

AN INTRODUCTION TO THE GAMEFUL WORLD

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Prelude

A gigantic conference table made of a single, thickly cut slice of wood (or so it seemed). Around it sat a client in a suit who represented a loyalty card program about to enter the market and the designers and developers of a web agency that had grown from four to more than one hundred employees in less than two years—all wearing T-shirts. Among them was one of the editors of this volume, then an aspiring interaction designer.

It was 1999, in the midst of the dot-com bubble. NASDAQ had not yet peaked. Many of us were speculating (intellectually and financially) what the Internet could become and how we would be interacting with people, products, and environments through networked computers in the near future. We dreamed that most of us would soon be carrying some form of handheld, networked device similar to a *Star Trek* Tricorder or IBM's proto-smartphone, the Simon Personal Communicator, which was released in 1991 (Sager 2012). And something else captivated the imagination of most of us designers around that table: in 1997, Ultima Online had been launched—the first massively multiplayer online role-playing game (MMORPG) to reach a subscriber base of 100,000 players within a mere six months (Electronic Arts

2006). Practically the entire agency played Ultima Online—during office hours. We hopped on and off game sessions between meetings and used the game's text chat to talk about game challenges and work projects alike. For most of us, Ultima Online had become part of our work culture. And to some extent, what looked and felt like a game had in fact turned into labor: the game extended into the office space, provided a crucial communication channel for job tasks, helped to bring aboard new employees, and kept us even busier than we were already. The directors of the agency had taken notice: the agency officially subscribed to several Ultima Online accounts, and certainly not just to keep the staff entertained.

At that table back in 1999, it had just been decided that the agency would design scenarios of how to engage online customers in the client's planned service using certain elements. Game elements. In the months prior, our agency had built a reputation for what was then called “advergaming”—little Flash-based web games that carried advertising messages. And we believed that in the suit sitting across the table was the ideal client with the ideal service to use gaming on a much grander scale: Loyalty Partner's Payback, which later not only survived the dot-com

crash but also went on to become Germany's largest loyalty card scheme, ultimately to be acquired by American Express in 2010 (Loyalty Partner 2010).

Everyone around the tree slice was excited about the new project: "So if customers collect discounts in the form of 'Payback bonus points,' and you market the service as 'life brings points,' clearly, you need a leaderboard," called out said coeditor. Added an agency colleague, "And we need badges, like we had them in church scouting. If Payback knows exactly what people shop, when and where, and in which sequence, couldn't we reward shopping patterns with badges, while collecting and mining that data? A 'toddler' badge if people consistently shop baby products. ... People will be super motivated!" And we went on to create and show a prototype of these ideas.

Yet in the end, nothing of that transpired. A couple of weeks after the initial launch of the Payback card in 2000, Loyalty Partner and its Payback card "won" the first German Big Brother Award (BBA), a negative

price issued by the privacy and digital rights organization FoeBuD to raise public awareness about the most egregious violations of privacy rights. FoeBuD's rationale: Payback, albeit looking like a discount card, served the sole purpose of obtaining and commercially using personalized data related to the purchasing behaviors of consumers without properly informing the consumers about this fact (Big Brother Awards 2000). Soon after, and likely in response to the negative press stirred by the award, Payback became more transparent about its data collection; at the same time, federal privacy regulations prevented those leaderboards and badges we had conceived while chatting in Ultima Online, steering our avatars.

Payback worked with the agency for a while, but said coeditor left the agency soon after the BBA disaster to pursue an academic career, shocked into awareness of what could happen if game elements as simple as points were applied for non-entertainment purposes, even if conceived in a playful spirit.

Space Invaders: The Rise of Gamification

A few years ago, speaking about a *gameful world* would likely have conjured images of MMORPGs such as Ultima Online or World of Warcraft, not systems like Payback. The popular imagination of the time was (and still is) filled with utopian hopes and dystopian fears of an *Exodus to the Virtual World* (Castronova 2008): at best, we would escape the drudgery of twentieth-century schools and business training via serious games. At worst, people would regress from reality into the *Otherland* (Williams 1996) of games. Today, the direction is reversed: not people escaping into the virtual world of games, but games escaping

into everyday life. On one side are utopian visions of re-engineering a supposedly "broken reality" (McGonigal 2011) into happiness engines: game design will allow us to maximize our individual potential, organize our "cognitive surplus" (Clay Shirky), and energize society to solve humankind's collective challenges. On the other side are dystopian reveries of Frankensteinian daemons and Skinnerian dictatorships: as algorithms increasingly rule the world (Slavin, this volume), we will wake up one day to find that our computers have become the game masters and we the pawns in one big Dream Park that isn't

just a game anymore (Suarez, this volume). Neuro-psychological knowledge about the claviature of our pleasures will enable our future (robot) overlords to control our every step and action with a seamless, fine-tuned, pervasive mesh of incentive systems (Pesce, this volume).

Close observers could get a glimpse of the impending ludic reality invasion in the early 2000s, when live action role-playing, location-based, augmented reality, persistent alternate reality, and similar *pervasive games* began to extend the magic circle of play spatially, temporally, and socially (Montola 2005). But most of them remained too avant-garde and experimental to gain acceptance beyond the niches of academic laboratories, art exhibits, and game design festivals. It was only in the late 2000s that the reach of games and game design into everyday life appeared in the public consciousness, with “gamification” emerging around mid-2010 to overtake “serious games” in global web search interest in mid-2011.¹ The arguable blueprint for the gamification movement has been foursquare, a social, mobile, location-based service launched in 2009: foursquare allows users to “check in” at venues, see check-ins of members of their social graph, and browse venue suggestions based on check-in data. To motivate check-ins, foursquare implemented a series of game-like design elements:

- *Points* Every time a user checks in, she earns a variable amount of points depending on factors such as novelty (first check-in to a location of this type) or distance (check-in far away from last check-in).
- *Badges* Certain types or combinations of check-ins unlock “badges,” virtual marks of achievement, like the “Gym Rat” badge earned for checking into gyms ten times in the course of thirty days.
- *Leaderboards* Points are compared with members of one’s social graph on a weekly point leaderboard, aiming to spur competition between users.
- *Mayorships* Those users who have checked in the most often at a location in the past sixty days are acknowledged as its “mayor,” which again can spur competition between users.
- *Rewards* Business owners of a location may offer location-specific rewards (e.g., a free drink when a user checks in at a certain time).

Today, five years after foursquare’s launch, a whole cottage industry of gamification consultants, agencies, and software providers has emerged, spanning from “white label” platform providers such as Bunchball, Badgeville, or Lithium to more specialized platforms such as (now defunct) Greengoose, a sensor and software package for self-tracking everyday activities. Business consultancies publish rosy predictions, all arrows predictably pointing up and to the right: according to one forecast, the gamification market will grow from US\$100 million in 2011 to US\$2.6 billion by 2016 (Meloni & Gruener 2012). The tone is nothing if not evangelical: business books promise a *Gamification Revolution* (Zichermann & Linder 2013), explaining *How to Revolutionize Customer and Employee Engagement with Big Data and Gamification* (Paharia 2013).

Implementations abound across all domains of life, the overwhelming majority using some variation of the points-badges-leaderboards model of foursquare (Hamari, Koivisto & Sarsa 2014). In marketing, one finds digital loyalty programs and sweepstakes built around “customer engagement”: checking into a store; sharing or liking posts and product pages of brands on social media platforms. Examples are platforms like Lockerz, Getglue, or the Buffalo Wild

Wings in-store mobile phone challenge, which prompts users to, for example, check in at the store or take a picture of a food and share it online to earn points redeemable for drinks and food. Another common form is a new breed of advertising games like the Heineken StarPlayer: while watching a soccer match on television, players of the application can bet on how certain game situations (such as a free kick) will be resolved or whether a goal will shortly occur (Coulton, this volume).

In health and wellness (see Munson et al., this volume), gamification chiefly intersects with the quantified-self movement of individuals seeking self-knowledge and self-improvement through self-tracking and analysis of their behaviors, body states, and experiences (Wolf 2009). The most publicized example for this intersection has been Nike+ (and now Nike Fuelband), a suite of tracking device and software that records everyday exertion and translates it into a universal score, complete with personal goal-setting and social competition. Health Month has been another early, influential system. Developed by Buster Benson (this volume), it allows users to set personal health goals and track their daily activity against these goals and to form player groups with collective goals and the ability to “heal” each other if one loses “life points” by missing a goal. In their wake, innumerable applications nowadays combine self-tracking with goal setting and virtual achievements, some for individual fitness (such as Runkeeper or Fitocracy), some as enterprise health programs (such as Keas), and some for task management (such as Chorewars or Epic Win). Zombies, Run! offers a slightly different, more narrative take: in this mobile running application, the player is motivated to run physically in order to escape fictional zombies.

In education, gamification has been adopted chiefly among practitioners and researchers interested in learning analytics, new forms of assessment, and self-directed, self-motivated online learning as found in, for example, massive open online courses (MOOCs). One highly influential exemplar is Khan Academy, a website that offers videos and exercises around basic educational topics, where users can earn points and badges (and educators can track learner performance). On a grander scale, the Quest to Learn schools restructure the entire school life and curriculum in the image of games (Salen, this volume). At the Rochester Institute of Technology, undergraduate students can engage with Just Press Play, an achievement system for noncurricular activities such as visiting a professor in her office (Ramirez & Squire, this volume). And already in 2010, Microsoft Office Labs released Ribbon Hero, an add-on that taught users the basics of the Microsoft Office Suite, including the then-new ribbon interface, with a game interface of challenges, achievements, and scores layered into the Microsoft Office software itself.

In sustainability, a notable example is Chromaroma, a platform that allows users to visualize their public transport use in London as tracked by their Oyster Card; users can form competing teams, and the system nudges users toward more sustainable commuting behaviors with goals that put walking and cycling over public transport, and public transport over car driving. And in cars themselves, one nowadays finds a plethora of “eco-feedback systems” with more or less explicit “gamy” qualities, most prominently in-car “eco-dashboards” that display how environmentally friendly one is driving, such as Ford’s SmartGauge or the Ecoscore of the car-sharing service Car2Go (Froehlich, this volume).

In the enterprise space, many companies have been experimenting with gamification for training, innovation, and employee engagement (Mollick & Werbach, this volume). In training, one can find examples like the Deloitte Leadership Academy, adding point scores, missions, achievements, and leaderboards to its online video and exercise leadership training program. With regard to innovation, one finds a host of platforms for employee and consumer online idea competitions, such as the 2011 Volkswagen People's Car Project, which invited

Chinese consumers to submit and vote on concepts for a future automobile, complete with teams, scores, leaderboards, and badges. In terms of employee engagement, gamification platform vendors have released a wealth of software suites to track and motivate employee performance through scoreboards, goal setting, and leaderboards, specifically in sales and customer service. The popular customer relationship management platform Salesforce alone currently counts twelve different gamification apps.²

Defender: Resistance to Gamification

On one side, then, optimistic authors such as Jane McGonigal (this volume) argue that mankind's existential challenges in the twenty-first century can be fixed with game design. Scholars like Byron Reeves (Reeves & Read 2009) hold that games present systems of informational feedback and incentives that are perfectly organized for reinforcement learning and for coordinating the collective action of self-interest-driven individuals; thus, we can learn from them how to design perfect markets and behavior change systems (see also Linehan et al., this volume; Rangaswami, this volume; Williams, this volume). Business consultancies like Gartner (2011) declare gamification to be a major business technology trend, and agencies and software vendors promise that gamification will "revolutionize" all areas of society and economy, motivating us as consumers to co-create, to buy, and to produce by word-of-mouth; as employees to engage in the workplace; as citizens to participate in politics and collective problem-solving; and as individuals to learn, live healthy, and act sustainably.

On the other side, we find equally vocal critics coming mostly from game design and academia (Juul 2011). They hold that "gamified" products never can, nor ever intended to achieve, the engaging qualities of well-designed games. The joys of game play arise from having meaningful choices in trying to achieve interestingly difficult goals. In contrast, gamification is "taking the thing that is least essential to games and representing it as the core of the experience"; namely, the scoring feedback that tells players how well they are on the way to achieving their goals (Robertson 2010). What gamification proponents are interested in, following Bogost (this volume), is merely commodifying the current cultural cachet of games into an easily sellable workshop format or "turnkey" technology. In this, they ignore that game *design* is an inherently complex, risky, skill-based, situation-bound, and therefore non-scalable process, as well as the potential differences of users; for instance, not all cultures equally value competition (Khaled, this volume). Gamification presents but the latest form of ideology masking

political disenfranchisement and exploitation of digital labor as playful self-realization (Rey, this volume).

Thus, many gamification vendors show little ethical concern for the affected users. Privacy and data ownership are one obvious issue here: Who owns, controls, and views the data generated? How might employers, health insurers, or governments use it? What chilling effects might the tracking and publication of such data have? Does the playful veneer of gamification make users willingly self-report behavioral data they would in no other context allow to be tracked (Andrews, this volume)?

Others argue that by presenting games and gamification as information and incentives, gamification proponents fail to appreciate that play is the quintes-

sential case for intrinsically motivating activity: adding a layer of rules, goals, feedback, and consequences might motivate participants through coercion or incentivization but actively thwart rather than tap into the motivations characteristic for game play (Rigby, this volume; Stenros, this volume).

Finally, there are unintended consequences such as gaming the system: framing an activity as the singular pursuit of goals spelled out in metrics and targets attracts exploitive actors interested in finding loopholes. Even with regular actors, it may crowd out wider concerns for any factor not captured in the metrics, such as moral conduct, “negative externalities,” or whether “meeting the target” “misses the point”; that is, whether a given goal is contextually sensible (Deterding 2012).

From Gamification to *The Gameful World*

One important part of the debate around *gamification* has been the word itself. Advocates have attempted to establish gamification as the umbrella term for anything game-related, including serious games, or even to extend it beyond games to include loyalty programs and applications of behavioral economics. Critics have taken this as an indication that gamification proponents are not interested in games at all, only in the attention value of the term *games*. Thus, they have phrased *serious games* or *gameful design* as *opposites* to gamification and have suggested to replace *gamification* with terms like *exploitationware* (Bogost, this volume).

One issue with these language disputes is that they (sometimes intentionally) conflate descriptive and political, normative levels: Instead of first establishing descriptive terms and then judging whether

specific instances meet aesthetic, practical, or moral standards, they generalize and position “good” = well designed = ethical *serious games* or *gameful design* against “bad” = poorly designed = unethical *exploitationware* or *gamification*. Furthermore, they ignore the wider context. Gamification is certainly the most recent and visible instantiation of the interpenetration of games and everyday life. Yet not only has this interpenetration a long and varied history, spanning from art movements like the Situationists to war games, serious and pervasive games, and playful design in human-computer interaction: it is also but a part of a wider trend that has been variously called the “ludification of culture” (Raessens 2012), “ludofication of society” (Walz 2006), or the rise of a “ludic society” (Stenros, Montola & Mäyrä 2007, 32), “ludic century” (Zimmerman, this volume),

“ludic language” (Flanagan, this volume), and “ludic architectures” (Walz 2010). Practices and attitudes, patterns and tropes, materials and tools, languages and concepts from (digital) games and play increasingly pervade all arenas of life. Just as importantly, artists and businesses, scholars and technologists, institutions and subcultures in turn attempt to harness and shape games and play for their own purposes. Whereas game scholars have mostly painted this as a lamentable “rationalization,” “colonization,” or “instrumentalization” of games and play, we hold that this *cultivation of ludus* is just the logical complement to the *ludification of culture*. How can we expect games and play to “migrate” into new territories without undergoing some “acculturation” in the course (see Deterding, this volume)?

Hence, instead of using the value-laden term *gamification* or the narrower concept of *ludification*, for the current volume we have chosen to speak of “the gameful world.” In this, we build on the terminology of Deterding et al. (2011), who suggested mapping the current use of games and play beyond leisurely entertainment along two dimensions: wholes versus elements or qualities, and *paidia* versus *ludus*. The latter distinction is taken from philosopher Roger

Caillois (2001), who noted that all forms of human play fall on a spectrum between open, free, exploratory play as we find it in children’s object and pretend play (*paidia*) and formalized, rule-based, goal-oriented play as we find it in games (*ludus*). One may thus distinguish

- serious games: “ludic wholes,” or full-fledged games designed and/or deployed for non-entertainment purposes;
- serious toys: “paidic wholes,” or toys designed and/or deployed for non-entertainment purposes;
- playful design: “paidic elements or qualities,” or non-toy objects and experiences that use design elements from toys and/or are designed to afford playful experiences;
- gamification (or gameful design): “ludic elements or qualities,” or non-game objects and experiences that use design elements from games and/or are designed to afford gameful experiences.

All four are part of but do not exhaust the double movement of the *ludification of culture* and the *cultivation of ludus*, which together we call the rise of a gameful world (figure I.1).

The Question of the Gameful World

So what are we to make of the rise of a gameful world and the debate between gamification proponents and critics? As editors, we were struck by four things. The first is the narrow focus on gamification itself, blending out its prehistory and wider double movement of the *ludification of culture* and *cultivation of ludus*.

The second is the tendency to speak in absolutes: gamification proponents promise revolutions, yet

seldom mention possible limitations, complications, or downsides. Conversely, critics of gamification voice valid and important concerns, but again paint with a broad brush. Even if questionable actors and implementations are currently in the majority, this does not disprove that games and game design have a growing impact on our culture, nor that they hold valuable learnings for other domains—just as comic

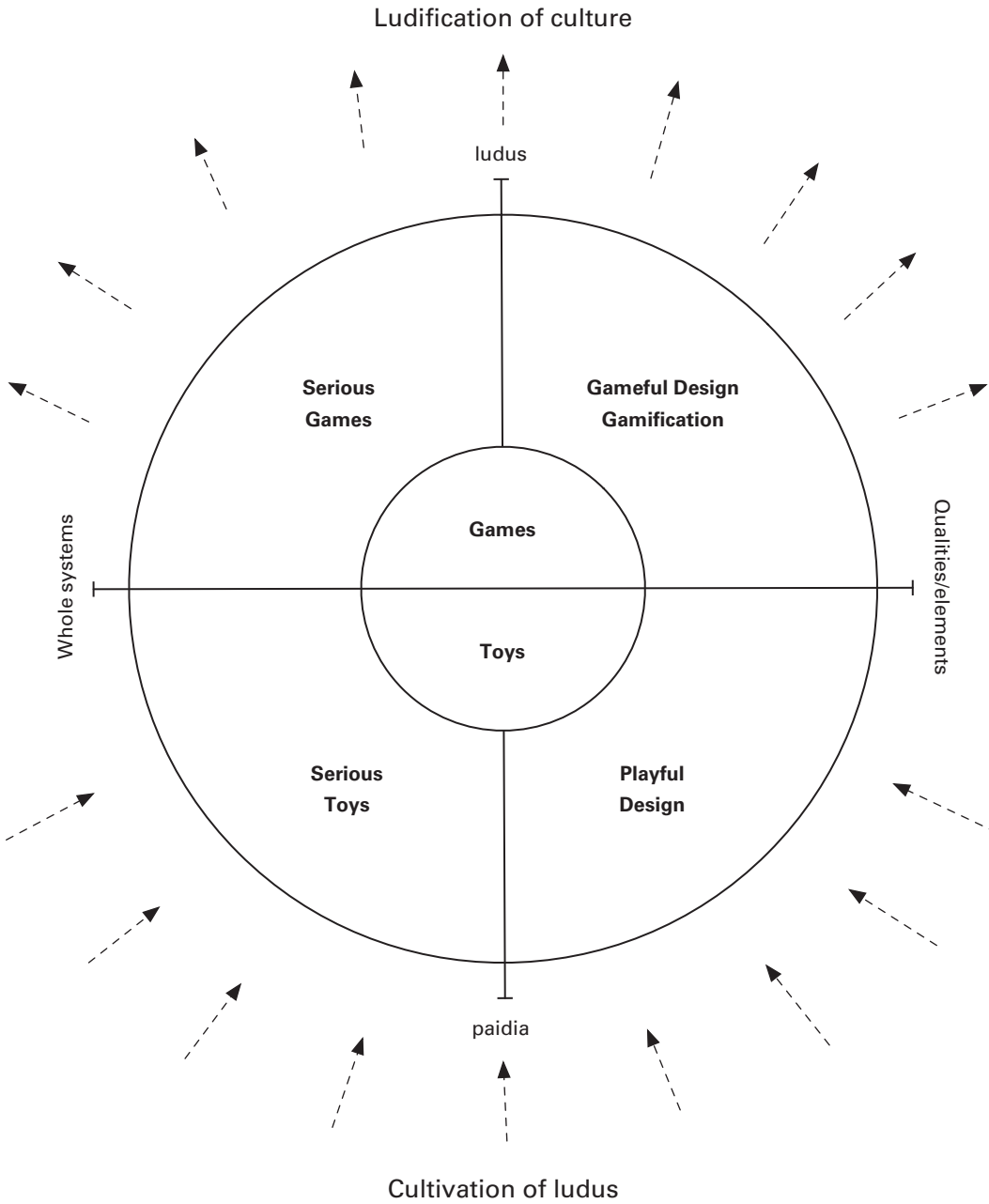


Figure 1.1
A conceptual mapping of the gameful world.

artists have been inspired by movies, novelists by advertising and screenwriting, interaction designers by graphic design, or hackers by science fiction (Stober et al. 2013). Given that game design is *the* practice of creating enjoyable interactions, it stands to reason that it holds something of interest to any domain where interaction is designed and the goal is to make it more enjoyable. In this sense we agree with proponents that gameful design has potential—although we hasten to emphasize *potential*. Despite the publicized short-term success stories of gamification vendors, there are still few solid, peer-reviewed empirical studies on the effects of using game design in non-game contexts (Hamari et al. 2014).

Third, we were struck by the sheer fervor of the debate. As Deterding (this volume) argues, what we see at work here is not so much a disagreement over facts than a clash of *rhetorics*—worldviews and moral politics reproduced by communities and their languages, most importantly in this case, different ideas of the “proper” place of games and play in society. Gamification has brought communities into the discourse around games and play whose rhetorics are alien and often anathema to the rhetorics of game designers and scholars. In Victor Turner’s (1982) terms, gamification proponents predominantly subscribe to the *liminal* use of games and play as a conservative perfection of means toward the given goals of the existing social order. Game scholars and designers in contrast predominantly see the “proper” use of games and play beyond entertainment as *liminoid* progressive questioning and subversion of the standing order.

Fourth and finally, while proponents have been busy producing blueprints and services for bringing a gameful world about, and critics busy ridiculing the

very idea, we are dearly lacking solid description, analysis, and reflection of just *what is happening now* and just *how it will affect us, the people*. *What if* all of our everyday life is turned into a game? What would be the consequences of life governed by a pervasive web of sensors tracking our every action, algorithms evaluating them against rules and goals set by ourselves and others, and effectuators constantly feeding back information on our performance, status, and progress? How would we work, commune, and act politically under such circumstances? How would it alter (and disturb) the ordering of our everyday interaction? And what happens to games and play themselves? What are the ethical ramifications of a societal *panludicum*—for policy makers, for designers, but also for individuals alternatively extending or replacing our will with technically mediated systems of goals?

There are no definite answers to any of these questions yet. But the underlying issues have been tackled in philosophy, game studies, human-computer interaction, psychology, sociology, economics, anthropology, and other disciplines. These literatures at least provide us with inroads to the questions a gameful world poses. The goal of the current volume, then, is to scrutinize the ramifications of a gameful world, the promises it holds, and the issues it brings—socially, economically, politically, culturally, ethically, and on a personal level. Rather than shoehorn the heterogeneity of phenomena and rhetorics into one coherent argument, we believed it most helpful to surface its very heterogeneity: to rub the different stances of advocates and critics against each other, thus highlighting their partially rhetorical nature, but also enabling the reader to make up his or her own mind.

Organization of the Book

The essays collected in this book are organized into three broad parts. The first part, “Approaches,” disentangles various disciplinary perspectives that have been used to frame gamification. It is grounded in the chapter “The Ambiguity of Games,” a historical survey that traces the main precursors and parallels of today’s gameful world and synchronically maps the main contemporary rhetorics. Chapters by representative scholars each explicate one perspective: rhetorics (Bogost), behavioral psychology (Linehan, Kirman & Roche), motivational psychology (Rigby), neoclassic and behavioral economics (Hamari, Huotari & Tolvanen), play and performance (Stenros), aesthetics (Flanagan), design (Hassenzahl & Laschke), and ethics (Sicart).

The second part, “Issues,” breaks out major issues at stake in pervading life with game elements: exploitation (Rey), culture (Khaled), media spectacle (Borland), social control (Whitson), morality (Selinger, Sadowski & Seager), privacy (Andrews), and the technical underbelly of a gameful world (Nova).

The third part, “Applications,” surveys existing research in major application domains: product and service design (Holopainen & Stain), the enterprise (Mollick & Werbach), social media (Lampe), science (Cooper), politics (Lastowka & Steinkuehler), cities (Alfrink), sustainability (Froehlich), education (Ramirez & Squire), and health (Munson et al.).

In each part, *chapters* are interspersed with *position papers*. Chapters synthesize and critically reflect the existing literature around an approach, issue, or application area. As counterpoints, position statements provide subjective voices by practitioners, theorists, and activists that have been formative for the gameful world.

The choice of chapter topics emerged from a systematic mapping of the main actors, topics, and rhetorics of the gamification discourse in 2012. As editors, we tried to match each topic with authors bringing deep expertise in both games or gamification and the given subject matter. Despite its size, this book does not claim to be a comprehensive representation of *all* angles and voices. To the best of our ability, where currently influential voices or angles had to give, we tried to at least provide ample reference to them throughout the book. Still, this book very much remains an opening move to a—hopefully—continuing conversation.

To give our readers a first map and compass for this conversation, we have arranged the various contributions into a coordinate system with two axes, reflecting the main fault lines of the debate around the gameful world: one axis represents the different forms of play appealed to, *paidia* and *ludus*, the other axis the different moral politics of the “proper” place of play and games in social life: *liminal* and *liminoid*. By assigning numeric values on both axes to each contribution in the book, we arrived at a coordinate for it: its place in *The Gameful World* (figure 1.2).

In closing, we would like to thank first and foremost our authors for embarking on this adventure with us, our anonymous reviewers for their valuable guidance, and our editorial producer Sebastian Felzmann for keeping the ship afloat throughout the journey, as well as editorial assistant Sebastian König and translator Jenna Krumminga. Lastly, we would like to acknowledge that the production of this book has been supported by the Royal Melbourne Institute of Technology, Australia, and its Games and Experimental Entertainment Laboratory, the GEElab.

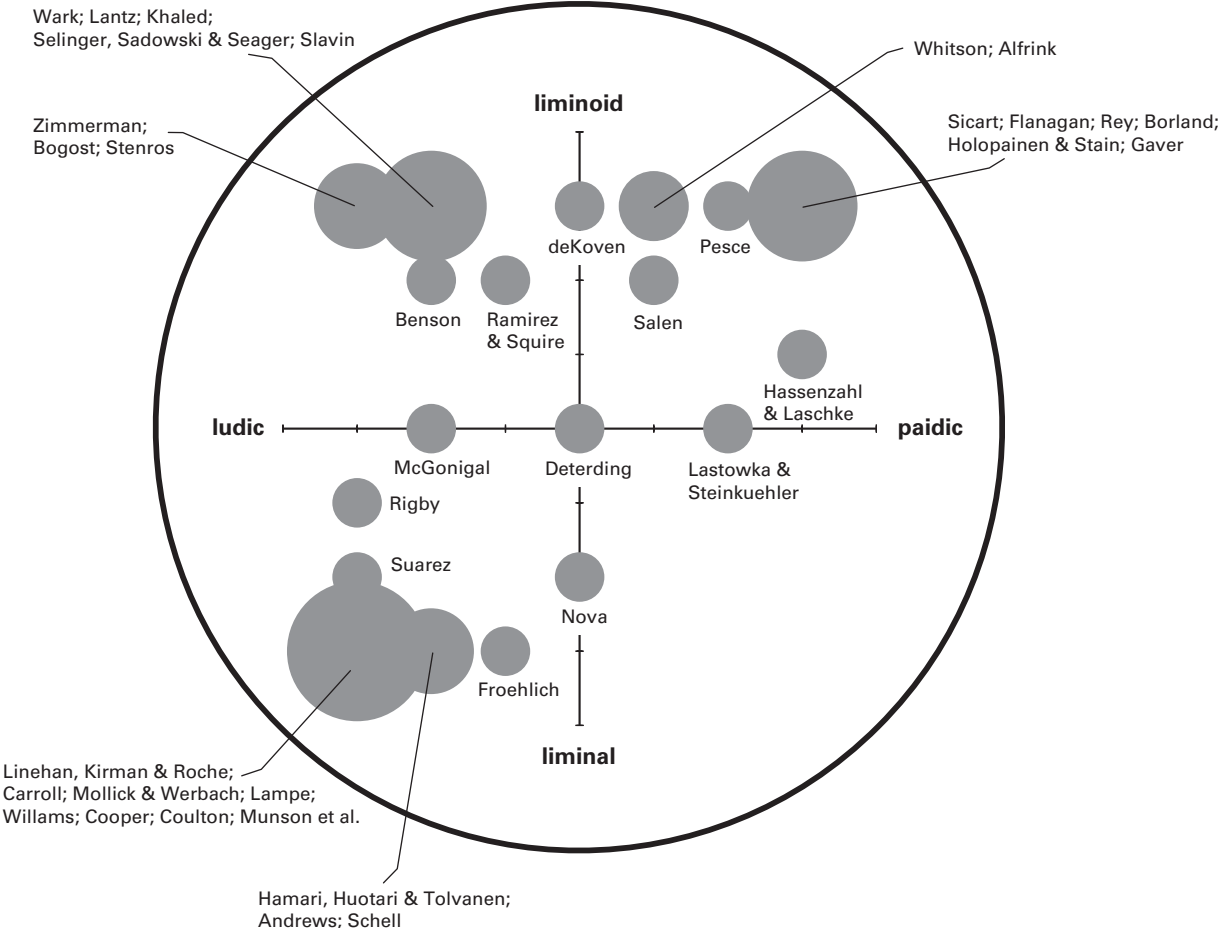


Figure 1.2
 A compass to *The Gameful World*: Contributions by predominant form of play and moral politics.

Notes

1. See <http://www.google.com/trends/explore#q=serious%20games,%20gamification> (accessed May 11, 2014).
2. See <https://appexchange.salesforce.com/collection/gamification> (accessed November 24, 2013).

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