players against one another other in a zero-sum fashion. The underlying idea was that this embodied experience with participants across social divides would build trust, community, and new ways of living.

These themes have been picked up by critical art games and game-inspired art from the late 1990s on. They appropriate games, game engines, and game imagery as forms of cultural commentary and expression, linking backward and outward to everyday tactics of resistance (Lefebvre 2002/1961), reversing socially normed forms of action, appearance, and narratives in toys and game play (Flanagan 2009, 33; Flanagan, this volume).

Pervasive Games and Mixed Reality Performances

Intertwined with both the serious games movement and artistic play practices, new forms of gaming evolved in the early 2000s that extended games into new contexts and spaces. Commonly called *pervasive games*, they have "one or more salient features that expand the contractual magic circle of play spatially, temporally, or socially" (Montola 2009, 12). Examples are location-based games that take game play into the public space, augmented reality games that use digital devices to overlay game representations on the environment, persistent games that continually run to be entered and exited during the course of the day, or alternate reality games (ARGs), which "take the substance of everyday life and weave it into narratives that layer additional meaning, depth, and interaction upon the real world" (37).

Pervasive games originated in ubiquitous computing research labs, where they became a handy use case for prototyping new technologies (Magerkurth et al. 2005; McGonigal 2006). In parallel, in the late 1990s, art collectives and theater groups like Blast Theory started to connect critical media art, Situationism, and New Games with locative games using mobile phones (de Souza e Silva and Hjorth 2009). They developed mixed reality performances and immersive theater productions that were less about winning games than layering alternative meanings and narratives into participants' experience of moving through cities or staged

environments (Benford and Giannachi 2011). As in the case of Davies' (2009) "barely games" and the "subtlemobs" of artist collective *circumstance*, audio in particular has been explored as a medium in this context, being an inexpensive and unobtrusive means to layer an additional atmosphere and information stream into everyday life (see also Dow et al. 2005).

In parallel with this growing academic and artistic interest in pervasive games, design studios like Area/Code started developing experimental games in public spaces, as well as ARGs as marketing campaigns, which have nowadays grown into the lovechild of media companies as the future of transmedia storytelling, advertising, and marketing (Rose 2011). Independent game designers began to organize festivals dedicated to play in public spaces, such as Come out and Play, igfest, Hide&Seek, or Playpublik. And specifically in Northern Europe, live action role-playing (LARP) games developed into a unique subculture with high production value games, a decidedly noncommercial spirit, a strong theoretical discourse, and an artistic, political impetus that led to the exploration of societal issues and the testing of boundaries of appropriateness (Stenros and Montola 2010).

Silicon Valley and the Origins of Gamification

Serious games, funsultants and funology, countercultural play and pervasive games show that the use of games and play beyond the modernist confines of leisure times and playgrounds is far from new. Still, they remained relatively niche phenomena happening in research labs and subcultures. It was in the U.S. technology industry where between 2005 and 2010, some of these traditions would be absorbed and then strategically grown into "a thing" called *gamification*, to take off rapidly after January 2011.[2]

Around 2005, with the rise of web 2.0 business models centering on "harnessing collective intelligence" (O'Reilly 2005), web startups increasingly faced the challenge how to motivate users to sign up with the offered service, invite their friends, and part with their share of said collective intelligence. In reaction to this demand, in January 2005 Kathy Sierra, author and coeditor of the popular "Head First" book series with technology publisher O'Reilly, began to write about game design as an important inspiration for "Creating Passionate Users."

In 2006, game and online community designer Amy Jo Kim started touring the Silicon Valley conference circuit, talking about the application of game mechanics to functional software. The gamified fitness application Nike+ was released and became the quintessential conference case study for service and experience design. Justin Hall and colleagues founded the startup GameLayers and built out the *Passively Multiplayer Online Game* (PMOG, later rechristened "The Nethernet") that placed a game layer on top of web browsing.

In 2007, IBM contracted communication researcher Byron Reeves to publish white papers on the role of online games for business leadership. *Chore Wars* (Davis 2007) launched, a role-playing game around household tasks that became another early reference case.[3] Jane McGonigal, who started her design career at the team-building game company Go Game, was employed by the Institute for the Future and began to present keynote talks at conferences such as ETech about using ARGs for "happiness hacking." The startup Bunchball, founded by Rajat Paharia, pivoted toward "the science of engagement," building out the meta-game features of its social games (leaderboards,

virtual currencies, virtual items) into a white-label platform that was deployed on the website of the NBC television series *The Office* to drive user activity.

In April 2008, StackOverflow was launched, a question-and-answer platform for software developers. Using a reputation system with points and badges inspired by the gaming experience of its developers, it quickly gained cachet in the technology industry. The same month, Rajat Paharia of Bunchball, Justin Hall of GameLayers, and one Gabe Zichermann met at a panel of the web 2.0 Expo to discuss how "to work massively multiplayer game mechanics into social websites." Zichermann, a marketer working for publishers and companies servicing the games industry, had toyed with the idea of applying game elements to online photos and business cards, founding the startup rmbr. In May 2008, shortly after the web 2.0 Expo panel, he began blogging about "funware" and closed book deals on *Game-Based Marketing* with John Wiley and *The Engaging Web* with Manning Publications (rapidly renamed *Funware in Action*). In October, David Edery and Ethan Mollick's (2008) book *Changing the Game* appeared and summarized the business application of games, only to be drowned by the financial crisis. In November 2008, the term *gamification* was documented online for the first time, then attributed to Clay Shirky and Bret Terrill. The verb *gamify* was presumably first used by Richard Bartle in 1980 during his work on *MUD* (Trubshaw and Bartle 1978). But the word didn't catch on then, and it didn't catch on in 2008.

Still, things sped up. In March 2009, foursquare launched at the SxSW festival and demonstrated that game design elements can drive the initial adoption and retention of users. The massive success of *FarmVille* (Zynga 2009), launched in June the same year, reaffirmed the impression that games somehow "solve" the problems of user acquisition and monetization. In August 2009, Bunchball's Rajat Paharia registered the domain gamification.com.[4] In September 2009, Volkswagen Sweden launched the advertising campaign "The Fun Theory" for its green brand Blue-Motion. Its slogan, "Fun can obviously change behavior for the better," was illustrated in online videos of installations such as the Piano Stairs: stairs down to a subway station are rebuilt into giant piano keys that play a sound when people step on them, motivating people to take the stairs instead of the escalator next to them (at least on day one).[5] The videos spread virally and offered short, fun, high production value case studies for the concept of gamification. In November 2009, Byron Reeves and J. Leighton Read's *Total Engagement* appeared, a business-book-length exposition of their 2007 white papers that MMORPGs provide the blueprint for future work environments.

In January 2010, Microsoft Office Labs launched *Ribbon Hero*, a tutorial game for learning the Office Suite ribbon interface. It became another staple case study. David Helgason, CEO and cofounder of game engine provider Unity Technologies, blogged that 2010 will be "the year of gamification." The word started to get currency, flickering between "gameification," "game-ification," and "gamification," but "game mechanics" and "game dynamics" were used as well. In February, game designer Jesse Schell gave the talk "Design Outside the Box" at the game industry conference DICE, presenting a vision of the future where every little action will be tracked and awarded with points by advertisers and governments. The video became a viral hit, and Schell put up a "Gamepocalypse" blog. In March, Jane McGonigal's talk "Gaming Can Make a Better World" was released on TED.com and also spread virally.

To summarize, by early 2010 Zynga had heated up venture capital interest in everything online game-related, and Nike+, foursquare, Chorewars, Stack-Overflow, and Ribbon Hero presented success stories of the use of game design beyond games. There was at least one startup (Bunchball) that provided a white-label gamification platform and a popular advertising campaign (The Fun Theory) that helped illustrate the idea. In the technology conference circuit and business book aisles, a discourse around the use of game design beyond games had thickened, to hit mainstream audiences with the futurist talks of Jesse Schell and Jane McGonigal. There are many converging threads, but there is no *gestalt*, no *single* word.

And then. In May 2010, Bunchball relaunched its website, now stating that its white-label platform Nitro "brings the power of Gamification to you."[6] In June, Manning Publications announced that they will not publish Gabe Zichermann's *Funware in Action*. In July, Zichermann (whose first book *Game-Based Marketing* had just appeared) gave a talk on *gamification* at the Develop 2010 conference—it's the first time the term appeared in any of his presentations or his "funware" blog. In parallel, Zichermann registered the domain name gamification.co and founded Gamification Corp.[7] In October 2010, Zichermann rerouted his funwareblog.com to gamification.co, where all previous content was now hosted. He announced the "Gamification Summit," and, shortly thereafter, that his book *Gamification by Design* would be published by O'Reilly in 2011—turning out to be the manuscript of *Funware in Action*. The Gamification Summit commenced on January 20, 2011, with Zichermann as host, Bunchball as showcase sponsor, Jane McGonigal as keynote speaker (launching her book *Reality Is Broken* the same day), and Amy Jo Kim as leader of a "gamification workshop." The technology media report: a meme is baptized.[8]

Enablers

In the late 2000s, then, we find the seeds of serious games and pervasive games, of countercultural art games and play in public, of playful interaction, ludic design, and gamification both growing and accelerating to grow into a gameful world. This raises the simple question: Why? And why *then*?

One obvious reason is the rise of *digital* games as a cultural medium of its own right in the 2000s. Cohorts whose childhoods were spent playing video games began rising into positions of cultural power in media and education. Game studies, game exhibits, game museums, and game canons were formed, institutionalizing games as objects of cultural worth, facilitated by the rise of art games and serious games.

Politicians discovered games as part of the highly sought-after "creative industries" and started catering to game companies, and journalists and marketers discovered games as reliable attention magnets. Games developed cultural momentum; they become *cool*. As a consequence, social actors tried to cash in on games' symbolic capital (see Bogost, this volume) and probed the applicability of games for their own ends, as happened with radio propaganda, documentary film, or educational television before.

Some authors have suggested that we are witnessing the rise of a "gamer generation" (Beck and Wade 2006; Shore 2011) belonging to the larger cohort of "digital natives" that puts new, "gamy"

demands on workplaces, products, and public institutions. However, these analyses suffer from the same shallow data basis and massive overgeneralization as the concept of "digital natives" itself (Jones et al. 2010). A more convincing line of reasoning is provided by longitudinal studies of the post–World War II shift toward postmodern values in Western industrialized nations, such as the World Values Survey (Ingleheart 2008). According to these, cultural development charts a relatively predictable path: with the first wave of modernization comes a shift from traditional, survival-focused values of religion and community to values of economic achievement and rational, legal state authorities. Growing affluence and functioning institutions increase the experience of existential safety. This brings about a second, postmodern shift that de-emphasizes authority and economic achievement and foregrounds the maximization of personal well-being and self-expression. Against this background, it appears sensible that postwar generations in postmaterial societies would positively value games and play as worthwhile sources of such well-being and self-expression.

A congruent economic argument can be made about the post–World War II shift toward a post-Fordist, dematerialized service, information, and experience economy. As the provision of basic sustenance goods (food, shelter, clothing, mobility) and higher consumer goods becomes commoditized, margins and market differentiators shift toward the immaterial, symbolic, and experiential: an "experience economy" (Pine and Gilmore 2011) of lifestyle marketing and "retailtainment" (Ritzer 2004) emerges where "the experience is the product" (Merholz et al. 2008, 1), and companies are in a perpetual search for the next experiential "value add." Playful and gameful design appear as a logical outgrowth of this trend.

In parallel, with the exponentially decreasing costs of processing power, data storage, and networking bandwidth, more and more everyday interactions are mediated through networked computing devices; sensors, processors, and actuators become ubiquitous, from the smartphones in our pockets to the "smart cities" we walk through, and more and more behavioral data of individuals are tracked, stored, and analyzed. This technological rise of a "code/space" (Kitchin and Dodge 2011) effectively equips our lifeworld for pervasive, large-scale gaming: as goal-oriented, rule-based input-output systems, games require some sensing and tracking of activity, some processing of activity according to the rules, some storing of game states, and some display of game feedback. Today's code/space is the basic technological precondition for deploying algorithmic game(like) systems beyond the confines of a single gaming device and software (see Nova, this volume). Several authors have in fact argued that computers and games show such deep structural similarities (Pias 2002; Zimmerman, this volume) that computerization equals gamification.

Contemporary Rhetorics of the Gameful World

The growing interest in and use of games and play beyond the entertainment game industry and game studies has widened the discourse, but also created friction, as it brings in people from different traditions, contexts, and disciplines with different agendas, experiences, and reference points. This

situation somewhat mirrors the state of play research at the end of the 1990s, which then led Brian Sutton-Smith (1997) to pen *The Ambiguity of Play*. The book presents a historical discourse analysis of play in scholarship and popular culture, tracing the miscommunication between researchers and pundits back to different value-laden "implicit narratives," or *rhetorics*: "the way play is placed in context within broader value systems," "large-scale cultural 'ways of thought' in which most of us participate in one way or another, although some specific groups will be more strongly advocates for this or that particular rhetoric" (8–9).

I hold that the same phenomenon is at work in the current discourse around the gameful world. And like Sutton-Smith, I believe that "by revealing the rhetorical underpinnings of the apparently diverse theoretical approaches" toward the gameful world, "there is the possibility of bridging them with some more unifying discourse" (Sutton-Smith 1997, 9). Appropriating Sutton-Smith's validating criteria for the identification of a play rhetoric (15–16), I suggest that a gameful world rhetoric presents a more or less coherent, self-stabilizing network of the following components:

- one or more *communities of practice* that reproduce the rhetoric: its fit with the practices, values, mental models, and standard operating procedures of a community stabilizes a rhetoric;
- one or more *academic disciplines* in which the community members were likely socialized, whose epistemology, theories, and methods fit their practice and rhetorics and lend them legitimacy;
- *concepts and intellectual precursors* that can be referenced and drawn upon as jointly known and accepted as authoritative;

- main *proponents* of the rhetoric in the current discourse;
- typical *application areas* informed by the rhetorics, whose fitting affordances again stabilize the rhetoric;
- *prototypical nongame analogs* that offer conceptual metaphors to guide thinking about games in the form of "games are like X";
- a specific *framing of games and game design* in terms of specific concepts and theories, foregrounding specific properties and backgrounding others;
- specific *reference game genres* whose features fit and stabilize the rhetoric;
- a *moral politics* of play: a wider social valuing and placing of play, games, and game design in either liminal or liminoid terms;
- finally, many rhetorics of the gameful world perpetuate one of the *play rhetorics* identified by Sutton-Smith.

The use of the term *rhetorics* is not meant to imply a linguistic relativism or a historicism for which every rhetoric is "immediate to Truth," to paraphrase von Ranke. It is grounded in a pragmatist stance: theories, perspectives, and rhetorics are practical tools, not Platonic mirrors, and some tools are more useful or viable than others. Also, the rhetorics presented in the following subsections are to be seen as Weberian ideal types. Any individual speaker is likely to appeal to several rhetorics, have her own individual twist, suggest combining two or swapping one for the other, or similar. Likewise, any designer in her practice will be guided by her own idiosyncratic blend, and any resulting application will be describable *post hoc* in the terms of different rhetorics. With these provisions out of the way, let us look at the individual rhetorics in detail (tables 1.1–1.4).

Table 1.1
Rhetorics of the gameful world, part 1 of 4

Rhetoric	Feedback	Nudging	Exploitation	Status
Communities	Marketers, managers, economists, quantified self movement	Marketers, designers, economists, policy makers	Critical theorists	Marketers, social media startups, managers
Academic Disciplines	Neoclassical economics	Behavioral economics, social psychology	Political economy, critical theory	Sociology, social psychology, informatics
Concepts and Precursors	Markets, incentives, mechanism design, market design	Cognitive biases and heuristics, persuasion, incentive-centered design	Free labor (Terranova), playbor (Kücklich), ideology, symbolic politics	Conspicuous consumption (Veblen), social capital (Bourdieu), signaling theory, self-presentation (Goffman)
Application Areas	Enterprise, human information tasks, health, sustainability, social media	Public policy, health, sustainability, marketing	*Same as feedback and nudging*	Marketing, UGC platforms
Games as . . .	Markets with perfect information and incentives	Choice architectures using cognitive biases	Exploitation, tokenism, bullshit, false consciousness	Stages for public display of costly signals
Non-game Analogs	Prediction markets, virtual currencies, KPIs, business intelligence, incentives, loyalty programs	Marketing material, sales offers	Clicktivism, free labor, human information tasks	Reputation systems, loyalty programs, status goods
Reference Genres	MMORPGs	Social network games	MMORPGs, social network games	Achievement systems
Moral Politics	Liminal optimization of fitness, profit, productivity, policy outcomes	Liminal achievement of policy outcomes and business goals	Liminoid critique of surplus extraction, social inequity, and commodification of dissent	Liminal appeals to and reproduction of status anxiety
Play Form	Ludic	Ludic	Paidic	Ludic
Proponents	Byron Reeves, JP Rangaswami, Gabe Zichermann	Gabe Zichermann, Juho Hamari	Heather Chaplin, Liz Losh, P. J. Rey, McKenzie Wark, Ian Bogost	Gabe Zichermann
Play rhetoric	Progress	Progress	Power	Power

Table 1.2
Rhetorics of the gameful world, part 2 of 4

Rhetoric	Performance		Well-being	
	Communal	Immersive	Hedonic	Eudaimonic
Communities	Nordic larp, performance art and public play design community	Mixed reality researchers and art groups, narrative educational role-playing	Gameful.org community	Philosophers, designers
Academic Disciplines	Performance studies, game studies	Media studies, performance studies, computer science, educational research	Positive psychology	Psychology, virtue ethics
Concepts and Precursors	Performance (Schechner), ritual (Turner), play community (DeKoven), collective effervescence (Collins)	Mixed reality performance (Benford), barely games (Davies), augmented environment (Bolter), spatial stories (Jenkins), transformational play (Barab), practomimesis (Travis)	Happiness and well-being (Seligman), lusory attitude (Suits)	Flow (Csikszentmihalyi), self-determination (Ryan and Deci), paratelic state (Apter), virtue ethics (Aristotle), focal practice (Borgmann)
Application Areas	Therapy, art, community building, political activism	Art, entertainment, education	Health, personal growth	Personal growth, ethical development
Games as . . .	Collective performance and experience of temporary reframings	Immersive worlds and narratives	Environments well-structured for positive experiences	Extended will, focal practices and objects for building virtues
Non-game Analogs	Rituals, performance art, happenings, parties	Theater, virtual reality, amusement rides, theme parks	Therapeutic and self-help exercises	Deliberate practice in crafts, sports, martial arts
Reference Genres	Larps, pervasive games, art games, new games, ARGs	Augmented reality games, story-driven games, RPGs	Multiplayer games, ARGs	Skill-based games, playful objects
Moral Politics	Liminoid temporary autonomous zone for communities	Liminoid experiences, liminal pleasures	Liminal-liminoid recovery, fueling collective action	Liminoid eudaimonia
Play Form	Paidic	Paidic	Ludic, paidic	Paidic
Proponents	Jane McGonigal, Kars Alfrink, Jaakko Stenros	John Carroll, Russell Davies, Lee Sheldon, Roger Travis	Jane McGonigal	Scott Rigby, Marc Hassenzahl, Miguel Sicart, Evan Selinger, Sebastian Deterding
Play Rhetorics	Identity	Imaginary	Progress	Self

Table 1.3
Rhetorics of the gameful world, part 3 of 4

Rhetoric	Pleasure	Systems	
		Expressive	*Learning*
Communities	Advertisers, designers	(Indie) game designers and scholars	Game-based learning scholars
Academic Disciplines	HCI, Industrial design, user experience, game design	Game design, literary theory, computer science	Education
Concepts and Precursors	Funology (Blythe et al.), playfulness (Korhonen et al.)	Serious games (Abt), proceduralism (Wardrip-Fruin, Mateas, Bogost), systems theory	Microworlds, constructionism (Papert), communities of practice (Lave and Wenger)
Application Areas	Advertising, design	Arts, political communication	Education
Games as . . .	Experiences designed for pleasure	Designed rule systems procedurally expressing meaning	Explorable microworlds with problems and communities
Non-game Analogs	Playful design	Literature, propaganda, algorithms, hacking	Montessori schools
Reference Genres	Advergames, toys, installations, amusement parks	Persuasive games, rule-intensive games	Simulation games, multiplayer games, MMORPGs
Moral Politics	Liminal attention generation, entertainment, and value-add	Liminoid social critique	Liminal training of the twenty-first century workforce, liminoid empowerment
Play Form	Paidic	Ludic	Ludic
Proponents	Jesse Schell, Stephen Anderson, Nicole Lazzaro	Ian Bogost	Kurt Squire, Katie Salen, Karl M. Kapp
Play Rhetorics	Frivolity	Imaginary	Progress

Table 1.4
Rhetorics of the gameful world, part 4 of 4

Rhetoric	Cultural form	Playfulness	
		Free	Industrial
Communities	Game artists, media scholars	Philosophers, critical designers	Product designers
Academic Disciplines	Aesthetics, cultural and media studies	Philosophy, critical design	Design
Concepts and Precursors	New media literacies, media theory, cultural studies	Carnival (Bakhtin), paidia (Caillois), Dyonisian (Nietzsche), free play (Nachmanovitch), ludic design (Gaver)	Design thinking, creativity
Application Areas	Arts, media	Infinite	Product innovation
Games as . . .	Aesthetic forms and cultural media	Material for the playful recombination of behaviors, objects, meanings	Rationally accountable creativity methods
Non-game Analogs	Music, film, literature	Carnival, jazz, childhood play	Creativity techniques
Reference Genres	Indie games, art games	Sandbox simulations	Card games, word games
Moral Politics	Liminoid reflection of culture, self-expression, art for art's sake	Liminoid heterotopia	Liminal rationalized creativity
Play Form	Paidic	Paidic	Paidic
Proponents	Joost Raessens, Eric Zimmerman, Frank Lantz, Ian Bogost, Mary Flanagan	Miguel Sicart, Bill Gaver, Scott Nicholson, Jaakko Stenros	Luke Hohmann, Dave Gray
Play Rhetorics	Imaginary	Frivolity	Imaginary

The Rhetoric of Feedback

The rhetoric of feedback has been put forward most strongly in Reeves and Read's (2009) *Total Engagement.* MMORPGs are blueprints for the future of work, they argue, because they create a fully transparent and meritocratic market: character statistics such as levels and skills are explicit and reliable markers of skill and reputation, goals are explicit numerical targets, and feedback is immediate and explicit. In MMORPGs, systems like "Dragon Kill Points" ensure loot is distributed meritoriously based on each indi-

vidual's measurable contribution to the team effort, solving collective-action problems. JP Rangaswami (this volume) similarly argues that the networked, distributed, exception-is-the-rule, "lumpy" quality of today's knowledge work requires MMORPG design and gamer values, "active 360 feedback loops, highly sensitive controls, both close-in and as well as zoomed-out loci of operations." Much "green gamification" (Froehlich, this volume) and health gamification (Munson et al., this volume) appeal to this line of reasoning: provide users timely

and actionable feedback on their health and environmental behavior, and they will improve it. As Aza Raskin (2011) put it: "The one secret to changing human behavior? Feedback loops." This rhetoric connects gamification with the quantified self movement and with "big data" and "smart cities" discourses (Wolf 2009; Li, Dey, and Forlizzi 2010; Goetz 2011).

Underlying this rhetoric is a conception of human beings as computational and economic *rational actors*, dominant in a wide range of disciplines during the second half of the twentieth century. In essence, the claim is that humans are highly independent quasi-computers that rationally process information to plan and execute actions so as to maximize their self-interest. "Suboptimal" action (disengagement at school, free-riding at work, overeating, driving fuel-inefficiently) is therefore due to either incorrect information or insufficient incentives. The solution is to improve the available information or to align incentives with desired outcomes. In contemporary terms, behavior needs to be tracked and measured (with ubiquitous sensors), analyzed (with big data analytics), displayed (with data visualization), and incentivized (with granular scores translating into saved fuel, reduced health care premiums, etc.). The rhetoric of feedback thus reiterates mid-twentieth-century cybernetic, systems theoretical visions of social engineering performed by technical elites (e.g., Bell 1976), only in slightly more "distributed" and "agile" terms where software continually monitors and automatically adjusts information flows, terms, and incentives (O'Reilly 2010).

Games in this rhetoric are blueprints of perfect markets or feedback systems. Players cooperatively engage in activity intended by the system designers because games provide not only a wealth of real-time, precise, easy-to-grasp feedback on all relevant parameters but also granular, explicit, optimally balanced and aligned incentives for any and every desired activity (Williams, this volume). Game design is essentially market or mechanism design (Hamari, Huotari, and Tolvanen, this volume), and frequent nongame analogies are prediction markets, virtual currencies, KPIs, business intelligence, and employee bonus and customer loyalty programs.

This rhetoric is found in public policy, sustainability, personal health, and human information task platforms such as Amazon Mechanical Turk. Yet its main bedrock is corporate engagement, productivity, and collaboration (see Mollick and Werbach, this volume). It fits nicely with mental models and practices dominant in enterprises: games are seen as business dashboards and incentive programs, only somehow more and better. The societal role of games is thus framed fully in liminal terms: game design can allow managers and regulators to arrange for more competitive and productive employees (or citizens), solve collective-action problems, and coordinate distributed work.

The Rhetoric of Nudging

In the past decades, the rational actor model has been increasingly called into question across the social and behavioral sciences, to be replaced with the image of human beings as "social animals" (Brooks 2011): humans depend on others and are driven by social influence; they are guided by emotions, not just reason; most of their everyday behavior is habitual, not consciously planned; and even where rationality holds, it is bounded.

The most visible rendition of this view has come in the shape of behavioral economics, which

empirically studies how people's actual economic behavior deviates from predictions based on the *Homo economicus* model, explaining this deviation with certain cognitive heuristics and biases. In their influential book *Nudge*, Richard Thaler and Cass Sunstein (2008) flipped the descriptive analyses of behavioral economics into prescriptive advice for policy makers: to improve regulatory outcomes, governments should engage in "choice architecture" that uses knowledge about cognitive biases in the presentation of choices to "nudge" individual choice in the desired direction. Beyond policy circles, this rhetoric has become prevalent in (online) marketing and user experience design as "persuasive design" (Deterding 2012b). Hence, consumer marketing is the predominant application area and real-life analog of this rhetoric, though it also extends to personal health, green technology, and public policy.

Gamification evangelists and scholars alike have appealed to behavioral economics as a foundation for gamification (Paharia 2010; Zichermann and Linder 2013). Game design is framed liminally as helping governments and marketers to drive policy outcomes and sales with choice architectures whose design patterns directly use cognitive biases and heuristics, social influence, emotional appeals, and the power of habit. Social network games like FarmVille are the reference genre of choice: their gifting mechanics utilize guilt and reciprocity norms to get people back to the game; appointment play with decaying resources makes use of the sunk-cost fallacy and endowment effect; and so on (Hamari 2011, 2013).

The Rhetoric of Exploitation

The expectable opposition to market and nudging rhetorics comes from political economy and critical theory, where gamification is seen as the most recent adaptation of capitalism to reproduce the power and property relations of bourgeoisie and proletariat (Rey, this volume).

As societies become affluent and work is dematerialized into affective, creative, and information labor, new, *symbolic* goods and forms of consumption have to be invented to keep production running, and new ideologies have to be fashioned to appease the public. Furthermore, creative, affective, and information labor require a degree of emotional investment, self-investment, initiative, and flexibility that is incompatible with the alienation of twentieth-century Fordism—which denied workers any autonomy and initiative and offered nothing but money in exchange. The new economy replaces Fordism with a "play ethic" (Kane 2004) that dissolves the modernist distinctions of work and leisure into "weisure" (Conley 2008), producers and consumers into "produsers" (Bruns 2008), and play and labor into "playbor" (Kücklich 2005): the workplace is presented as a playground where "friends" "grow themselves" and "have fun" while working on things that "make a dent in the universe." This factual and rhetorical *de-alienation* of labor enables its continued *exploitation* (Rey, this volume). In the "free service for data" deal, the terms (of service) are set by the platform owners, and the surplus value stays with them. One exemplary site of such de-alienated exploitation is the "free labor" (Terranova 2013) performed by players of "games with a purpose" (Zittrain 2008).

Games and gamification in this rhetoric manifest symbolic goods, modes of production, and ideologies that commodify dissent and optimize surplus value extraction while covering up their exploitive nature with a false consciousness. They create

artificial demand for virtual items without real value. They channel dissatisfaction into slacktivism and "epic wins" in virtual worlds. They replace real co-determination, deliberation, and participation by employees, shareholders, and citizens with tokenist "engagement" in "idea platforms" and "democracy hackathons." Instead of helping the public to identify and align around systemic social issues, games and gamified platforms for health, education, self-management, or civic engagement let people "feel *as if* they're doing something worthwhile" (Chaplin 2011). Government serious games harness the symbolic capital of games (Losh 2009), and development aid projects like the PlayPump (Borland, this volume) make for uplifting feel-good stories—no matter if outcomes on the ground are dysfunctional. In gamified employee and customer relations, "(o)rganizations ask for loyalty, but they reciprocate that loyalty with shams" (Bogost 2011b). In short, this rhetoric explicitly addresses and critiques the liminal framing of the rhetorics of feedback and nudging.

The Rhetoric of Status

Where the rhetoric of feedback and nudging strike an individualist tone, the rhetoric of status turns to the collective. No person has pushed the role of status more strongly and consistently than gamification evangelist Gabe Zichermann. He presents social status as a central human drive that fuels an innate desire to compete, win, and publicly display tokens of achievement. His "SAPS" hierarchy puts status on the first place as the most desired (and least expensive) reward. Status competition is presented as the unifying core of games, loyalty programs, and social life writ large (Zichermann and Linder 2010, 15, 41;

Zichermann and Cunningham 2011, 9–11, 91–92; Deterding 2011).

Zichermann's status rhetoric echoes the premodern play rhetorics of power (Sutton-Smith 1997, 74–90), where games, sports, and other ritualized contests are seen as (predominantly male) arenas of publicly asserting dominance, cool nerves, and group affiliation, but his statements ultimately lack scientific grounding. This is surprising given that ethology, sociology, and social psychology provide ample resources to substantiate and unpack such status rhetorics: one may appeal to Veblen's conspicuous consumption, Bourdieu's analyses of social capital and the reproduction of class difference through displaying "good taste," Cooley's looking-glass self, Goffman's (1959) studies of self-presentation, or psychological research on social motives like power, achievement, and affiliation (Reeve 2009, 170–200). One might even appeal to evolutionary signaling theory, reasoning that animals display costly signals (like elk horns, peacock tails, luxury goods, or diplomas) because these provide a hard-to-fabricate indication of one's reproductive fitness (Bliege Bird and Alden Smith 2005). All these approaches argue for a central role of social signaling in human coexistence. Seen in their light, games and gamified systems are public arenas that provide means for fashioning scarce and costly signals of status, fitness, and trustworthiness. However, their portrayals of the dynamics of symbolic social regard are also far more intricate and complex than gamification proponents would have them be.

The most relevant application of these theories for games and gamification can be found in informatics and HCI research on self-presentation, trust, and motivations for contributing UGC on social media (Lampe, this volume) and game scholarship on

gaming capital and achievement systems (Consalvo 2007; Jakobsson 2011; Medler 2011).

Given the naturalizing terms in which gamification proponents appeal to status, this rhetoric is again liminal: all there is to do is for system designers to hook into people's natural "drives" to status to motivate them to pursue the system's goals. Critics in, for example, sociology, psychology, or informatics have countered that competing for social status is long-term detrimental to psychosocial well-being (Dweck 2008; Deci and Ryan 2012) and an acquired, learned need—one we don't find as strongly in collectivist cultures (see Khaled, this volume).

The Rhetoric of Performance

If status is one side of the coin of collective rhetorics, communal performance is the other. Its proponents—most prominently Jane McGonigal—emphasize collaboration over competition, shared experience over individual distinction, and the "epic" sense of "Becoming a Part of Something Bigger than Ourselves" (McGonigal 2011, 95). We find this rhetoric in the artistic public play and pervasive game communities, mixed reality art groups, Nordic larp, and Bernie DeKoven's notion of a "play community" (DeKoven 2013; DeKoven, this volume). Games are understood as collective rituals: temporally, spatially, and socially set-apart alternate realities where participants can embody and explore alternative roles and behaviors. New social frames of meaning and norms get negotiated and enacted, and this joint performance of an alternate little world unto itself gives rise to strong embodied experiences of "collective effervescence" (Collins 2004) or *communitas* (Turner 1982; see Stenros, this volume).

The rhetoric of performance ties directly back to the premodern play rhetoric of identity, framing play as events in which individuals experience their belonging to their community and reassert its sacred moral order (Sutton-Smith 1997, 91–110). Its nongame analogs are festivities, performance art, and happenings. Here, gamification (although proponents of this rhetoric usually shun the term) entails that the spatially, temporally, and socially *bounded* alternate reality of a ritual becomes *pervasive* as a shared framing that generates and stabilizes new meanings, experiences, behaviors, and roles in everyday life (McGonigal 2011, 125–126). Hence play activities and games that blur the boundaries between games, public space, and everyday life are the reference prototypes of this rhetoric: situationist practices, LARP, ARGs, pervasive games, or the "big games" of Area/Code (2007).

Analytically, the rhetoric of performance as *communal* action can be distinguished from a second flavor, *immersive* performance, where games are seen as environments whose dramaturgical arrangement creates narrative experiences for the person who moves through them: "spatial stories" (Jenkins 2004). In this context, gamification means to layer media onto everyday reality to reframe the environment and activity of the audience-as-performer, a technology-enabled pretense. Proponents span from Carroll and Thomas's (1982) "metaphoric cover stories" to today's immersive theater, mixed reality, and narrative role-playing-based forms of gameful learning (Barab, Gresalfi, and Ingram-Goble 2010; Sheldon 2011; Travis 2011). Role-playing and augmented reality games are the typical reference genre, and theme parks, amusement rides, and theater the typical nongame analogs.

In McGonigal's (2011) current writings, games are presented as the positive normative yardstick for social life and the means to move individual experience and collective action toward this optimum—ultimately, a secular liminal position where societal values are given and affirmed, and individual action is utilized for the *collective* good of *individual* happiness. Other proponents of this rhetoric conceive of games in liminoid terms as temporary autonomous zones (Bey 1991) where the culturally dominant meanings, values, and ways of life can be questioned and dissolved, where experiences that "another world is possible" can be made and oppositional communities forged. Many projects of this rhetoric—like *Macon Money* (Area/Code 2010)—aim to counteract the segregation and loss of community in cities that are framed as both a cause and part of the systemic inequities of today's societies (see Alfrink, this volume). It is an irony of history that *ritual*—the very embodiment of affirmation of the social order in premodern societies—should in late modernity be viewed as a principal space for challenging it.

The Rhetoric of Reinforcement

The rhetoric of reinforcement shares many proponents, tenets, and design approaches with the rhetorics of feedback and nudging. Their joint interest is using technology to drive individuals' behavior in an intended direction—in other words, "persuasive technology." Coined by psychologist B. J. Fogg (2003, 1) the term describes "any interactive computing system designed to change people's attitudes or behaviors." Fogg has since 2003 focused more and more on behaviors over attitudes, fashioning his own "Behavior Model" (Fogg 2009a) and "Behavior Grid"

(Fogg 2009b). Through his business consultancy work, he has been instrumental in the resurgence of behaviorism among technology and design circles in Silicon Valley. In the rhetoric of reinforcement (as in behaviorism writ large), intention and cognition are seen as mostly epiphenomenal. Behavior is explained—that is, mathematically modeled and predicted—as the relation of the observable previous history of reinforcement of an organism and its current environment of observable stimuli (see Linehan, Kirman, and Roche, this volume). This "engineering" view of human behavior, coupled with a focus on data and predictive modeling, seems to resonate with the existing mental models and practices within software and technology companies.

In the gamification discourse, the rhetoric of reinforcement was first struck by Fogg's doctoral advisor Byron Reeves (Reeves and Read 2009, 71–75)[9] and has since become a mainstay in the publications of Gabe Zichermann (Zichermann and Cunningham 2011) and Michael Wu (2012). These authors present games as systems that produce optimal stimuli and reinforcement. Slot machines and loot drop in World of Warcraft (Blizzard Entertainment 2004) are evoked as prime examples of variable ratio reinforcement schemes that deliver reinforcements on desired behavioral responses at a not fully predictable rate, which is seen to explain their "addictive" quality.

Notably, even critics of gamification often deploy the rhetoric of reinforcement, equating gamification with "Skinner boxes"; that is, the experimental setup of B. F. Skinner and colleagues where animals are placed in a box with a lever and food dispenser (Linehan, Kirman, and Roche, this volume). Such "Skinner box" appeals are sometimes used to highlight the reductionism of behaviorist explanations,

but most often to express moral outrage over designers intentionally using behaviorist techniques on human beings—thereby implicitly expressing a strong belief in the efficacy of these techniques (Pesce, this volume). This common reaction to the rhetoric of reinforcement (and persuasive technology more generally) has led to a legitimizing ethics discourse (Berdichevsky and Neuenschwader 1999; Fogg 2003, 211–244; Zichermann 2012). In practice, these ethics are usually construed as constraints on what is "still permissible" in the liminal perfection of means toward the predetermined ends of the system owner. Applications inspired by the reinforcement rhetoric range from employee engagement and customer loyalty to public policy, but arguably center around "Habit Design"[10] for personal health and self-improvement. It bears pointing out that many proponents of the reinforcement rhetoric *appeal* to science but ultimately operate on a folk theoretical understanding, amalgamating knowledge of often obsolete and even mutually contradicting bodies of research (e.g., Maslow's hierarchy of needs with behaviorism, cf. Wu 2012), filtered through pop science journalism or B. J. Fogg.

The Rhetoric of Well-Being

The rhetoric of well-being is grounded in the cognitive and positive psychology that presents the very counterreaction to behaviorism in the history of psychology: the (re)discovery of the fact that humans voluntarily engage in activities without any reinforcement and that one and the same dreadful circumstance might lead to radically different understandings, experiences, and thus behavioral responses challenged the behaviorist ban on taking internal states into account. Consequently, the rhetoric of well-being emphasizes internal states over environmental circumstance, experience over behavior, and self-determination over outside control. The chief intellectual guideposts in this rhetoric are Aristotelian (2002) virtue ethics, Apter's (2006) reversal theory, Csikszentmihalyi's (1990) concept of flow, self-determination theory (Deci and Ryan 2012), and the works of positive psychologist Martin Seligman (2011). All are concerned with the nature of human well-being, and all propose that human beings actively seek out and enjoy certain intrinsically valued states. Indeed, the human being in this rhetoric is defined by its ability to transcend its animal determination by bodily pleasure and pain toward ever-greater self-determination.

The rhetoric of well-being frames the "fun" of games as just those states that we as humans innately strive for: experiences of competence, relatedness, and autonomy, of meaning and flow. Games are seen as environments that optimally afford such experiences (Csikszentmihalyi 1990, 48–76; see Rigby, this volume). Notably, the quality of one's experience is seen to depend on both external circumstances *and* one's internal stance toward them. We might perceive and engage in an activity as "autotelic" (Csikszentmihalyi), "paratelic" (Apter), "autonomous" (Deci and Ryan)—or not. This is why proponents of the rhetorics of well-being emphasize perceived autonomy as a necessary condition for play.

One aspect of the rhetoric of well-being, forwarded by Jane McGonigal among others, might be called hedonic. In her view, judged by its ability to provide what humans strive for, "reality, compared to games, is broken." (McGonigal 2011, 3). Her proposed solution is to (a) play *more* games to sate our unfulfilled needs, and (b) redesign the world in the image of

games, again (c) using games to motivate people to engage in these redesign efforts.

Miguel Sicart (this volume), Marc Hassenzahl and Matthias Laschke (this volume), myself (Deterding 2012a), and to a certain extent, McGonigal herself have emphasized a different aspect of well-being one may call *eudaimonic*. Taking a primary cue from Aristotelian ethics, the focus is less on happiness than *eudaimonia* or flourishing as the lifelong development into a self-determined, self-concordant human being. Changing outer circumstances alone by definition cannot bring about such flourishing, because it is the development of self-knowledge, self-awareness, and self-regulating skills or virtues through deliberate practice. In this rhetoric, gamification is seen as ideally facilitating tools of "extended will" or "pleasant troublemakers" we enroll in our pursuit of eudaimonia (Heath and Anderson 2010; Hassenzahl and Laschke, this volume; Selinger, Sadowski and Seager, this volume). Analogs are the practicing of crafts or martial arts. Physical sports or games like Go and chess that allow a lifelong deepening of skills as well as "light," playful interactions that invite reflection instead of forcing (or easing) action are prototypical game genres. This rhetoric is deeply liminoid, wedded to modernist rhetorics of self-realization (Sutton-Smith 1997, 173–200).

The Rhetoric of Pleasure

The rhetoric of pleasure is found predominantly in HCI as well as user experience and game design, with Jesse Schell (this volume), Stephen P. Anderson (2011), and Nicole Lazzaro (2008) being main figureheads. Here, the central question is how to create an entertaining, enjoyable, engrossing experience—be that for a marketing or advertising campaign, a product or service, or a stand-alone entertainment offering. In all cases, games are seen as *the* genre of interactive experiences that has been built with the sole purpose of providing enjoyment—hence, they are a medium of choice and a source of inspiration for designers who want to design for pleasure. This rhetoric is holistic and applied—the main interest is in supporting the practice of design with (conceptual) tools and processes. Many different forms, causes, and conditions of enjoyable experiences are acknowledged (Arrasvuori et al. 2011), as is the importance of design detail and the complexity of circumstances.

Given its broad stance and perspective, this rhetoric is grounded in a broad range of exemplary phenomena, including toys, amusement park attractions, and museum installations. Its applied focus is fully liminal, supporting organizations in designing and marketing products and services.

The Rhetoric of Systems

The rhetoric of systems—sometimes also labeled proceduralist or formalist (Sicart 2011)—is a distinctive emic discourse of game design and game studies. Central proponents are designers and scholars such as Eric Zimmerman (this volume; Salen and Zimmerman 2004), Ian Bogost (2007), and Michael Mateas and Noah Wardrip-Fruin (2009). Grounded in literary theory, computer science, systems theory, and education, this rhetoric portrays games as designed rule systems with which one can interact.

The *expressive* branch of this rhetoric is especially interested in games as meaning-making media—how rule systems are able to present claims about other systems, and how meaning is generated in the interaction between people and rule systems. The

main reference genres here are simulations or otherwise rule-intensive games; algorithms, societal rule systems, and expressive media (especially literature) are common nongame analogs. The expressive potential of games is at the same time criticized as a potential "hidden persuader" (see Starr 1994) and actively encouraged in the design of persuasive games (Bogost 2007). This rhetoric has been so far mostly used as a critique of gamification (Bogost, this volume; Robertson 2010), making the argument that the reduction of games to reusable feedback design elements misses their *systemic* nature, and thus ignores the complexity of both game design and the game-player interaction. The moral politics of its representatives have given the expressive systems rhetoric a liminoid bent: by representing (or contrasting) the dysfunctions of other rule systems in society, games ought to raise players' consciousness of them.

A slightly different tune is struck in the *educational* branch of the systems rhetoric (Gee, 2003; Squire, 2011; Ramirez and Squire, this volume). Grounded in constructionist and sociocultural learning theories, its representatives are most interested in the learning that takes place through and around games. Learning is understood as a process of constructing one's understanding of and skill in engaging with the world through practical experience with complex real-world problems and participation in a surrounding community of practice. Games are thus viewed as sociotechnical systems of communities and artifacts, with the artifacts themselves being complex, probable systems. This makes simulation and multiplayer games, with strong player communities, the key reference genres. Systems thinking, design, creativity, complex problem solving, and collaboration are presented as the most relevant skills of the twenty-first-century workforce (Zimmerman, this volume), and

game design as the activity where these skills are best trained, making hackers and designers aspirational role models: Ludoliteracy (Zagal 2010), procedural literacy (Bogost 2005; Mateas 2005), and computational thinking (Wing 2006) are understood as intimately linked. In this rhetoric, gamification is framed mostly critically, arguing that educational uses of gamification have so far fallen back into incentive systems that have proved detrimental to learning, while missing out on games' ability to present complex real-world tasks and involve players in social learning (Ramirez and Squire, this volume). Counterexamples such as Lee Sheldon's (2011) *Multiplayer Classroom* or the Quest 2 Learn schools (Salen et al. 2011; see Salen, this volume) again stress the *systemic* nature of games, restructuring classes (or school curricula) around complex, collaborative problems and design activities. This rhetoric fluctuates between the liminal and liminoid, based on the underlying educational philosophy—it is liminal (and echoing the modernist play rhetorics of progress; Sutton-Smith 1997, 18–51) where it plainly uses game design to realize socially demanded learning outcomes and educate a future workforce (e.g., Kapp 2012). It is liminoid where it understands education as the full development and empowerment of individuals.

The Rhetoric of Cultural Form

The rhetoric of cultural form overlaps with that of expressive systems in its framing of games as sites of expression, meaning making, and aesthetic experience. Yet it casts a wider net: many scholars and designers with backgrounds in art, art history, or cultural and media studies understand games broadly as an "aesthetic form" (Lantz 2011; Lantz, this

volume) parallel to painting, music, film, or literature, one that has its own specific affordances and tropes (Flanagan, this volume). As such, games partake in the wider circulation of meanings in culture—as reflections of the ideas, discourses, and ideologies of their time, and as expressions of individuals' perspectives and (critical) reflections on them. Cultural participation today requires the acquisition of "new media literacies" (Jenkins et al. 2009), including the ability to appreciate and express oneself critically through the medium of games. Unsurprisingly, this rhetoric is particularly dear to the indie and art games communities.

This rhetoric is quintessentially modernist and liminoid, continuing the play rhetorics of the imaginary (Sutton-Smith 1997, 173–200). Games can be a medium of creative expression of the self and social critique, but as "art for art's sake," they do not need any instrumental, functional legitimacy. "In Defense of Beauty" (Zimmerman 2011), gamification is usually critiqued as profaning "the wild, magical beast of games" (Bogost 2011). At best, it is reframed as "ludification"—the recirculation of game aesthetics in the wider media culture (Raessens 2012).

The Rhetoric of Playfulness

A central motif in the rhetorics of play is to portray it as what by definition escapes definition, graspable only in the negative as the reversal of any existing order or form, as an inherently "meta" phenomenon of "antistructure" (Turner 1982, 52). In modernity, play has become framed as the frivolous opposite to the Protestant work ethic, but the rhetoric of frivolity goes back much futher to the ancient figure of the trickster god (Sutton-Smith 1997, 201–213).

Fittingly, in both the game studies and gamification discourse, the rhetoric of playfulness takes the shape of a counterdiscourse (Sicart 2011; Sicart, in press; Sicart, this volume; Nicholson 2012). It draws on philosophy and aesthetics to evoke the protean, creative, unruly powers of *paidia* (Caillois 2001) or *Free Play* (Nachmanovitch 1990). From its improvisational recombination of behaviors, objects, and meanings, new forms emerge. Play is thus not only "free movement within a more rigid structure" (Salen and Zimmerman 2004, 304) but also the movement and transcendence of structure, while still bound to it as its necessary antithesis. At the same time, the ludic civilization of rules and competition is ever present to bind the primordial impulse of playfulness (DeKoven 2013). Games in this rhetoric are that antithesis: they are the material for and solidified remains of play. If there is a genre of games conducive to play at all, it is the most toy-like, open-ended sandbox simulations such as Minecraft (Mojang 2009). Playfulness itself is seen not as a material object or activity, but as a non-instrumental, autotelic stance. It is a temporary liminoid appropriation and transformation of its source activity—a bout of benign mischief that for its very immoderateness always carries the danger of derailing into "dark play" (Schechner 1988). In HCI, this rhetoric is reflected in Gaver's notion of "ludic design" (Gaver 2002; Gaver, this volume) that is less interested in the "improvement" of user experience than in creating spaces and objects for open exploration and reflection. Then again, in the design industry, we find the liminal harnessing of play as a source of creativity. Innovation games (Hohmann 2006), gamestorming (Gray, Brown, and Macanufo 2010), and gamified idea platforms are used to "manage innovation processes" (Gartner 2011) and to sate the demand of businesses for rationally accountable creativity.

Conclusion: *Vos jeux, faite*

Fitter, happier, more productive
Comfortable
Not drinking too much
Regular exercise at the gym (three days a week)
Getting on better with your associate employee
   contemporaries
At ease
Eating well (no more microwave dinners and saturated
   fats)
A patient better driver, a safer car (baby smiling in
   back seat)
Sleeping well (no bad dreams)
No paranoia

—Radiohead, Fitter Happier (1997)

So what remains? As with the rhetorics of play, we see that the rhetorics of a gameful world "are part of the multiple broad symbolic systems—political, religious, social, and educational—through which we construct the meaning of the cultures in which we live" (Sutton-Smith 1997, 9). Reviewing its histories—serious and pervasive games, artistic and countercultural play, playful design, socialist competition, playful resistance and funsultants at work—takes the breathless edge of newness from gamification. This in turn opens a view toward deeper underlying transformations of society: the postmaterial value shift, the rise of post-Fordist information, service, and experience economies, the instrumentation of our lifeworld into a code/space of ubiquitous computing, the emergence of digital games as a medium and industry, and the convergence of media into ever-new amalgamations.

Surveying the rhetorics of a gameful world, one finds a heterogeneity of communities, discourses, and practices that existed long before they came into contact with games and play. As a cultural moment and momentum, the gameful world is characterized by this very proliferation of perspectives that—I would argue—game scholarship should not fend off as "colonizing attempts" (Aarseth 2001), but embrace and reflect in its meaning and effects. If the unifying feature of play is its "adaptive variability" (Sutton-Smith 1997, 221), then "games" today are unified in their mirror-like quality to reflect the image of whatever preconceptions are brought to them: the alliances and oppositions among the rhetorics of the gameful world organize themselves along the fault lines of modernist politics of play, on the question of what the "proper" place of play and games in society ought to be.

On the one side, we find the liminal rhetorics that accept our secular gods of progress, productivity, and the self. They frame games, play, and game design as the perfection of means toward these given ends. Here we see economists and psychologists, marketers, designers, and educators building perfect markets and feedback systems, choice architectures and behavior programs, remedies for the stresses of everyday life, collective self-realization engines, digital pleasures and innovation machines, microworlds for the twenty-first century workforce—all to make us fitter, happier, more productive. What is new is that the liminal collectivity of ritual is dissolved into a mundane, individualist, technical rationality. No collective ritual: just a few more rules the individual chooses to self-obey and self-monitor (until ubiquity turns them into social norms and technical defaults). No ecstatic moment of boundless *communitas*: just linked data, social graphs, and aggregated visualizations. No temporary inversion that affirms the

order upon return, no risky *Rumspringas*: just direct affirmation.

These liminal rhetorics go hand in hand with an emphasis on and preference for ludic forms in Caillois' (2001) sense: *gamification* is an inadvertently apt term, as the suggested solutions almost always involve adding *more* structure, rules, and goals (the only exception being the rhetorics of pleasure and industrial creativity). These added rule systems often present themselves as tools that empower individuals to pursue economic achievement and self-realization. Yet as Foucault has taught us, any such technology of the self at the same time is a technology of domination: just as it liberates through self-control, it controls through self-liberation. Continual self-governing is the very form of governmentality in modern liberal democracies and market economies (see Whitson, this volume), and celebrating the empowerment of individuals to better themselves puts the onus for any social problem on the individual, her "willpower" and "determination" (or lack thereof). All would be well if we all just ate a bit better, worked a little harder, drove a little more fuel-efficiently. You can get it if you really want, but you must try, try, and try—and gamification can help you along the way. This affirms the standing order by backgrounding any systemic causes or inequities, and thus any questioning of the sustainability or fairness of the order as such (cf. Thøgersen 2011).

Such liminal cultivations of play and games face the serious issue that the experience of autonomy in an activity is borne out by study after study as a constitutive feature of play and a central source of our enjoyment of it (Deterding 2013). It is not so much that we voluntarily play games because they are so much fun; rather, we experience game play as fun partially because it is framed as autonomous,

with no outer control, coercion, or frightful consequence affixed. The irony of instrumentalizing play and games as means to another end, then, is that it depletes the very source it tries to tap into: the experience of autonomy in noninstrumental activity.

One the other side, we find the liminoid rhetorics of critique, resistance, subversion, likewise bowing to the modern god of the self, but in presumed opposition to and desired transformation of the standing order: here the artists, intellectuals, and subcultures, here the critical aesthetic interventions and creative civil disobediences that "raise awareness" of the exploitation and inequity in society, the pocket utopias reminding us that "another world is possible," the focal practices of self-determination, the empowering mastery of new media expressing social critique and personal vision, the nonfunctional art for art's sake, the little carnivals and tactics of resistance. They overwhelmingly coincide with a preference for *paidic* forms of play and games (Caillois 2001), the freeing of movement and dissolution of structure—the exception being the rhetoric of expressive systems.

These liminoid rhetorics have to answer to the question whether their critical interventions (like those of any avant-garde before them) will ever reach more than the already converted and highly educated few. They have to respond to Horkheimer and Adorno's (2010/1969, 145–150) interjection that play as a refuge *from* the world of instrumentality is always already instrumentalized as a restoration *for* that world. And they have to ask themselves to what extent any playful reclaiming of public life is really a form of repressive tolerance that discharges revolutionary energy and resells it as commodified dissent.

In all its presumed dissolution of modernist boundaries between work and leisure, then, the rhetorics of

the gameful world reproduce the modernist opposition of the utopian politics of economic and technological progress and the romantic counterpolitics of the incommensurable individual and art as religion. Which raises the question: What are we *not* talking about? For this, let us turn to Jane McGonigal's (2011) *Reality Is Broken.* The book's premise is straightforward: "Reality wasn't designed from the bottom up to make us happy. Reality, compared to games, is broken." And so is the inviting conclusion: "What if we decided to use everything we know about game design to fix what's wrong with reality?" (3, 7). Now to the extent that McGonigal—and other proponents of a gameful world—want us to be more aware and skillful designers of our own lives, they are to be applauded. But their project also reveals an almost Baconian modernist, technocratic belief in the ultimate knowability, controllability, and perfectibility of nature by mankind. Games certainly offer us such strong experiences of agency. Their narratives almost invariably reiterate some version of *Only You Can Save Mankind* (Pratchett 1992). There's a reason we call Utopia (Dagelow 1982) or Populous (Bullfrog 1989) "god games." Games are bounded spaces of "contrived contingency" (Malaby 2007) where the odds are ever in our favor: it might be a zero-sum game, but *someone* is *bound* to win—even if it is the bank. In this, games mirror the ontological cocoon of today's technical civilization where gratification is instant, power is at our fingertips, and "disruptive" progress is a daily news story. Surely, any day now, diseases will be overcome, aging reversed, and death conquered.

But reality is not broken—the comparison is. Reality has no tutorials, walk-throughs, or rulebooks. Not every puzzle has a solution. There are no save games, no insert coins to continue (well, depending on your creed). The cards are almost invariably stacked, and often enough, everyone is bound to lose.

Reality ultimately is much more messy, random, unfair, and *beyond our control* than games. To think otherwise is to fall for "the ludic fallacy" (Taleb 2010, 122–133; cf. Walz 2010b): to confuse map and territory, the calculable risks of gambling with the existential dangers of living, the contrived, controlled, known spaces of our games, models, and technical lifeworlds with the uncontrolled, unknown, uncaring cosmos. It is tantamount to believing in some form of benign predestination, or the megalomania of children playing a game of "War," believing they can somehow force their will unto the cards.

This is the rhetoric of play conspicuously missing in today's discourse: *fate* (Sutton-Smith 1997, 52–74). In Hinduism, existence is seen as *lila*, a form of play by Shiva Nataraja, the lord of dance. In dancing, Shiva creates and destroys universes for the pure pleasure of doing so. In another myth, Shiva splits into himself and his wife Parvati to play a game of dice together. They constantly cheat on each other and get angry over it—and this divine spousal infighting is the source of our worldly turmoil (Handelman and Shulman 1997). We also have this notion in the Western tradition. It is present in the jealousies and scheming of the all-too-human Greek gods. It is the *hamartia* of Aristotelian tragedy, the hero's tragic flaw, the sight of which causes terror and pity in us through recognizing our own possible lot in it. It is the wheel of fortune commanded by the goddess Fortuna. There is a small, liminoid tradition in modern art that sought out chance as a means to escape the order of society, culture, and language— echoed in Luke Rinehart's (1971) *The Dice Man*, who decides to let his every decision be ruled by the roll of a die, logically leading him into the outside of society (with lots of gratuitous sex, drugs, and violence on the way, as befits a 1970s "cult classic"). We find remnants of this tradition in Dennis Crowley's

vision for foursquare: collecting and analyzing behavioral and social graph data "to generate more of those serendipitous encounters" (Crowley in Newton 2011) that brighten our daily routines in traversing a big city—an automated *dérive* that seems to miss the point that "reliable pleasant surprises" are as oxymoronic as "mandatory play." Urban "things to do, places to shop" raffles like foursquare—useful and enjoyable as they are—only add cushioning to our cocoons. They do not expose us to our own thrownness, as games of chance sometimes do (Malaby 2012). Compared with Greek tragedy, we seem to have lost our taste for facing suffering and fatefulness—for seeing them not as bugs but as inherent features of our lives that demand and teach courage, compassion, humility, and wisdom.

And games and play themselves? What happens to them in a gameful world? If they become fully ubiquitous and mundane, if they no longer demarcate something "magic" anymore, will they disappear? Will their increasing instrumentalization kill their very soul? Such anxieties, understandable as they are, presumably result from our attachment to that brief pocket in time and space we call modernity: where play and games were permissible for children in their healthy development, artists in their creative pursuit, and adults as leisure—but nothing more. These, after all, *are* the modernist rhetorics of play (Sutton-Smith 1997). We perceive artistic and countercultural play in public, serious and pervasive games, or gamification as figures of provocation, newness, alterity, or profanation only against this background. The rise of a gameful world reminds us that this modern state of affairs is itself a temporary formation and practical accomplishment: to expect and demand *that* games have no practical consequence or instrumental function; to design games *such that* the risk of serious bodily and social conse-

quence is minimized and interpretive and experiential openness maximized. Change these practices, and over time you change the background of our shared expectations, concepts, norms, and designs, our social and material institutionalizations. These new forms do not pervert an eternal "heart of gameness"; they *transform* what games "are" *to us*, *today*, as members of a culture.

On a practical level, we as individuals can attentively track only so many levels of meaning at any given moment and thus partake in only so many games at any time. Games as designed artifacts are already used every day in ways the users themselves would not call gaming or playing—gold farming, usability testing, and the like. Games as artifacts and gaming as activity do not necessarily coincide; today's diffusion of game design beyond gaming encounters makes this theoretical possibility an everyday reality.

Play and games have always already been interwoven with and cultivated by society. The pocketing away of games and play into the fringes of childhood, art, and leisure—which allowed transgressions for their very marginality—has been their primary social place in modernity. That changes now. Their ubiquity and pervasiveness will strip games and play of some of their current enchantment, momentum, and cachet—that's the logic of fashion. Gamers will revolt against this "Eternal September" (Grossman 1998) of massive outer influx into the places and practices they feel "belong to them" and retreat into new, "hardcore" places and practices, anxiously guarding cultural symbols of "true" identity and belonging—that's the logic of subculture. The instrumentalization of games and play will engender alienation and professional deformation, and people will reassert their autonomy and playfulness in gaming the system and in seeking out new, yet unknown spaces and

forms of nonfunctionalized restoration and resistance that will then be functionalized again—that's the logic of instrumentalization.

History tells us that these shifts will not dissolve games or play, only change their local meanings and forms. As long as we are warm-blooded bodies living and dying on Earth, the exigencies of survival will not disappear, and neither will the *un*-necessary, the *in*-efficient, the "just so" and "just because," the occasions of pure waste, the voluntary attempts to overcome unnecessary obstacles as that which lifts us, however fleetingly, from the given bounds of our mortal fate into the chosen bounds of culture. "And law only / can give us freedom."

Notes

1. But very much in the footsteps of Walz and Coulton's (2011) pioneering mapping attempt and Walz's (2010) historical analysis of the "routinization trajectories" of games. I thank my coeditor Steffen P. Walz for the countless shared discussions that deeply informed every line of this chapter.

2. See http://www.google.com/trends/explore#q =gamification (accessed April 5, 2013). For references in order of appearance, see Sierra (2005), Kim (2006), and Merholz et al. (2008) on Nike+; Hall (2011) on GameLayers; IBM (2007) and Reeves and Malone (2007) on IBM's involvement in serious games; Saffer (2007) and Alfrink (2007) on talks about games inspiring user experience design; Varney (2010) on McGonigal; Lusty (2007) on Bunchball; Atwood (2011) on StackOverflow; O'Reilly Media (2008) on the web 2.0 Expo 2008; Takahashi (2005) on Zichermann's Funware blog; Currier (2008) and King and Borland (2003, 53) on first uses of the term *gamification*; Werbach and Hunter (2012, 36–37) and Kapp (2012, 2–3) on the "Piano Stairs"; Schell (2010a, 2010b, 2010c) on his Dice talk and Gamepocalypse blog; McGonigal (2010) on her TED talk; Manning Publications (2010) on the book *Funware in Action*; Zichermann (2010) and Zichermann and Linder (2010) on the Develop talk and the book *Game-Based Marketing*; Badgeville (2010) on their launch; Helgason (2010) on "the year of gamification"; and Kim (2011) on her gamification workshop.

3. See http://www.chorewars.com/help.php (accessed April 11, 2013).

4. See http://who.godaddy.com/whoischeck.aspx ?domain=GAMIFICATION.COM (accessed April 11, 2013).

5. See http://www.thefuntheory.com/ (accessed April 11, 2013).

6. See http://web.archive.org/web/20100525152043/ http://www.bunchball.com/ (accessed April 11, 2013).

7. See http://who.is/whois/gamification.co (accessed April 11, 2013).

8. And if the term needed any more legitimacy, in April that year technology consultancy Gartner (2011a) announced its "strategic planning assumption" that more than half of all organizations with innovation processes will gamify those by 2015 and that more than 70 percent of Global 2000 companies will have at least one gamified application by 2014. Gartner then officially placed gamification on its "hype cycle" curve of emerging technologies in

August 2011 (Gartner 2011b), only to announce one year later another strategic planning assumption that by 2014, 80 percent of gamified applications will fail due to poor design (Gartner 2012)—thus providing ample material for research on the manufacture of self-fulfilling prophecies.

9. Who was in turn informed by Yee (2001).

10. See http://www.habitdesign.org/ (accessed April 12, 2013).

References

Aarseth, Espen. 2001. Computer Game Studies, Year One. *Game Studies* 1 (1). Available at: http://www.gamestudies.org/0101/editorial.html.

Abt, Clark C. 1971. *Serious Games*. New York: The Viking Press.

Alfrink, Kars. 2007. "Playful IAs." Paper presented at Euro IA Summit 2007, Barcelona, Spain, September 21–22. Available at: http://www.slideshare.net/kaeru/playful-ias-euro-ia-summit-2007.

Anderson, Stephen P. 2011. *Seductive Interaction Design: Creating Playful, Fun, and Effective User Experiences*. Berkeley, CA: New Riders.

Andreotti, Libero. (2000). Play-tactics of the "Internationale Situationniste." *October* 91:36–58.

Apter, Michael J. 2006. *Reversal Theory: The Dynamics of Motivation, Emotion and Personality*. 2nd ed. Oxford: Oneworld.

Area/Code. 2007. Big games manifesto. Available at: http://areacodeinc.com/manifesto.html.

Aristotle. 2002. *Nicomachean Ethics*. New York: Oxford University Press.

Arrasvuori, Juha, Marion Boberg, Jussi Holopainen, Hannu Korhonen, Andrés Lucero, and Markus Montola. 2011. Applying the PLEX framework in designing for playfulness. In *DPPI '11 Proceedings of the 2011 Conference on Designing Pleasurable Products and Interfaces.* New York: ACM Press, Art. 24.

Atwood, Jeff. 2011. The gamification. Coding Horror. Available at: http://www.codinghorror.com/blog/2011/10/the-gamification.html.

Bakhtin, Mikhail M. 2009 [1965]. *Rabelais and His World*. Bloomington: Indiana University Press.

Barab, Sasha A., Melissa Gresalfi, and Adam Ingram-Goble. 2010. Transformational play: Using games to position person, content, and context. *Educational Researcher* 39 (7):525–536.

Beck, John C., and Mitchell Wade. 2006. *The Kids Are Alright: How the Gamer Generation Is Changing the Workplace*. Boston: Harvard Business School Press.

Bell, Daniel. 1976. *The Coming of Post-Industrial Society: A Venture in Social Forecasting*. New York: Basic Books.

Benford, Steve, and Gabriella Giannachi. 2011. *Performing Mixed Reality*. Cambridge, MA: MIT Press.

Berdichevsky, Daniel, and Erik Neuenschwander. 1999. Toward an ethics of persuasive technology. *Communications of the ACM* 42 (5):51–58.

Bey, Hakim. 1991. *T. A. Z. The Temporary Autonomous Zone, Ontological Anarchy, Poetic Terrorism.* Brooklyn, NY: Autonomedia.

Bliege Bird, Rebecca, and Eric Alden Smith. 2005. Signaling theory, strategic interaction, and symbolic capital. *Current Anthropology* 46 (2):221–248.

Blythe, Mark A., Kees Overbeeke, Andrew F. Monk, and Peter C. Wright. 2004. *Funology: From Usability to Enjoyment.* Norwell, MA: Kluwer Academic Publishers.

Bogost, Ian. 2005. Procedural literacy: Problem solving with programming, systems, & play. *Telemedium* 52 (1–2):32–36.

Bogost, Ian. 2007. *Persuasive Games: The Expressive Power of Video Games.* Cambridge, MA: MIT Press.

Bogost, Ian. 2011a. Gamification is bullshit. *The Atlantic.* Available at: http://www.theatlantic.com/technology/archive/2011/08/gamification-is-bullshit/243338/.

Bogost, Ian. 2011b. Exploitationware. *Gamasutra.* Available at: http://www.gamasutra.com/view/feature/6366/persuasive_games_exploitationware.php.

Brooks, David. 2011. *The Social Animal: The Hidden Sources of Love, Character, and Achievement.* New York: Random House.

Bruns, Axel. 2008. *Blogs, Wikipedia, Second Life, and Beyond: From Production to Produsage.* New York: Peter Lang.

Burke, Kenneth. 1950. *The Rhetoric of Motives.* New York: Prentice Hall.

Caillois, Roger. 2001. *Man, Play, and Games.* Urbana: University of Illinois Press.

Carroll, John M. 1982. The adventure of getting to know a computer. *Computer* 15 (11):49–58.

Carroll, John M., and John C. Thomas. 1982. Metaphor and the cognitive representation of computing systems. *IEEE Transactions on Systems, Man, and Cybernetics* 12:107–116.

Carroll, John M., and John C. Thomas. 1988. Fun. *ACM SIGCHI Bulletin* 19 (3):21–24.

Chao, Dennis. 2001. "Doom as an interface for process management." In *CHI '01 Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 152–157. New York: ACM Press.

Chaplin, Heather. 2011. I don't want to be a superhero: Ditching reality for a game isn't as fun as it sounds. Slate.com. Available at: http://www.slate.com/articles/technology/gaming/2011/03/i_dont_want_to_be_a_superhero.single.html.

Cohen, Stanley, and Laurie Taylor. 1992. *Escape Attempts: The Theory and Practice of Resistance in Everyday Life.* 2nd ed. London: Routledge.

Collins, Randall. 2004. *Interaction Ritual Chains.* Princeton, NJ: Princeton University Press.

Conley, Dalton. 2008. *Elsewhere, U.S.A.: How We Got from the Company Man, Family Dinners, and the Affluent Society to the Home Office, Blackberry Moms, and Economic Anxiety.* New York: Pantheon.

Consalvo, Mia. 2007. *Cheating: Gaining Advantage in Video Games.* Cambridge, MA: MIT Press.

Coonradt, Charles A. 1985. *The Game of Work: How to Enjoy Work as Much as Play.* Salt Lake City, UT: Shadow Mountain.

Costello, Brigid, and Ernest Edmonds. 2007. "A study in play, pleasure and interaction design." In *DPPI '07 Proceedings of the 2007 conference on Designing pleasurable products and interfaces*, 76–91. New York: ACM Press.

Csikszentmihalyi, Mihaly. 1975. *Beyond Boredom and Anxiety: The Experience of Play in Work and Games*. San Francisco: Jossey-Bass.

Csikszentmihalyi, Mihaly. 1990. *Flow: The Psychology of Optimal Experience*. New York: Harper and Row.

Currier, James. 2008. Gamification: Game mechanics is the new marketing. Ooga Labs. Available at: http://blog.oogalabs.com/2008/11/05/gamification-game-mechanics-is-the-new-marketing/.

Curtius, Ernst Robert. 1990 [1948]. *European Literature and the Latin Middle Ages*. Princeton, NJ: Princeton University Press.

Davies, Russell. 2009. "Playful." Paper presented at This Is Playful 2009, London, UK, October 31. Available at: http://russelldavies.typepad.com/planning/2009/11/playful.html.

de Souza e Silva, A., and L. Hjorth. 2009. Playful urban spaces: A historical approach to mobile games. *Simulation & Gaming* 40 (5):602–625.

Debord, Guy. 1958. Contribution to a situationist definition of play. Trans. Reuben Keehan. *Internationale Situationniste* 1. Available at: http://www.cddc.vt.edu/sionline/si/play.html.

Deci, Edward L, and Richard M. Ryan. 2012. Motivation, personality, and development within embedded social contexts: An overview of self-determination theory. In *The Oxford Handbook of Human Motivation*, ed. Richard M. Ryan, 85–107. New York: Oxford University Press.

DeKoven, Bernard. 2013. *The Well-Played Game: A Player's Philosophy*. Cambridge, MA: MIT Press.

Deterding, Sebastian. 2009. Living room wars: Remediation, boardgames, and the early history of video wargaming. In *Joystick Soldiers: The Politics of Play in Military Video Games*, ed. Nina Hunteman and Matt Payne, 21–38. London: Routledge.

Deterding, Sebastian. 2011. A quick buck by copy and paste: A review of "Gamification by Design." Gamification Research Network. Available at: http://gamification-research.org/2011/09/a-quick-buck-by-copy-and-paste/.

Deterding, Sebastian. 2012a. Paidia as paideia: From game-based learning to a life well-played. Keynote. GLS 8.0. Available at: http://codingconduct.cc/Paideia-as-Paidia.

Deterding, Sebastian. 2012b. Persuasive design. In *Depletion Design: A Glossary of Network Ecologies*, ed. Carolin Wiedemann and Soenke Zehle, 115–119. Amsterdam: Institute of Network Cultures.

Deterding, Sebastian. 2013. "Situational autonomy support in video game play: An exploratory study." Paper presented at ICA 2013 Preconference "The Power of Play", London, UK, June 17.

Deterding, Sebastian, Dan Dixon, Rilla Khaled, and Lennart E. Nacke. 2011. "From game design elements to gamefulness: Defining 'gamification.'" In *MindTrek '11 Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments*, 9–15. New York: ACM Press.

Dow, Steven, Jaemin Lee, Christopher Oezbek, Blair Maclntyre, Jay David Bolter, and Maribeth Gandy. 2005. "Exploring spatial narratives and mixed reality experiences in Oakland Cemetery." In *ACE'05 Proceedings of the 2005 ACM SIGCHI International Conference on Advances in computer entertainment technology*, 51–60. New York: ACM Press.

Dweck, Carol S. 2008. *Mindset: The New Psychology of Success.* New York: Ballantine.

Dibbell, Julian. 2008. The Chinese game room: Play, productivity, and computing at their limits. *Artifact* 2 (3):1–6. Available at: http://www.juliandibbell.com/articles/the-chinese-game-room/.

Edery, David, and Ethan Mollick. 2008. *Changing the Game: How Video Games Are Transforming the Future of Business.* Upper Saddle River, NJ: FT Press.

Farmer, Randy, and Bryce Glass. 2010. *Building Web Reputation Systems.* Sebastopol, CA: O'Reilly.

Fernaeus, Ylva, Kristina Höök, Jussi Holopainen, Katarina Ivarsson, Anna Karlsson, Siân Lindley, and Christian Norlin eds. 2012. *Plei-Plei!* Hong Kong: PPP. Available at: http://playfulness.info.

Flanagan, Mary. 2009. *Critical Play: Radical Game Design.* Cambridge, MA: MIT Press.

Fogg, B. J. 2003. *Persuasive Technology: Using Computers to Change What We Think and Do.* Amsterdam: Morgan Kaufmann.

Fogg, B. J. 2009a. "A behavior model for persuasive design." In *Persuasive'09 Proceedings of the 4th International Conference on Persuasive Technology*, Art. No. 40. New York: ACM Press.

Fogg, B. J. 2009b. "The behavior grid: 35 ways behavior can change." In *Persuasive'09 Proceedings of the 4th International Conference on Persuasive Technology*, Art. No. 42. New York: ACM Press.

Gartner. 2011a. Gartner says by 2015, more than 50 percent of organizations that manage innovation processes will gamify those processes. Gartner.com [press release]. Available at: http://www.gartner.com/newsroom/id/1629214.

Gartner. 2011b. Gartner's 2011 hype cycle special report evaluates the maturity of 1,900 technologies. Gartner.com [press release]. Available at: http://www.gartner.com/newsroom/id/1763814.

Gartner. 2012. Gartner says by 2014, 80 percent of current gamified applications will fail to meet business objectives primarily due to poor design. Gartner.com [press release]. Available at: http://www.gartner.com/newsroom/id/2251015.

Gaver, William W. 2002. Designing for Homo ludens. *I3 Magazine* 12.

Gaver, William W. et al. 2004. The drift table: Designing for ludic engagement. In *CHI'04 Extended Abstracts*, 885–900. New York: ACM Press.

Gee, James-Paul. 2003. *What Video Games Have to Teach Us About Learning and Literacy.* New York: Palgrave Macmillan.

Goetz, Thomas. 2011. Harnessing the power of feedback loops. *Wired* 19 (7). Available at: http://www.wired.com/magazine/2011/06/ff_feedbackloop/all/.

Goffman, Erving. 1959. *The Presentation of Self in Everyday Life.* New York: Anchor Books.

Goffman, Erving. 1967. *Interaction Ritual: Essays on Face-to-Face Behavior.* New York: Pantheon Books.

Goodwin, Marjorie Harness. 2006. *The Hidden Life of Girls: Games of Stance, Status, and Exclusion*. Malden, MA: Blackwell.

Gray, Dave, Sunny Brown, and James Macanufo. 2010. *Gamestorming: A Playbook for Innovators, Rulebreakers, and Changemakers*. Sebastopol, CA: O'Reilly.

Grimes, Sara M., and Andrew Feenberg. 2009. Rationalizing play: A critical theory of digital gaming. *Information Society* 25 (2):105–118.

Grossman, Wendy M. 1998. *Net.wars*. New York: New York University Press.

Hall, Justin. 2011. A story of GameLayers, Inc.: Making online social games 2007–2009. Justin's Links. Available at: http://www.links.net/vita/gamelayers/.

Halter, Ed. 2006. *From Sun Tzu to Xbox: War and Videogames*. New York: Thunder's Mouth Press.

Hamari, Juho. 2011. "Perspectives from behavioral economics to analyzing game design patterns: Loss aversion in social games." Paper presented at the Social Games at CHI 2011 Workshop, Vancouver, Canada, May 8. Available at: http://socialgamestudies.org/post/61406077572/social-game-studies-at-chi-2011-workshop-papers.

Hamari, Juho. 2013. Transforming Homo economicus into Homo ludens: A field experiment on gamification in a utilitarian peer-to-peer trading service. *Electronic Commerce Research and Applications* 12 (4): 236–245.

Handelman, Don, and David Shulman. 1997. *God Inside Out: Siva's Game of Dice*. New York: Oxford University Press.

Hassenzahl, Marc. 2010. *Experience Design: Technology for All the Right Reasons*, ed. John M. Carroll. Morgan & Claypool.

Hassenzahl, Marc, Marcus Schöbel, and Tibor Trautmann. 2008. How motivational orientation influences the evaluation and choice of hedonic and pragmatic interactive products: The role of regulatory focus. *Interacting with Computers* 20 (4–5):473–479.

Heath, Joseph, and Joel Anderson. 2010. Procrastination and the extended will. In *The Thief of Time: Philosophical Essays on Procrastination*, ed. Chrisoula Andreou and Mark White, 233–252. New York: Oxford University Press.

Helgason, David. 2010. 2010 Trends. Unity Technologies Blog. Available at: http://blogs.unity3d.com/2010/01/14/2010-trends.

Hohmann, Luke. 2006. *Innovation Games: Creating Breakthrough Products Through Collaborative Play*. Upper Saddle River, NJ: Addison-Wesley.

Horkheimer, Max, and Theodor W. Adorno. 2010. *Dialektik Der Aufklärung: Philosophische Fragmente*. Frankfurt am Main: Fischer Taschenbuch Verlag.

Huizinga, Johan. 1955. *Homo Ludens: A Study of the Play Element in Culture*. Boston: Beacon Press.

IBM. 2007. *Virtual Worlds, Real Leaders: Online Games Put the Future of Business Leadership on Display*. Armonk, NY: IBM.

Inglehart, Ronald F. 2008. Changing values among western publics from 1970 to 2006. *West European Politics* 31 (1–2):130–146.

Jakobsson, Mikael. 2011. "The achievement machine: Understanding Xbox 360 Achievements in gaming practices." *Game Studies* 11 (1). Available at: http://gamestudies.org/1101/articles/jakobsson.

Jenkins, Henry. 2004. Game design as narrative architecture. In *First Person: New Media as Story, Performance,*

and Game, ed. Noah Wardrip-Fruin and Pat Harrigan, 118–130. Cambridge, MA: MIT Press.

Jenkins, Henry. 2006. *Convergence Culture: Where Old and New Media Collide*. New York: New York University Press.

Jenkins, Henry, et al. 2009. *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century*. Cambridge, MA: MIT Press.

Jones, Chris, Ruslan Ramanau, Simon Cross, and Graham Healing. 2010. Net generation or digital natives: Is there a distinct new generation entering university? *Computers & Education* 54 (3):722–732.

Jordan, Patrick W. 2002. *Designing Pleasurable Products. An Introduction to the New Human Factors*. London: Taylor & Francis.

Kane, Pat. 2004. *The Play Ethic: A Manifesto for a Different Way of Living*. London: Pan Macmillan.

Kapp, Karl M. 2012. *The Gamification of Learning and Instruction: Game-Based Methods and Strategies for Training and Education*. San Francisco: Pfeiffer.

Kim, Amy Jo. 2006. Putting the fun in functional: applying game design to mobile services. O'Reilly Emerging Technology Conference. Available at: http://conferences.oreillynet.com/cs/et2006/view/e_sess/7735.

Kim, Amy Jo. 2011. Gamification workshop: Designing the player journey. Available at: http://www.slideshare.net/amyjokim/gamification-101-design-the-player-journey.

King, Brad, and John Borland. 2003. *Dungeons and Dreamers: The Rise of Computer Game Culture from Geek to Chic*. New York: McGraw-Hill.

Kitchin, Rob, and Martin Dodge. 2011. *Code/Space: Software and Everyday Life*. Cambridge, MA: MIT Press.

Kücklich, Julian. 2005. Precarious playbour: Modders and the digital games industry. Fibreculture 5. Available at: http://five.fibreculturejournal.org/fcj-025-precarious-playbour-modders-and-the-digital-games-industry/.

Lantz, Frank. 2011. "Games as an aesthetic form." Paper presented at MIT Comparative Media Studies Colloquium Series, Cambridge, Massachusetts, December 1. Available at: http://gambit.mit.edu/updates/2011/12/video_games_as_an_aesthetic_fo.php.

Lazzaro, Nicole. 2008. Why we play: Affect and the fun of games. In *The Human-Computer Interaction Handbook. Fundamentals, Evolving Technologies and Emerging Applications*, ed. A. Sears and J. A. Jacko, 679–700. New York: Lawrence Erlbaum.

Lefebvre, Henri. 2002 [1961]. *Foundations for a Sociology of the Everyday. Volume II. Critique of Everyday Life*. New York: Verso.

Li, Ian, Anind Dey, and Jodi Forlizzi. 2010. "A stage-based model of personal informatics systems." In *CHI '10 Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 557–566. New York: ACM Press.

Lockton, Dan, David Harrison, and Neville A. Stanton. 2010. *Design with Intent: 101 Patterns for Influencing Behaviour Through Design*. 1st ed. Windsor: Equifine.

Losh, Elizabeth. 2009. *Virtualpolitik*. Cambridge, MA: MIT Press.

Lundin, Stephen C., Harry Paul, and John Christensen. 2000. *Fish! A Proven Way to Boost Morale and Improve Results*. New York: Hyperion.

Lusty, Susan. 2007. Bunchball introduces "Nitro™"—The first & only web catalytics service available today. *PR Newswire*. Available at: http://www.webcitation.org/query?url=http%3A%2F%2Fwww.ereleases.com%2Fpr%2Fbunchball-introduces-nitrotm-the-first-only-web-catalytics-service-available-today-10845&date=2014-05-03.

Magerkurth, Carsten, et al. 2005. Pervasive games: Bringing computer entertainment back to the real world. *Computers in Entertainment* 3 (3): Article 4A.

Malaby, Thomas M. 2007. Beyond play: A new approach to games. *Games and Culture* 2 (2):95–113.

Malaby, Thomas M. 2012. Our present misfortune: Games and the post-bureaucratic colonization of contingency. *Social Analysis* 56 (2):103–116.

Malone, Thomas W. 1982. Heuristics for designing enjoyable user interfaces: Lessons from computer games. In *Proceedings of the 1982 Conference on Human Factors in Computing Systems*, 63–68. New York: ACM.

Manning Publications. 2010. Announcement: We regret that Manning Publications will not be publishing this title. Manning Forums. Available at: http://www.manning-sandbox.com/ann.jspa?annID=80.

Mateas, Michael. 2005. Procedural literacy: Educating the new media practitioner. *Horizon* 13 (2):101–111.

Mateas, Michael, and Noah Wardrip-Fruin. 2009. "Defining operational logics." In *Breaking New Ground: Innovation in Games, Play, Practice and Theory. Proceedings of DiGRA 2009*, n.p. Uxbridge: DiGRA. Available at: http://www.digra.org/wp-content/uploads/digital-library/09287.21197.pdf.

McGonigal, Jane. 2006. *This Might Be a Game: Ubiquitous Play and Performance at the Turn of the Twenty-First Century*. Doctoral dissertation, University of California, Berkeley.

McGonigal, Jane. 2010. "Gaming can make a better world." TED Conferences, LLC video 20:03, February. Available at: http://www.ted.com/talks/jane_mcgonigal_gaming_can_make_a_better_world.html.

McGonigal, Jane. 2011. *Reality Is Broken: Why Games Make Us Better and How They Can Change the World*. London: Penguin.

Medler, Ben. 2011. Player dossiers: Analyzing gameplay data as a reward. *Game Studies* 11 (1). Available at: http://gamestudies.org/1101/articles/medler.

Merholz, Peter, et al. 2008. *Subject to Change: Creating Great Products and Services for an Uncertain World*. Sebastopol, CA: O'Reilly.

Minnema, L. 1998. Play and (post)modern culture: An essay on changes in the scientific interest in the phenomenon of play. *Cultural Dynamics* 10 (1):21–47.

Montola, Markus. 2009. Games and pervasive games. In *Pervasive Games: Theory and Design. Experiences on the Boundary Between Life and Play*, ed. Markus Montola, Jaakko Stenros, and Annika Waern, 7–24. Amsterdam: Morgan Kaufmann.

Nachmanovitch, Stephen. 1990. *Free Play: Improvisation in Life and Art*. New York: Jeremy P. Tarcher/Putnam.

Nelson, Mark J. 2012. "Soviet and American precursors to the gamification of work." In *MindTrek '12 Proceeding of the 16th International Academic MindTrek Conference*, 23–26. New York: ACM Press.

New Games Foundation. 1976. *The New Games Book: Play Hard Play Fair Nobody Hurt*, ed. Andrew Fluegelman. Garden City, NY: Dolphin Books / Doubleday.

Newton, Casey. 2011. An expanded Q&A with foursquare founder Dennis Crowley. SFGate Tech Chronicles Blog. Available at: http://blog.sfgate.com/techchron/2011/05/02/an-expanded-qa-with-foursquare-founder-dennis-crowley/.

Nicholson, Scott. 2012. "Strategies for meaningful gamification: Concepts behind transformative play and participatory museums." Paper presentet at Meaningful Play 2012, Lansing, Michigan, October 18–20. Available at: http://scottnicholson.com/pubs/meaningfulstrategies.pdf.

O'Reilly, Tim. 2005. What is Web 2.0: Design patterns and business models for the next generation of software. O'Reilly Media. Available at: http://oreilly.com/web2/archive/what-is-web-20.html.

O'Reilly, Tim. 2010. "Government as platform." In *Open Government, ed. Daniel Lathrop and Laurel Ruma*, n.p. Sebastopol: O'Reilly. http://chimera.labs.oreilly.com/books/1234000000774/ch02.html

O'Reilly Media. 2008. Children of Flickr: Making the massively multiplayer social web. Web 2.0 Expo 2008. Available at: http://www.web2expo.com/webexsf2008/public/schedule/detail/2144.

Paharia, Rajat. 2010. Who coined the term "gamification"? Quora. Available at: http://goo.gl/CvcMs.

Pearce, Celia, Tracy Fullerton, Janine Fron, and Jacquelin Ford Morie. 2007. "Sustainable play: Towards a new games movement for the digital age." *Games and Culture* 2 (3): 261–278.

Pias, Claus. 2002. *Computer Spiel Welten*. Munich: Sequenzia.

Pine, B. Joseph, and James H. Gilmore. 2011. *The Experience Economy*. 2nd ed. Boston: Harvard Business Review Press.

Pratchett, Terry. 1992. *Only You Can Save Mankind: If Not You, Who Else?* London: Doubleday.

Radiohead, "Fitter Happier," by Thom Yorke, Jonny Greenwood, Colin Greenwood, Phil Selway, and Ed O'Brien. In *OK Computer*, Parlophone, 1997, CD.

Raessens, J. 2006. Playful identities, or the ludification of culture. *Games and Culture* 1 (1):52–57.

Raessens, Joost. 2012. *Homo Ludens 2.0: The Ludic Turn in Media Theory*. Utrecht: Utrecht University.

Raphael, C., C. Bachen, K.-M. Lynn, J. Baldwin-Philippi, and K. A. McKee. 2009. Games for civic learning: A conceptual framework and agenda for research and design. *Games and Culture* 5 (2):199–235.

Raskin, Aza. 2011. "The behavior change checklist. Down with gamefication." Paper presented at *SxSW 2011*, Austin, Texas, March 11–15. Available at: http://schedule.sxsw.com/2011/events/event_IAP000453.

Reeve, Johnmarshall. 2009. *Understanding Motivation and Emotion*. 5th ed. Hoboken, NJ: John Wiley & Sons.

Reeves, Byron, and Thomas W. Malone. 2007. Leadership in games and at work: Implications for the enterprise of massively multiplayer online role-playing games. Available at: http://www.seriosity.com/downloads/Leadership_In_Games_Seriosity_and_IBM.pdf.

Reeves, Byron, and J. Leighton Read. 2009. *Total Engagement: Using Games and Virtual Worlds to Change the Way People Work and Businesses Compete*. Boston: Harvard Business School Press.

Rey, P. J. 2012. Gamification, playbor & exploitation. *Cyborgology*. Available at: http://thesocietypages.org/cyborgology/2012/10/15/gamification-playbor-exploitation-2/.

Rinehart, Luke. 1971. *The Dice Man*. New York: Morrow.

Ritzer, George. 2004. *Enchanting a Disenchanted World: Revolutionizing the Means of Consumption*. 2nd ed. Thousand Oaks, CA: Sage.

Robertson, Margaret. 2010. Can't play, won't play. *Hide & Seek*. Available at: http://hideandseek.net/2010/10/06/cant-play-wont-play/.

Rose, Frank. 2011. *The Art of Immersion: How the Digital Generation Is Remaking Hollywood, Madison Avenue, and the Way We Tell Stories*. New York: W.W. Norton & Company.

Roy, Donald F. 1960. "Banana time": Job satisfaction and informal interaction. *Human Organization* 18 (4):158–168.

Saffer, Dan. 2007. "Gaming the Web: Using the structure of games to design better Web apps." Paper presented at Voices That Matter 2007, San Francisco, California, October 22–25. Available at: http://www.slideshare.net/dansaffer/gaming-the-web-using-the-structure-of-games-to-design-better-web-apps.

Salen, Katie, and Eric Zimmerman. 2004. *Rules of Play: Game Design Fundamentals*. Cambridge, MA: MIT Press.

Salen, Katie, Robert Torres, Loretta Wolozin, Rebecca Rufo-Tepper, and Arana Shapiro. 2011. *Quest to Learn: Developing the School for Digital Kids. Digital Media*. Cambridge, MA: MIT Press.

Sawyer, Ben. 2002. *Serious Games: Improving Public Policy Through Game-based Learning and Simulation*. Washington, DC: Foresight and Governance Project, Woodrow Wilson International Center for Scholars. Available at: http://www.seriousgames.org/images/seriousarticle.pdf.

Sawyer, Ben, and Peter Smith. 2008. "Serious games taxonomy." Paper presented at Serious Games Summit at GDC 2008, San Francisco, California, February 19. Available at: http://www.dmill.com/presentations/serious-games-taxonomy-2008.pdf.

Schechner, Richard. 1988. Playing. *Play & Culture* 1:3–19.

Schell, Jesse. 2010a. "Design outside the box." Paper presented at D.I.C.E. Summit 2010, Las Vegas, Nevada, February 18. Available at: http://www.g4tv.com/videos/44277/dice-2010-design-outside-the-box-presentation/.

Schell, Jesse. 2010b. Welcome to the Gamepocalypse. Gamepocalypse Now. Available at: http://gamepocalypsenow.blogspot.de/2010/02/welcome-to-gamepocalypse.html.

Schell, Jesse. 2010c. "Visions of the Gamepocalypse." Paper presented at Seminars about Long-Term Thinking, Long Now Foundation, San Francisco, California, July 27. Available at: http://fora.tv/2010/07/27/Jesse_Schell_Visions_of_the_Gamepocalypse.

Seligman, Martin. 2011. *Flourish: A New Understanding of Happiness and Well-Being—and How to Achieve Them*. London: Nicholas Brealey.

Sheldon, Lee. 2011. *The Multiplayer Classroom: Designing Coursework as a Game*. Boston, MA: Cengage Learning.

Shore, Nick. 2011. Millennials are playing with you. *Harvard Business Review*. Available at: http://blogs.hbr.org/cs/2011/12/millennials_are_playing_with_y.html.

Sicart, Miguel. 2011. Against procedurality. *Game Studies* 11 (3). Available at: http://gamestudies.org/1103/articles/sicart_ap.

Sicart, Miguel. In press. *Why Play Matters.* Cambridge, MA: MIT Press.

Sierra, Kathy. 2005. Creating playful users. Creating Passionate Users. Available at: http://headrush.typepad.com/creating_passionate_users/2005/01/creating_playfu.html.

Squire, Kurt. 2011. *Video Games and Learning: Teaching and Participatory Culture in the Digital Age.* New York: Teachers College Press.

Starr, Paul. (Spring 1994). Seductions of sim: Policy as a simulation game. *American Prospect* 17:19–29.

Stenros, Jaakko, and Markus Montola. 2010. *Nordic Larp.* Stockholm: Fea Livia.

Stenros, Jaakko, Markus Montola, and Frans Mäyrä. 2007. "Pervasive games in ludic society." In *Future Play '07 Proceedings of the 2007 conference on Future Play*, 30–37. New York: ACM Press.

Storsul, Tanja, and Anders Fagerjord. 2008. Digitization and media convergence. In *The International Encyclopedia of Communication*, ed. Wolfgang Donsbach. Oxford: Blackwell. Available at: http://www.blackwellreference.com/public/tocnode?id=g9781405131995_yr2013_chunk_g97814051319959_ss39-1#citation

Sutton-Smith, Brian. 1997. *The Ambiguity of Play.* Cambridge, MA: Harvard University Press.

Takahashi, Dean. 2005. Funware's threat to the traditional video game industry. *VentureBeat.* Available at: http://venturebeat.com/2008/05/09/funwares-threat-to-the-traditional-video-game-industry/.

Taleb, Nassim Nicholas. 2010. *The Black Swan: The Impact of the Highly Improbable.* 2nd ed. New York: Random House.

Taylor, T. L. 2012. *Raising the Stakes: E-Sports and the Professionalization of Computer Gaming.* Cambridge, MA: MIT Press.

Terranova, Tiziana. 2013. Free labor. In *Digital Labor: The Internet as Playground and Factory*, ed. Trebor Scholz, 33–57. New York: Routledge.

Thaler, Richard H., and Cass R. Sunstein. 2008. *Nudge. Improving Decisions About Health, Wealth, and Happiness.* New Haven, CT: Yale University Press.

Thøgersen, John. 2011. Do small green actions lead to bigger ones—or to lying and stealing? *The Guardian.* Available at: http://www.theguardian.com/sustainable-business/small-painless-behaviour-change.

Travis, Roger. 2011. Practomimetic learning in the classics classroom: A game-based learning method from ancient epic and philosophy. *New England Classical Journal* 38 (1):25–42.

Turner, Victor. 1982. *From Ritual to Theatre: The Human Seriousness of Play.* New York: PAJ Publications.

Varney, Allen. 2010. Jane McGonigal lives the game. *The Escapist.* Available at: http://www.escapistmagazine.com/articles/view/issues/issue_252/7501-Jane-McGonigal-Lives-the-Game.

von Ahn, Luis, and Laura Dabbish. 2008. Designing games with a purpose. *Communications of the ACM* 51 (8):58–67.

Walz, Steffen P. 2006. Welcome to my playce. Available at: http://spw.playbe.com.

Walz, Steffen P. 2010a. *Toward a Ludic Architecture. The Space of Play and Games.* Pittsburgh: ETC Press.

Walz, Steffen P. 2010b. Das ganze Leben ist ein Spiel: wie die Veralltäglichung von Games die Gesellschaft verändert. In *Postmediale Wirklichkeiten aus interdisziplinärer Perspektive: Wie Zukunftsmedien die Gesellschaft verändern*, ed. Stefan Selke and Ullrich Dittler, 205–222. Hannover, Germany: Heise / Telepolis.

Walz, Steffen P., and Paul Coulton. 2011. Gamification: The rhetoric wars. Available at: http://www.geelab .rmit.edu.au/content/gamification-rhetoric-wars.

Wardrip-Fruin, Noah. 2009. *Expressive Processing: Digital Fictions, Computer Games, and Software Studies.* Cambridge, MA: MIT Press.

Wark, McKenzie. 2011. *The Beach Beneath the Street: The Everyday Life and Glorious Times of the Situationist International.* New York: Verso.

Werbach, Kevin, and Dan Hunter. 2012. *For the Win: How Game Thinking Can Revolutionize Your Business.* Philadelphia: Wharton Digital Press.

Wing, Jeannette M. 2006. Computational thinking. *Communications of the ACM* 49 (3):33–35.

Wolf, Gary Isaac. 2009. Quantified self. *Aether.* Available at: http://web.archive.org/web/2009110 6094426/http://aether.com/quantifiedself.

Wu, Michael. 2012. The science of gamification. Available at: http://www.slideshare.net/mich8elwu/2012 -0501-vator-tv-science-of-gamification-v01bslide share.

Yee, Nicholas. 2001. The Norrathian Scrolls: A study of EverQuest version 2.5. Available at: http://www .nickyee.com/eqt/home.html.

Yee, Nicholas. 2006. The labor of fun: How video games blur the boundaries of work and play. *Games and Culture* 1 (1):68–71.

Zagal, José P. 2010. *Ludoliteracy: Defining, Understanding, and Supporting Games Education.* Pittsburgh: ETC Press.

Zhang, Ping. 2008. Motivational affordances: Reasons for ICT design and use. *Communications of the ACM* 51 (11):145–147.

Zichermann, Gabe. 2010. "Gamification for game people." Paper presented at Develop 2010, Brighton, UK, July 13–15. Available at: http://www.slideshare .net/gzicherm/gamification-for-game-designers -developers.

Zichermann, Gabe. 2012. The code of gamification ethics. Gamification.co Blog. Available at: http://www.gamification.co/2012/12/10/code-of -gamification-ethics/.

Zichermann, Gabe, and Chris Cunningham. 2011. *Gamification by Design: Implementing Game Mechanics in Web and Mobile Apps.* Sebastopol, CA: O'Reilly.

Zichermann, Gabe, and Joselin Linder. 2010. *Game-Based Marketing: Inspire Customer Loyalty Through Rewards, Challenges, and Contests.* Hoboken, NJ: Wiley.

Zichermann, Gabe, and Joselin Linder. 2013. *The Gamification Revolution: How Leaders Leverage Game Mechanics to Crush the Competition.* New York: McGraw-Hill.

Zimmerman, Eric. 2011. "In Defense of Beauty." Keynote presented at DiGRA 2011: Think Design Play, Hilversum, Netherlands, September 15–17. Accessed May 3, 2014. http://vimeo.com/30791244

Zittrain, Jonathan. 2008. Ubiquitous human computing. *Philosophical Transactions. Series A, Mathematical, Physical, and Engineering Sciences* 366:3813–3821.

Gameography

Area/Code. 2010. Macon Money. Real-world/Cross-media. Area/Code.

Blizzard Entertainment. 2004. World of Warcraft. PC, OS X. Blizzard Entertainment.

Bullfrog. 1989. Populous. Amiga. Electronic Arts.

William Crowther, Don Woods. 1976. Adventure. PDP-10. CRL.

Don Dagelow. 1981. Utopia. Intellivision. Mattel.

Kevan Davis. 2007. Chore Wars. Web. Kevan Davis.

GameLayers, Inc. 2009. Passively Multiplayer Online Game. Web. GameLayers, Inc.

Microsoft Office Labs. 2010. Ribbon Hero. PC. Microsoft.

Mojang. 2009. Minecraft. PC. Mojang and others.

Roy Trubshaw, Richard Bartle. 1978. MUD. Platform independent. Online.

Zynga. 2009. FarmVille. Adobe Flash/Facebook. Zynga.