# Gamification of Labor and the Charge of Exploitation

**Article** *in* Journal of Business Ethics · August 2016

DOI: 10.1007/s10551-016-3304-6



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J Bus Ethics
DOI 10.1007/s10551-016-3304-6

# Gamification of Labor and the Charge of Exploitation

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Received: 11 May 2015 / Accepted: 18 August 2016


**Abstract** Recently, business organizations have increasingly turned to a novel form of non-monetary incentives—that is, "gamification," which refers to a motivation technique using video game elements, such as digital points, badges, and friendly competition in non-game contexts like workplaces. The introduction of gamification to the context of human resource management has immediately become embroiled in serious moral debates. Most notable is the accusation that using gamification as a motivation tool, employers exploit workers. This article offers an in-depth analysis of the moral charge of exploitation. This article maintains that there are no clear grounds for believing that gamification of labor is exploitative and that if gamification of labor involves a wrong or vice, it must be something other than exploitation.

**Keywords** Gamification of labor · Gamification ethics · Labor relations · The ethics of human resource management · Incentives · Motivation · Exploitation

How can one person get another person to do what she wants her to do? The question is common but significant to all of us. In particular, employers and managers, especially HR managers, seek a good answer. They want to get their workers to more effectively and efficiently achieve organizational goals—for instance, improve workplace productivity. Indeed, there is a vast literature about the effectiveness of work motivation and incentives (Latham 2005, 2012; Locke and Latham 1990; Steers and Shapiro 2004). Not all kinds of motivation tools or incentives are morally benign (Grant 2002, 2012). An explicit normative examination of work motivation tools and, more broadly, HRM practices used to achieve organizational goals is required (Greenwood 2002, 2013). This article aims to offer an in-depth, normative analysis of a novel form of non-monetary incentive to which recently business organizations have increasingly turned—that is, "gamification," which refers to a motivation technique using video/app game elements, such as digital points, badges, and leaderboards[1] in non-game contexts like workplaces (Deterding et al. 2011a, b; Edery and Mollick 2009; Mollick and Rothbard 2014; Werbach and Hunter 2012).

Although gamification has been implemented for various business purposes,[2] it has become embroiled in a series of moral scandals with distinctively human resource management-related issues (Kim 2015; Lopez 2011; Walz and Deterding 2014; Werbach 2014b). The major charge is that using gamification as a motivation tool, employers (e.g., Target) *exploit* workers (e.g., cashiers) (Bogost 2011a, b, 2014; Rey 2012, 2014). Exploitation of labor is a

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[1] Game elements include more than the so-called "PBL triad" of points, badges, and leaderboards. Video games also include competition, fun, winning, mastery, accomplishment, a feeling of volition, problem-solving, surprise, rewards, show-offs, likes, dueling, next stage unlocked, karma points, and many more. It is difficult, however, to deny that the PBL triad is the most commonly used game element in the business application of gamification.

[2] Not all gamification is used in the context of the workplace. There are other implementations for marketing, non-profit, educational, or public health-related purposes. Since the moral nature of gamification that occurs in a market may be different from that within a firm, and since space is limited, my discussion in this article focuses primarily on ethical issues of gamification that can occur with respect to employees. For a discussion about the ethics of gamification with respect to customers, see Sicart (2014), which critically discusses Nike+.

Published online: 26 August 2016

serious moral wrong. Accordingly, the charge deserves a thorough investigation. The primary purpose of this article is to examine the moral controversy in a fair manner. The examination will show that, in contrast to the existing accusation, there are no clear grounds for believing that gamification of labor is wrongfully exploitative. If the practice is ethically problematic, the wrong or the bad must be something other than exploitation (e.g., manipulation, harm, negative impact upon moral character or self-reflection).

"Background" section provides brief background information about the moral controversies regarding the gamification of labor.[3] "The Existing Charge of Exploitation" section offers a critical evaluation of the existing charge of exploitation. "Three Possible Charges of Exploitation" section examines gamification of labor from the perspective of three major contemporary normative accounts of exploitation, explaining why none of the standard theories would define the practice as exploitative. "Discussion" section discusses some limitations of the analysis, of which business practitioners should be aware. "Conclusion" section concludes the study.

## Background

Leading game designer Jesse Schell made a bold prediction at the 2011 D.I.C.E Summit that, whether we like it or nor not, video game elements will infiltrate every aspect of our real lives.[4] The recent tremendous success of Nintendo's Pokémon Go, a digital game based upon augmented reality technologies, is simple proof of Schell's prediction. As Deterding (2014, p. 23) writes, "games and play move from the periphery of playgrounds, living rooms, and arcade halls toward the center of our cultural, social, and economic life," and as a result, "cultural, social, and economic actors become interested in shaping and harnessing them for their purposes." A notable example of this trend is the business application of gamification to the context of employee control. (Knowledge@Wharton 2011a, b). Anecdotal evidence abounds. In 2011, a symposium on gamification was organized at the Wharton School of Business,[5] which has offered an extremely popular MBA course in gamification, since 2012. *Coursera* has offered an online course on gamification since 2012 (Werbach 2014a), and more than 210,000 people around the world have registered.[6] Nike, Google, Microsoft, Deloitte, Amazon, Samsung, IBM, Target, Disney, and many other big profile corporations already embed the methods of game design, with the intention of engaging employees in ways similar to those of digital games, in their day-to-day business processes. Not long ago, whole issues of *Technology forecast* (PWC 2012) and *Deloitte Review* (Deloitte 2012) featured gamification. The 2013 Deloitte annual report chose gamification as one of its top ten business technology trends (Deloitte 2013). In 2013, the Gartner technology consulting firm predicted that, shortly, more than 40 % of global 1000 business organizations will use gamification as a primary mechanism to transform business operations and control employee productivity (Plummer et al. 2013). As a result, since most corporations outsource gamification platforms, gamification platform-providing is one of the fastest growing industries in the U.S. (e.g., companies such as 500Friends, Badgeville, Big Door, Bunchball, CrowdTwist, Gigya, IActionable, and Seriosity). The story of gamification applied to work productivity control continues (e.g., Brousell 2015; Deardorff 2015; Greenwald 2014; Megget 2014; Merrett 2014).

It will be helpful to further explain the gamification of labor through a simple, but real example. Consider Target's "Checkout Game":

> By the mid-2000s, Target customers had one major complaint: checkout lines. … The company added a game mechanic to the checkout experience. At the time, even those at Target's corporate offices were not calling it a game. … In fact, what has become known colloquially as the Target Checkout Game is simply the appearance of a letter on the screen as the cashier scans an item. The Gs and Rs (standing for green and red, respectively) indicate whether or not the space of time between each scan was fast enough—G for the right speed and R for too slow. At the end of the transaction, a percent appears on the screen. This number suggests an appropriate rate of speed per customer transaction, and it is in fact a total assessment of all the cumulative transactions that cashier has had in a given period…what happened next surprised everyone: not only did Target's checkout lines move faster than ever, but its cashiers reported an increase in satisfaction with their job experiences. The monotony and boredom often associated with the checkout experience suddenly had

[3] There are important non-normative works on gamification (e.g., Deterding 2014, 2015; Hamari et al. 2014; Mollick and Werbach 2014a, b). This article relies on those descriptive works as background knowledge, but does not directly involve their historical, anthropological, or social scientific issues.

[4] D.I.C.E. Summit is an acronym for the Design, Innovative, Communicate, Entertain Summit. It is one of the largest annual meetings for video game developers, held in Las Vegas. More information can be found at http://www.dicesummit.org. Jesse Schell's talk at 2010 DICE Summit can be found at http://www.ted.com/talks/jesse_schell_when_games_invade_real_life.

[5] More detailed information about the conference can be found at http://gamifyforthewin.com.

[6] For more statistics, see Werbach's wrap-up video at https://www.coursera.org/course/gamification.

an injection of fun. Employees themselves took personal pride in achieving a high score and better still beating it (Zicherman and Linder 2013, pp. 73–75).[7]

Target still utilizes the Checkout Game. The Game is probably one of the simplest possible examples of gamification applied to productivity control, which uses only the core methods of digital game design, such as digital game experience, points, leaderboard, competition, etc. One primary feature of gamification is worth mentioning. As Edery and Mollick (2009) say, "[g]ames can cause people to do amazing things, purely for the sake of fun" (p. 155). Gamification turns boring work into a pleasurable video game-like experience, by, among other things, assigning workers digital points or badges, instead of financial or substantive incentives. By doing so, the gamified labor system promotes friendly competition, displaying these points and badges on online leaderboards visible to all players, and recognizing top performers with badges (Table 1).

Note that, for the Target cashiers, the video game-like experience is itself an incentive—an offer designed to elicit a particular response from people that they would not likely choose in its absence (Grant 2012). Unlike other work incentives, such as monetary benefits, early promotion, or other non-monetary but substantive benefits (e.g., travel or gifts), the hedonic experience—fun—is typically the only benefit given to employees. Namely, employers do not pay for the increased outcomes that workers produce through the gamification of labor. And this very feature, as we shall soon see, has led critics to argue that gamification is a modern and digital exploitation of labor.

There are non-moral criticisms. An example is that gamification is "pointsification," which lacks genuinely important complex and serious motivation elements other than points and badges (Robertson 2010). The other sets of raised issues are, interestingly, moral concerns about the business application of gamification (e.g., Bogost 2011a, b, 2014; Fleming 2012; Lopez 2011; Rey 2012, 2014; Selinger et al. 2014; Sicart 2014; Werbach 2014b). The leading persuasive game designer Bogost has expressed a daunting criticism of gamification of labor, pejoratively dubbing it "exploitationware" (2011a, 2014)—or an exploitative digital work motivation control system. In response to the moral accusations, several practitioners have suggested the creation of a code of gamification ethics. In particular, Gabe Zichermann (2012), the CEO of two gamification service providing companies, Gamification Co. and Dopamine, outlined the "Code of Gamification Ethics" as follows:

As an accredited[8] Gamification Designer, I pledge my best effort to act in accordance with the following principles when creating systems of engagement:

1. I will strive to design systems that help individuals, organizations, and societies achieve their true potential, acting consistently with their values and enlightened interest.
2. I will not obfuscate the use of game mechanics with intent to deceive users about the purpose or objective of the system.
3. Where practical by law and contract, I will make an effort to share what I have learned about motivating behavior with the community so that others may leverage this understanding to advance society and the state of the art (Zichermann 2012).

The emergence of a code of ethics within the industry is welcome, as it signals that the gamification community is aware of moral issues and trying to make moral progress. However, the code suggested by Zichermann is not enough. The code was created primarily as a response to Bogost's charge of exploitation, but the code does not contain any clear resources that address the problem.

Since the emergence of these moral debates most published books on gamification have tended to insert at least a short chapter or remarks dealing with ethical issues (e.g., Werbach and Hunter 2012; Duggan and Shoup 2013; Herger 2014). Since then, gamification researchers and industry practitioners have actively discussed ethical issues regarding the gamification of labor. For example, in a recent meeting of gamification researchers at the Association for Computing Machinery (ACM)'s annual conference for Computer Human Interaction (CHI)—a conference attended by business school professors who belong to the Institute for Operations Research and the Management Sciences (INFORMS)—one of the four major themes was ethics. And yet, the gamification researchers' debates about moral issues seem to generate issues without rigorously judging whether or not the existing charges are normatively grounded or groundless. It is fair to mention that business ethicists should contribute to the debates. The scholarship of business ethics has deep resources for the topic of exploitation of labor, and it is time for business ethicists to participate in the moral debates about the gamification of labor. To take the first step, in this article, I critically examine one of the major existing charges that gamification of labor is exploitation (Bogost 2011b, 2014).

[7] Disneyland introduced a similar type of gamification to laundry staff. The company installed monitors that displayed employees' names and efficiency rates. The monitors were like leaderboards on which employees could see each other's scores. One employee criticized this practice as an "electronic whip" (Lopez 2011).

[8] One can become an accredited Gamification Designer certified by Gamification Co. by taking courses provided by Engagement Alliance at http://engagementalliance.org/get-certified/get-certified.

**Table 1** Snyder's (2010) categorization of theories of exploitation applied to gamification of labor

| Category | Sub-category | Theory | Definition |
|---|---|---|---|
| Fairness account | Micro fairness account | Hypothetical market test (Wertheimer 1996) | Gamification of labor is exploitative if the wage is significantly lower than the wage in the hypothetically competitive free labor market for gamified labors |
| | | Rights-violation test (Zwolinski 2007) | Gamification of labor is exploitative if it involves actual or threatened rights-violations in the distribution of benefits |
| | Macro fairness account | Structural Injustice theory (Sample 2003) | Not directly relevant |
| Mere-means account | Kant's Formulation of Humanity (Arnold 2003, 2010; Arnold and Bowie 2003, 2007) | | Gamification of labor is exploitative if the labor condition compromises workers' rational capacity that enables them to autonomously and deliberatively set moral and practical ends by coercing, deceiving, or not providing reasonable safety standards or living wages |

## The Existing Charge of Exploitation

In this section, I examine two existing arguments claiming that gamification of labor is exploitative. The first is what I shall call the *Imbalance Argument*; the second is the *Marxian Argument*. None of them are cogent, I maintain. For clarity's sake, I will use a specific case.

### A Case

I use Target's Checkout Game introduced above as a paradigm example of gamification of labor implemented in the context of work productivity control. One might say, however, that the Target Checkout Game is not really an example of gamification, because the cashiers cannot voluntarily choose to play it or at least opt out.[9] As Carse (1986, p. 4) succinctly says, "whoever must play, cannot play." Some people, including practitioners or evangelicals, such as Zicherman and Linder (2013), think that the Target Checkout Game is a good, if not excellent, example of gamification of labor. But others disagree—in particular, those who criticize the Target Checkout Game believe that mandatory fun is conceptually perplexing or oxymoronic (Werbach and Hunter 2012; Werbach 2014a, lecture 11.2, b). In addition, as an empirical matter, a game, when mandatory, can significantly lose its own function of fun-making (Mollick and Rothbard 2014).

To avoid the strawman fallacy and the common defense, "That is not gamification of labor," and to add more exportability to my analysis, I create a hypothetical variant of the Target Checkout Game that is voluntary and contains other primary features of gamification. Consider this:

> *Target Checkout Game**
> Everything is exactly the same as above except for two things. First, now cashiers can opt out of the game. Participation is entirely up to cashiers, and those who do not play will not be penalized. Second, several more digital game components are included in addition to points and leaderboards. Now once cashiers earn a certain amount of points, they will be awarded digital badges (A badge in gamification is a visual token of a particular achievement). And now there are different stages that have different levels of difficulty. Like the Tetris game that requires players to act faster when they unlock higher stages, cashiers need to scan the items faster as they unlock higher stages. Cashiers can choose either the mode of individual competition or that of team competition. If they choose the team competition mode, they will compete with the other Target stores in the U.S.

One might still object that Checkout* is not a genuine example of gamification. Perhaps, the critic might claim that only ethically legitimate cases of gamification of labor are genuine gamification; thus, all cases of gamification of labor would be, by definition, ethically innocuous. Such a claim is viciously circular. To fully address this kind of objection, however, I would need to provide a full-blown definition of gamification—and providing a full-blown definition by engaging the definitional controversy (Werbach 2014b) would be beyond the scope of this article.[10] I

[9] Of course, one can say that gamification in the Target Checkout Game is voluntary, because the cashiers can always quit the job. But quitting a job to avoid participation in a game seems an unreasonable burden.

[10] Some important topics about gamification are beyond the reach of this article. For example, there are debates regarding the definition of gamification. Rather than engaging in the debates, this article will rely upon a standard definition (Deterding et al. 2011a, b), according to which gamification refers to "the use of (rather than the extension) of design (rather than game-based technology or other game-related practices) elements (rather than full-fledged games) characteristics of games (rather than play or playfulness) in non-game contexts (regardless of specific usage intentions, contexts, or media of implementation)." Since well-written works already discuss the

begin, rather, with the given existing phenomenon that the Target Checkout Game is widely classified as an example of gamification, so Checkout* would be even more widely accepted as a paradigm case.

## The Imbalance Argument

Gamification is different from other incentives in that it does not provide any monetary rewards other than the game experience per se. This is particularly true in Checkout*, in which the company, Target, gains significant financial value through enhanced productivity, whereas the cashiers do not gain any increased wages except for the hedonic value—fun. This interesting feature is shared by most practices of gamification of labor, and it is one of the major reasons that entices many business organizations to implement gamification to control employee productivity.

Regarding this feature of gamification, among the critics, no one has more harshly denounced the labor practice than Bogost (2011a, b, 2014). Notably, Bogost dubbed gamification of labor "exploitationware." He remarks:

> … gamification proposes to replace real incentives with fictional ones…Organizations ask for loyalty, but they reciprocate that loyalty with shams, counterfeit incentives that neither provide value nor require investment. When seen in this light, "gamification" is a misnomer. A better name for this practice is "exploitationware" (Bogost 2011b).

In my undersanding, Bogost's claim could be understood to mean that the cashiers gain only a small fraction (or almost none) of the created financial value, while the company gains relatively too large a (or almost the entire) share of it, and that this *severe imbalance* constitutes the wrong of exploitation. Let me generally conceptualize the claim as follows:

> *The Imbalance Argument*:
> In the context of gamification of labor, if there exists severe imbalance between the amount of (monetary) value that workers gain as a result of their gamified labor and the amount that the employer gains as a result of implementation of the gamification, it necessarily constitutes the wrong of exploitation.

This interpretation descriptively well matches what happens in Checkout* and typical business practices of gamification of labor. For instance, Microsoft's *Language Quality Game*, through which employees find bugs and errors in newly developed software, significantly enhances work productivity, but the company does not pay employees any wages for the additional work they do (Werbach and Hunter 2012, pp. 17–8).

*Evaluation*: The *Imbalance Argument* is not sound, however. The mere fact that an outcome of a collaborative or contractual transaction or work is severely or even excessively asymmetrically distributed to employees and the employer does not by itself constitute the moral wrong of exploitation. Suppose that a transplant surgeon gains \$35,000 by saving a patient. Assuming that the (monetary) value of a person's life is incomparable to the monetary value that the surgeon gains, it is true that the patient benefits significantly more than the surgeon—but it would be odd to say that the patient wrongfully exploits the surgeon. The severe imbalance itself does not make the transaction exploitative. To substantiate the *Imbalance Argument*, a further explanation is required to show why severe imbalance in the context of gamified labor constitutes exploitation. However, the *Imbalance Argument* itself does not have the resources to address the problem.

## The Marxian Argument

The mere fact that Bogost's version of the *Imbalance Argument* does not provide a clear normative rationale does not mean that the claim is itself automatically false. The *Imbalance Argument* is indeed reminiscent of Karl Marx's famous criticism of capitalist exploitation, which Marx developed in connection with his labor theory of value, primarily in *Capital 1* (1867/1976). Indeed, sociologist Rey (2012, 2014) clear-sightedly catches the Marxian theme in Bogost's charge and attempts to strengthen it. Rey claims primarily that gamification of labor is a process of producing "play-bor" (Kücklich 2005), which refers to a combination of play and labor, and that it is inherently exploitative in Marx's sense. He writes, quoting Marx:

> I generally agree with Bogost's argument here, but I think his is only a partial critique… Here, I must invoke Marx's observation that "surplus value…for the capitalist has all the charms of a creation out of nothing." For the capitalist, the productive aspects of play are just latent value waiting to be "leveraged." But this leveraging of surplus value is the precise moment that exploitation occurs. Exploitation is "the mechanism by which the capitalist comes to accumulate a disproportionately large share of the wealth"… Exploitation is a ratio between how much

Footnote 10 continued
details of the definition, I do not explore them here. A more succint scholarly definition of gamification is "the design of services and products with the methods of game design, with the intention of engaging users in ways similar to those games" (Sicart 2014, p. 225). Although the question of what constitutes gamification involves important technical, philosophical, and semantic issues, the primary discussion of this article will be limited to a normative question—namely, whether or not the business practices that are currently classified as gamification sufficiently meet the conditions of the deontically wrongful form of exploitation.

of his or her own work returned in the form of wages and how much is kept as "surplus" by the capitalist. This is how we should interpret Marx when he concludes: "The rate of surplus value is… an exact expression for the degree of exploitation of labor-power by capital, or of the laborer by the capitalist" (Rey 2012).

For clarity's sake, let me conceptualize the argument underlying Rey's remarks above as applied to the Checkout*:

*The Marxian Argument*:
Premise (1) The ratio between what the Target cashiers gain and what the company, Target, gains through gamification is significant.
Premise (2) The rate of exploitation = surplus value (the value produced by the worker above variable capital)/variable capital (the capital paid out as wages). [Marx's theory of exploitation]
Conclusion) Therefore, the company significantly exploits the cashiers.

According to the *Marxian Argument*, the magnitude of exploitation in Checkout* and almost all practices of gamification of labor are almost infinite, for variable capital that is almost none in any form of gamification which does not pay at all. Thus, the rate of exploitation is close to $x/0$, so the rate is undefined or almost infinite. That means, according to the argument, that almost all practices of gamification of labor including Checkout* are infinitely exploitative. It follows, hence, that gamification of labor is inherently the worst form of exploitation.

*Evaluation*: First of all, the *Marxian Argument* is not genuinely Marxian. The currency of value that Marx himself famously used was "socially necessary labor time," not financial or monetary value or wages. To use Jon Elster's (1986, p. 121) words, for Marx, "[t]he meaning of exploitation can be stated, somewhat simplified, as follows: workers are exploited if they work longer *hours* than the number of labor *hours* embodied in the goods they consume" (italics mine). Note that the currency used in Premise 1 of the *Marxian Argument* is wage or financial value, whereas the currency used in Premise 2 (Marx's theory of exploitation, including labor theory of value and labor theory of surplus value) is working time. There is, therefore, equivalence between Premises 1 and 2. Once the problem of equivalence is fixed, the rate will be significantly lower than infinity.

However, we do not have to go further to know why even the genuine *Marxian Argument* fails to defend the charge of exploitation. The rate itself in Marx's theory is not a normative indicator of the wrongfulness of exploitation. There might be controversy over the meaning of the rate in Marx's theory, but the widely accepted standard interpretation is that the rate itself does *not* contain any clear normative meanings. I do not deny that various normative commitments are deeply embedded in Marx's overall works (see, Brenkert 1983, Ch. 1). But I do not make a radical claim either; I simply concur with influential commentators (Arnerson 1981; Cohen 1979, 2008; Roemer 1985; Wolff 1999; Wood 2004: Ch. 15) who maintain that Marx's original view of exploitation, particularly, is best understood as a *technical* or *scientific* view rather than a normative or moral one, and that Marx himself did not mean to provide a developed, ethical account of exploitation. For instance, Cohen (1979, p. 341) says, "the Marxian concept of exploitation is a purely scientific one, with no moral content…to assert, in the language of Marxism, that a exploits b, is to offer no condemnation or criticism of a, or of the arrangements under which a operates."[11] What, then, is the descriptive or social scientific meaning of the rate in Marx's theory of exploitation? Answering the question is itself interesting but beyond the capacity of this article and mostly irrelevant to our normative inquiry here.

The upshot is that even the genuine *Marxian Argument* lacks a clear moral or normative foundation, because Premise 2, Marx's theory of exploitation, lacks a clear normative foundation. Since Premise 1 is a given fact, if the conclusion is to be a moral conclusion, Premise 2 must play a role of normative foundation. But Premise 2 is not itself a clear normative statement. Premise 2 is, rather, a descriptive or technical conceptualization of a certain kind of transfer in the labor market.[12]

The fact that Rey's original version is not genuinely Marxian and the genuine *Marxian Argument* does not show that the charge of exploitation is true, as a logical matter, does not mean that the original version of the argument is

[11] Another important Marx commentator, Allen Wood (2004, p. 259), also remarks, "what is wrong with exploitation—why capitalists should not do it, or at least why they should feel guilty about doing it—or why morally motivated social reformers should want to arrange things so that they cannot do it. It is in fact worth noting—and letting sink in, when we read Marx's writings—that Marx almost never looks at capitalist exploitation from either of these points of view." In the same vein, Arnerson (1981, pp. 202–203) writes, "The posture he [Marx] adopts is that of the disinterested scientific observer standing among apologists for capital …. Quite obviously exploitation in the Marxian technical sense does not imply exploitation in the ordinary evaluatively charged sense of the term (In this ordinary sense, exploitation involves mistreatment)."

[12] Here, I assume that a normative statement cannot be drawn from a set of only descriptive statements (Donaldson 1994). One might disagree with the fact/value distinction, believing like Hilary Putnam (2004) that the term exploitation is a "thick" concept that contains both the normative and the descriptive. But those who agree with Putnam can still accept that Marx's account of exploitation is not itself clearly normative, because Premise 2 above (what Marx means by the term exploitation) is clearly not thick enough to be evaluative.

wrong. It shows only that the original version is not genuinely Marxian and the genuine Marxian is wrong. True, but the original argument is in fact just a more sophisticated form of the *Imbalance Argument*, which I already showed is not cogent. Rey's own version descriptively states only that there exists an imbalance between the value produced by the worker above the capital paid out as wages and the capital paid out as wages, but it does not offer why such an imbalance is a moral wrong, especially the wrong of exploitation. Thus, although the original *Marxian Argument* was developed to clarify the normative foundation of the *Imbalance Argument*, it is in fact just the *Imbalance Argument* in disguise.

Of course, the mere fact that Marx did not use his definition normatively does not entail that the charge of exploitation made against gamification of labor can never be true. Setting aside the adequacy of Marx's scientific account of exploitation, one fundamental moral insight deeply infused throughout Marx's idea of exploitation is, as Arnerson (1981) points out, that *workers should get what they deserve*. Accordingly, we need to examine whether or not the Target cashiers in Checkout* get what they deserve. And this very question about desert, as Wertheimer and Zwolinski (2012) point out, is not unique to Marx. Most contemporary accounts of exploitation attempt to explain under what circumstances employers gain unfair or undeserved benefits from workers. Indeed, unlike Marx's scientific theory, which focuses on predictive issues, contemporary accounts of exploitation are precisely focused on the normative issue. Thus, we have good reason to move on to contemporary accounts.

## Three Possible Charges of Exploitation

In this section, I explore contemporary theories of exploitation to see whether any of them would define Checkout* as exploitative. To do so, I follow Jeremy Snyder's (2010) classification of the contemporary approaches to business exploitation. Snyder categorizes two distinctive accounts of exploitation: the fairness account (Wertheimer 1996; Zwolinski 2007) and the mere-means account (Arnold 2003; Arnold and Bowie 2003, 2007). The fairness account includes two sub-categories: the micro fairness account (Wertheimer 1996; Zwolinski 2007) and the macro fairness account (e.g., Sample 2003). In this section, I do not discuss accounts of macro fairness, which hold that structural or historical injustices maintained through global economic orders and hegemonies can exploitatively disadvantage some parties, because our context is primarily jobs in the contemporary U.S. The micro fairness account addresses the wrong of exploitation as an unfair transaction between the employer and the employee. The mere-means account addresses the wrong as using workers as a mere means. Snyder (2010) claims that the different accounts are each defensible and not necessarily mutually exclusive, because exploitation of labor is a practice that can have multiple distinctive wrongs that can occur separately. I assume the plausibility of Snyder's (2010) integrative view. Since my primary job in this article is not to defend a certain theoretical position about the normative definition of exploitation, I will briefly summarize relevant facets of each account and discuss whether or not each account defines the gamification of labor in Checkout* as exploitative.[13]

### The Micro Fairness Account (1): Hypothetical Market Price Test

In the contemporary literature of exploitation, Alan Wertheimer's (1992, 1996) account has received probably the most attention, so I begin with it. Wertheimer argues that an exploitative transaction is one in which Party *A* takes unfair advantage of Party *B*. To elucidate what he means by unfair advantage, Wertheimer appeals to a kind of Rawlsian idea that it is unreasonable to use desert as a legitimate basis for determining fairness, because one's productivity or performance stems partly from social background and natural talents—which Rawls (1971) famously calls "natural lotteries." Following Rawls, to determine whether a transaction is unfair, Wertheimer suggests a hypothetical environment in which a reasonable number of realistically

[13] One might admonish that, descriptively, gamification of labor is not a form of exploitation from the beginning and that it is nonsense to examine a descriptively non-exploitative practice through existing normative accounts of exploitation. I have two responses. First, the debates in gamification communities center around the term "exploitation," so it is practically useful to engage the debates with the same language, unless the language is seriously misguided. Second, their choice of the term is not seriously misguided. Wood (2004, p. 246) descriptively defines "[e]xploitation of a person, or a person's labor" as "our use of the person, or their labor, which has been made possible for us by some way in which they are *vulnerable* to us." Contemporary workers like the employees in Checkout* face a certain condition that can make them vulnerable to employers who have the power and resources to implement gamified elements. Then, in what sense are workers still vulnerable to employers? Many employees do not find their work meaningful and fun, are not satisfied with their jobs, and experience stress, boredom, etc. Employers can take advantage of this dissatisfaction. In fact, most advocates of gamification of labor begin their lectures or books by emphasizing how stressful, unsatisfactory, not fun, boring, and meaningless most workplaces are. It is no surprise that most working conditions that employers want to gamify—for instance, that of the Target cashiers—are boring, monotonous, and potentially meaningless. It strikes me as plausible to say that this is precisely the sort of vulnerability that companies can take advantage of or leverage through gamification. But, of course, a descriptively exploitative work is not necessarily normatively exploitative. Therefore, we need to examine Checkout* with normative accounts.

well-informed and unpressured buyers and sellers transact. If a price or treatment is significantly different from the price or a term of the contract that would be chosen in the hypothetically competitive free market, the actual price or the contractual term is determined to be unfair or unconscionable.

To further understand the hypothetical market test, consider the famous case of exploitation, *The Port of Caledonia and the Anna* in 1903, in which the master of a vessel in danger asked for assistance from a nearby tug and the master of the tug required £1000 or no help. The master of the vessel voluntarily agreed to pay £1000. Now imagine a hypothetically competitive market in which there was at least one competent and rational competitor. In that hypothetical market, due to the market competition, the offering price would be significantly lower than £1000. This is an important rationale underlying the court's decision that the offered price, £1000, was unconscionable because it was an unfair offer. This means that the tug master took an unfair advantage, so that the agreement was, although voluntary and mutually beneficial, exploitative.

It is not easy to imagine a hypothetical, competitive free market for gamification of labor, in part because we do not yet have such a market in the real world.[14] Nonetheless, the basic ideas in the hypothetical market theory can be workably applied to Checkout* or other practices of gamification of employment productivity. Imagine a labor market in which labor for gamification is clearly specified and included within employment advertisements. In this hypothetical market, some numbers of competing companies, such as Target, Walmart, Costco, or IKEA, advertise cashier jobs. The job description of some companies, including Target, offers the gamified working condition as described in Checkout*, in which workers can play a simple video game but can also opt out. Other companies' job descriptions do not include the option of the gamified working condition. Would the addition of the gamified work alter and, more specifically, increase workers' wages in the hypothetically competitive market? Probably not—or, at least, it is unclear. Except for those who prefer gamified labor environments, applicants would probably be indifferent to the two kinds of jobs: the gamified and the non-gamified. In theory, offering a gamified working environment to those who preferred gamified to non-gamified employment could even allow a company to slightly decrease wages, because that group of employees preferred gamified employment to the traditional working condition. In sum, in the imagined competitive market, gamified jobs would not make a substantial difference to the actual amount of wages. From the hypothetical market test of exploitation, hence, the gamification of labor in Checkout* and, similarly, typical practices of gamified labor are not unfair. Ultimately, they are not exploitative.

## Micro Fairness Account (2): Rights-Violation Test

Zwolinski (2007, 2008, 2009, 2012; Powell and Zwolinski 2012) has contributed to the fairness approach that focuses on the distribution of benefits. Like Wertheimer (1996), Zwolinksi argues that to exploit others is to take unfair advantage of them, yet taking advantage of others is unfair primarily when it takes advantage by violating rights through the distribution of the benefits created through an interaction. Zwolinski (2007, p. 711) says, "the concept of exploitation is best understood in terms of actual or threatened rights-violation," so that "the precise nature of the line between those actions that constitute exploitation and those which do not will depend on one's theory of rights." The question, then, is whether the gamification of labor in Checkout* or other similar business practices of gamification violate or threaten any rights of the cashiers or workers. This is not an easy question, because there are differing accounts of rights (see Kramer et al. 2000 for reviews).[15]

For our purposes, we do not necessarily need to adjudicate various accounts of rights. Zwolinski (2007) believes that rights-violations in the distribution of benefits can constitute exploitation, but an exploitation can be permissibly tolerated if employees prefer and voluntarily choose a labor transaction. In other words, a permissible form of exploitation can exist. Zwolinski's rationale is that "[t]he fact that they [workers] choose the conditions of their employment from within a constrained set of options is strong evidence that they view it as their most-preferred option (within that set)" (p. 695),[16] and it is wrong to gratuitously harm their preferred interest and compromise their autonomy. Recall that the cashiers in Checkout* and workers in most business cases of

[14] Wertheimer (1996, p. 231) himself acknowledges that an application of his view would be not straightforward to cases like "the hypothetical market price for an autographed first edition of *A Theory of Justice*."

[15] A similar rights-violation based account is found in Hillel Steiner's (1984) liberal theory of exploitation. Steiner's account states that a transaction between *A* and *B* is exploitative if any historically previous transactions that led *A* or *B* to the current transaction involved a rights violation with *C*. Zwolinski's account differs from Steiner's historical account, because for Zwolinski, exploitation itself is addressed by rights violation, whereas for Steiner, exploitation is a result of a previous rights violation. Since we are concerned mainly about whether the employment that uses gamification itself is wrongful or not, in this article, I do not discuss Steiner's account.

[16] Wertheimer also makes a similar distinction between wrongful exploitation and a permissible form of exploitation. See Wertheimer (2011, Ch. 5).

gamification voluntarily consent to a labor contract with the company, and it is not an exaggeration to assume that the workers are reasonably informed about the gameful system—that is, it is clear that the employer wants to improve productivity using gamification techniques. From the rights-violation test of exploitation, therefore, although the cashiers in Checkout*, as well as the employer, are justified in claiming that their employment contract regarding the distribution of benefits can be exploitative, even if it is so, it would be a permissible form of exploitation, so it must be respected.[17]

At this point, one might draw the radical conclusion that gamification in Checkout* and in all other voluntary cases of gamification of labor cannot be wrongfully exploitative. Therefore, one might deduce that we can safely stop our exploration here. But I am skeptical. As I mentioned above, I agree with Snyder (2010), who maintains that the fairness view of exploitation does not fully exhaust the multi-faceted dimensions of wrongful exploitation. As Arnold (2003) also points out, although the fairness view is well positioned to address wrongs in exploitative transactions about the distribution of the benefits created through interactions, it is not as appropriately positioned to address wrongs in exploitative relationships or treatment.Whether or not the moral issues in exploitation can be reduced to issues of voluntariness is a topic that deserves much more analysis and discussion. I leave this question to other opportunities for two reasons. First, the primary purpose of my article is not to adjudicate competing views of exploitation. Second, it seems quite plausible to believe that an employer who makes an ethically non-questionable contract with employees can still relate to these employees in ethically questionable ways in day-to-day interactions. Therefore, we move on to a treatment/relationship-oriented/attitudinal account of exploitation..

### Mere-Means Account: Kantian Test

Arnold (2003, 2010; with Bowie 2003, 2007) has developed an influential perspective on wrongful exploitation as the use of others as a mere means. He draws primarily upon Kantian ethics and especially the second formulation of the categorical imperative: "Act so that you treat humanity, whether in your own person or in that of another, always as an end and never as a means only" (Kant 1990, p. 46). Jonathan Wolff (1999) also suggests that the normative foundation of exploitation that Marx did not attempt to address in his theory of exploitation can potentially be addressed through Kant's formulation of the end in itself. Allen Wood (2004) also makes a similar suggestion when he tries to address the wrongness of what Marx calls capitalist exploitation as "humiliating" and "degrading" of the rational nature of humanity in someone's person.

Since the second formulation of categorical imperatives is deep and fertile, it elicits subtly different interpretations about when one person treats another as a mere means and fails to treat another as an end in itself (Guyer 2006; Hill Jr. 1973, 2000; Korsgaard 1996, 2009; O'Neil 2002; Wood 1999, 2011). In this article, I do not adjudicate or develop a new interpretation, but draw upon a widely agreed interpretation that, for Kant, what makes a person an end is primarily the rational nature of humanity in someone's person that enables her to autonomously and deliberatively set moral and practical ends—what Kant often calls "the supreme value." Hence, treating others as ends in themselves primarily requires us to respect the rational nature of people, which, in turn, requires us to treat others as autonomous and deliberative decision makers and to not interfere with their reasonable choices. Specifically, it demands that we refrain from coercing or deceiving people—the two paradigmatic Kantian wrongs.

Let us ask: did Kant's two paradigmatic wrongs occur in Checkout*? The Target cashiers are certainly not coerced or deceived by the HR managers or the employer. First, as mentioned above, the gamified work is voluntary. Second, the message behind the implementation of gamification is reasonably forthcoming: the company implements a new system to improve work productivity. Thus, even though the company did not explicitly explain why it implemented the gamification system, it would not be a stretch to say that the cashiers quite clearly understood the message. Therefore, the cashiers were not used as a mere means in the two paradigmatic Kantian ways.

One might say that Checkout* or the gamified labor system empirically degrades workers' rational capacity. This is a grave concern. However, we do not yet have enough evidence or even anecdotes to show that the practice of gamification of labor really damages workers' rational capacity or intelligence. In similar long-lasting debates about video games and their impact on intelligence, a non-controversial answer has been elusive as well (e.g., Connolly et al. 2012; Ferguson 2007). In the case of Checkout*, particularly, gamification might even have

[17] Underlying Zwolinski's argument is Wertheimer's (1996) "non-worseness principle," which holds that "in cases where A has a right not to transact with B, and where transacting with B is not worse for B than not transacting with B at all, then it cannot be seriously wrong for A to engage in this transaction, even if its terms are judged to be unfair by some external standard" (Zwolinski 2008, p. 357). For-profit companies like Microsoft in the Language Quality Game obviously have a right not to provide gamification for employees, and providing the testing workers with an option of gamification is not worse for employees than not providing it, as I discussed earlier. Therefore, it cannot be seriously wrong for the company and the testing workers to agree upon a labor transaction that involves gamification.

helped the Target cashiers activate their brain functioning a little bit more than the traditional working environment would have giving them more opportunities to use their personal autonomy[18] and imagination than the monotonous work environment without gamification would have provided.

The Kantian account of exploitation as the use of others as a mere means requires more than not interfering with others' autonomy through coercion, deception, or degradation. For Kant, as Arnold and Bowie (2003) point out, treating others as ends themselves also often requires us not to be "indifferent" to enabling them to make reasonable choices that would otherwise be outside their reach, so that people do not fail to minimally maintain their rational capacity of humanity. What it means to minimally maintain one's rational capacity of humanity might be controversial, but in the context of labor relations, it is widely acceptable that the "indifference" condition requires meeting minimum or reasonable safety standards and providing a minimum or living wage for employees, depending upon local situations. Snyder (2009a, b, 2013) also develops a similar Kantian account, grounded in the duty of beneficence, which holds that employers have an obligation to offer the means for living a minimally decent and respectful human life, including living wages and reasonable safety.

It is quite obvious that gamification of labor in general and in Checkout* in particular are not clearly exploitative in this manner. First, most companies that use gamification of labor operate in the U.S. and in other developed countries, where companies typically provide more than the legally defined minimum wage or even reasonably determined living wage as well as other benefits, including discounts on products, services, and merchandise. At Target, for instance, cashiers earn minimum wage or more, and qualified cashiers can receive medical coverage, 401 plans (4), and paid time off.[19] Playing gamified work on digital platforms is not like working in the so-called sweatshops in developing countries. The digital game itself is neither chemically toxic nor physically dangerous to workers.

In sum, the gamification of labor in Checkout* and in similarly typical practices of gamification pass the Kantian mere-means test of exploitation, because the cashiers' rational natures are not compromised by coercion or deception, and the company provides them more than the minimal/living condition necessary to sustain the rational capacity of humanity.

## Discussion

Before concluding this paper, it is worth mentioning that there are two important limitations to my analysis, which have precautionary implications for practitioners.

First, the nature of my argumentative strategy is largely inductive, in the sense that I survey selective accounts of exploitation and have not exhaustively examined all existing theories of exploitation. There are, surely, other important accounts of exploitation that this article does not survey, for instance, Goodin's (1986, 1988) account based on duty to the vulnerable and Valdman (2009)'s account based on duty not to extract excessive benefits. In theory, these other, unexplored accounts of exploitation could potentially address the business application of gamification as exploitative.[20] In my understanding, however, the other existing accounts of exploitation would not address the gamification of labor as exploitative. The three standard accounts I have used in this article already share most of the essential components of other important views of exploitation: fairness, respectful treatment, and duty not to be indifferent to workers' minimal welfare. For instance, Goodin's account seems to be already captured, although not squarely, by the three components. Nonetheless, it is fair to mention that a new, defensible theory of exploitation that addresses gamification of labor as exploitative might be developed in the future. Practitioners should clearly understand that my analysis does not give them a permanent justification.

The second limitation is that this article explores only one of many normative questions about the gamification of labor. Although this article shows that gamification of labor is not exploitative, that does not mean that gamification can never be unethical. A single wrong/vice-making feature cannot appropriately address the complex moral contours of gamification (Kim and Werbach 2016). Managers should clearly understand that there can be other important normative concerns related to gamification that this article does not discuss (e.g., Kim 2015; Sicart 2014; Selinger et al. 2014). The goal of this article has been to show that only the charge of exploitation is not defensible, and this position is consistent with the position that gamification of

[18] A distinction is often made between moral autonomy and personal autonomy. For instance, Joseph Raz (1986, p. 371) says that "[p]ersonal autonomy" is "a particular ideal of individual well-being" and it "should not be confused with the only very indirectly related notion of moral autonomy" which he believes "originates with the Kantian idea that morality consists of self-enacted principles." For a review about different accounts of personal autonomy, see Buss (2013).

[19] For more information about Target Cashier job descriptions, see http://www.job-applications.com/target-cashier/.

[20] For a comprehensive analysis of the existing literature about exploitation, see Ferguson (2013) and Wertheimer and Zwolinski (2012).

labor involves other wrongs or vices like harm, manipulation, or negative impact upon moral character and the capacity for self-reflection.

Recently, Sicart (2013, 2014) developed a virtue-based Aristotelian argument that gamification undermines "the capacity of self-reflection," which is essential for a person to live the good life. Similarly, Selinger et al. (2014) claim that "funware cannot help us gain the reflectivity needed to make good moral judgemnts" (p. 373). To avoid this ethical problem, Sicart (2013) suggests that players—workers in our context—"need to be partially estranged from the game by its design" (p. 108). Similarly, Kim (2015) suggests adding "solemn time" as an essential element of the gamified labor system, so that workers can maintain their status as reason-responsive agents. Part of this philsophical claim is grounded in an unexamined empirical premise that gamified labor causally undermines workers' reflective capacity for living the good life. Empirical research about whether or not gamified labor really compromises workers' capacity for self-reflection and whether or not the estrangement or solemn time can really work to protect workers' reflective capacity will be an interesting topic that behavioral business ethics researchers can potentially help to answer.

The field of business ethics aims primarily to develop a theoretical understanding of important moral questions. However, it also aims to pay attention to practitioners' real issues and questions, trying to help them solve the moral questions they raise. The field of business ethics has not paid much attention to ethical issues in the gamification of labor. The lack of attention can be explained in part by the historical fact that the scholarship of business ethics has researched mainly the ethical status of management practices that the Academy of Management (AOM) community is interested in shareholder value maximization, whereas gamification of labor is involved with topics that INFORMS researchers are primarily interested in queuing theory, cloud computing, data analytics [or big data], machine learning, and social networking service. It is worth noting that a quarter of business school research is related to the INFORMS community, and part of business ethicists' responsibility is to impact business school research, which should include INFORMS topics.

## Conclusion

In this article, I have explored why it is difficult to say that gamification of labor used to improve workplace productivity is exploitative. In particular, I explained why the two major existing arguments (the *Imbalance Argument* and the *Marxian Argument*) are not appropriate ways to examine the ethics of gamified labor for the case of Target Checkout*. I also spelled out why the standard contemporary normative accounts of exploitation do not define Target Checkout* as exploitative either. Since Target Checkout* is a paradigmatic case of gamification of labor applied to the context of employee productivity control, in the sense that it possesses morally relevant components—for instance, the absence of monetary rewards for workers, but the hedonic game experience instead—the analysis can be extended to other similar business cases of the gamified labor system. If the analysis is valid, hence, it follows that most typical business applications of gamification of labor to similar contexts are difficult to condemn as exploitative. Ultimately, although existing accusations (Bogost 2011a, 2014; Rey 2012, 2014) have played an important role in prompting gamification researchers and industry practitioners to think about the ethical status of gamification, the charges turn out to be groundless. I hope that the analysis provided in this article helps gamification design scholars, gamification service providers, and managers better understand the moral aspects of the labor practice that they study, design, and implement and the moral controversies in which they have recently engaged.

## References


Arnerson, R. J. (1981). What's wrong with exploitation? *Ethics, 91*, 202–227.

Arnold, D. G. (2003). "Exploitation" and "the sweatshop quandary": Exploitation by Alan Wertheimer; The Sweatshop quandary: Corporate responsibility on the global frontier by Pamela Varley. *Business Ethics Quarterly, 13*, 243–256.

Arnold, D. G. (2010). Working conditions: Safety and sweatshops. In G. G. Brenkert & T. L. Beauchamp (Eds.), *The oxford handbook of business ethics*. New York: Oxford University Press.

Arnold, D. G., & Bowie, N. E. (2003). Sweatshops and respect for persons. *Business Ethics Quarerly, 13*, 221–242.

Arnold, D. G., & Bowie, N. E. (2007). Respect for workers in global supply chains: Advancing the debate over sweatshops. *Business Ethics Quarterly, 17*, 135–145.

Bogost, I. (2011a). *Persuasive games: Exploitaionware*. Retrieved from *Gamasutra*: http://www.gamasutra.com/view/feature/6366/persuasive_games_exploitationware.php.

Bogost, I. (2011b). *Gamification is bullshit*. Retrieved from *The Atlantic*: http://www.theatlantic.com/technology/archive/2011/08/gamification-is-bullshit/243338/.

Bogost, I. (2014). Why gamification is bullshit. In S. P. Walz & S. Deterding (Eds.), *The gameful world: Approaches, issues, and applications*. Cambridge: The MIT Press.

Brenkert, G. G. (1983). *Marx's ethics of freedom*. New York: Routledge.

Brousell, L. (2015). *How DirectTV used gamification to overcome the fear of failure*. Retrieved from *CIO*: http://www.cio.com/article/2872110/gamification/how-directv-used-gamification-to-overcome-the-fear-of-failure.html.

Buss, S. (2013). *Personal autonomy*. Retrieved from *Stanford Encyclopedia of Philosophy*. http://plato.stanford.edu/entries/personal-autonomy/.

Carse, J. (1986). *Finite and infinite games: A vision of life as play and possibility*. New York: Free Press.

Cohen, G. A. (1979). The labor theory of value and the concept of exploitation. *Philosophy & Public Affairs, 8*, 338–360.

Cohen, G. A. (2008). More on exploitation and the labour theory of value. *Inquiry, 26*, 309–331.

Connolly, T. M., Boyle, E. A., MacArthur, E., Hainey, T., & Boyle, J. M. (2012). A systematic literature review of empirical evidence on computer games and serious games. *Computers & Education, 59*, 661–686.

Deardorff, N. (2015). *Future of EdTech 101: Automation, curation and gamification*. Retrieved from *Forbes*: http://www.forbes.com/sites/berlinschoolofcreativeleadership/2015/01/16/future-of-edtech-101-automation-curation-and-gamification/.

Deloitte. (2012). *Deloitte review*. Deloitte.

Deloitte. (2013). *Tech trends 2013: Elements of postdigital*. Deloitte.

Deterding, S. (2014). The ambiguity of games: Histories and discourses of a gameful world. In S. P. Walz & S. Deterding (Eds.), *The gameful world: Approaches, issues and applications*. Cambridge: MIT Press.

Deterding, S. (2015). The lens of intrinsic skill stoms: A method for gameful design. *Human-Computer Interaction, 30*, 294–335.

Deterding, S., Dixon, D., Khaled, R., & Nacke, L. E. (2011a). From game design elements to gamefulness: Defining "gamification." In *MindTrek '11 Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments*. New York: ACM.

Deterding, S., Dixon, D., Khaled, R., & Nacke, L. E. (2011b). Gamification: Toward a definition. In *Proceedings of the ACM SIGCHI*. Vancouver: ACM.

Donaldson, T. (1994). When integration fails: The logic of prescription and description in business ethics. *Business Ethics Quarterly*, *4*, 157–169.

Duggan, K., & Shoup, K. (2013). *Business gamification for dummies*. Hoboken: John Wiley & Sons Inc.

Edery, D., & Mollick, E. R. (2009). *Changing the game: How video games are transforming the future of business*. Upper Saddle River: Pearson Education.

Elster, J. (1986). *Karl Marx: A reader*. New York: Cambridge University Press.

Ferguson, C. J. (2007). The good, the bad, and the ugly: A meta-analytic review of positive and negative effects of violent video games. *Psychiatry, 78*, 309–316.

Ferguson, B. (2013). *The paradox of exploitation: A new solution.* London: London School of Economics PhD Dissertation.

Fleming, N. (2012). *Gamification: Is it game over?* Retrieved from *BBC Future.*

Goodin, R. (1986). *Protecting the vulnerable: A re-analysis of our social responsiblities*. Chicago: University of Chicago Press.

Goodin, R. (1988). Reasons for welfare: Economic, sociological, and political-but ultimately moral. In J. Moon (Ed.), *Responsibility, rights & welfare: The theory of welfare state*. Boulder: Westview Press.

Grant, R. W. (2002). The ethics of incentives: Historical origins and contemporary understandings. *Economics & Philosophy, 18*, 111–139.

Grant, R. W. (2012). *Strings attached: Untangling the ethics of incentives*. Peinceton: Princeton University Press.

Greenwald, M. (2014). *Gamification in everything: The range and when and why it's so effective*. Retrieved from *Forbes*: http://www.forbes.com/sites/michellegreenwald/2014/09/15/gamification-in-everything-the-range-and-when-and-why-its-so-effective/.

Greenwood, M. R. (2002). Ethics and HRM: A review and conceptual analysis. *Journal of Business Ethics, 36*, 261–278.

Greenwood, M. R. (2013). Ethical analysis of HRM: A review and research agenda. *Journal of Business Ethics, 114*, 355–366.

Guyer, P. (2006). *Kant*. New York: Routledge.

Hamari, J., Koivisto, J. & Sarsa, H. (2014). Does gamification work? A literature review of empirical studies on gamification. In *Proceddings of the 46th Hawaii International Conference on System Science.*

Herger, M. (2014). *Enterprise gamification: Engaging people by letting them have fun.* EGC Media.

Hill, T. E., Jr. (1973). Servility and self-respect. *Monist, 57*, 87–104.

Hill, T. E., Jr. (2000). *Respect, pluralism and justice*. New York: Oxford University.

Kant, I. (1990). *Foundations of the metaphysics of morals.* (L. W. Beck, Trans.). New York: Macmillan.

Kim, T. W. (2015). Gamification ethics: Exploitation and manipulation. In *Proceedings of ACM SIGCHI Gamifying Research Workshop.*

Kim, T. W., & Werbach, K. (2016). More than just a game: Ethical issues in gamification. *Ethics and Information Technology, 18*(2), 157–173.

Knowledge@Wharton. (2011a). *Can gamification advance to the next level?* Retrieved from *Knowledge@Wharton*: http://knowledge.wharton.upenn.edu/article/can-gamification-advance-to-the-next-level-2/.

Knowledge@Wharton. (2011b). *The dangerous side of online gaming*. Retrieved from *Knowledge@Wharton*: http://knowledge.wharton.upenn.edu/article/the-dangerous-side-of-online-gaming/.

Korsgaard, C. M. (1996). *The sources of normativity*. Cambridge: Cambridge University Press.

Korsgaard, C. M. (2009). *Self-constitution: Agency, identity, and integrity*. New York: Oxford University Press.

Kramer, M., Simmonds, N. E., & Steiner, H. (2000). *A debate over rights: Philosophical enquiries*. Oxford: Oxford University Press.

Kücklich, J. (2005). Precarious playbour: Modders and the digital games industry. *The Fibreculture Journal, 5*.

Latham, G. P. (2005). Work motivation theory and research at the dawn of the twenty-first century. *Annual Review of Psychology, 56*, 485–516.

Latham, G. P. (2012). *Work motivation: History, theory, research and practice* (2th ed.). Thousand Oaks: SAGE.

Locke, E. A., & Latham, G. P. (1990). Work motivation and satisfaction: Light at the end of the tunnel. *Psychological Science, 1*, 240–246.

Lopez, S. (2011). *Disneyland workers answer to 'electronic whip.'* Retrieved from *Los Angeles Times*: http://articles.latimes.com/2011/oct/19/local/la-me-1019-lopez-disney-20111018.

Marx, K. (1867/1976). *Capital* (Vol. 1). (B. Fowkes, Trans.). New York: Penguin.

Megget, K. (2014). *SMARTECH:* Gamification is no longer child's play Retrieved from *PharmaTimes*: http://www.pharmatimes.com/Article/14-09-11/SMARTTECH_Gamification_is_no_longer_child_s_play.aspx.

Merrett, R. (2014). *Macquarie university takes gamification to new level*. Retrieved from *CIO*: http://www.cio.com.au/article/556253/macquarie-university-takes-gamification-new-level/.

Mollick, E. R., & Rothbard, N. (2014). Mandatory fun: Consent, gamification and the impact of games at work. *The Wharton School Research Paper Series*.

Mollick, E., & Werbach, K. (2014a). Gamification and the enterprise. In S. P. Walz & S. Deterding (Eds.), *The gameful world: Approaches, issues and applications*. Cambridge: MIT Press.

Mollick, E., & Werbach, K. (2014b). Gamification and the enterprise. In S. P. Walz & S. Deterding (Eds.), *The gameful world: Approaches, issues and applications*. Cambridge: MIT Press.

O'Neil, O. (2002). *Autonomy and trust in bioethics*. New York: Cambridge University Press.

Plummer, D. C., Bona, A., Steenstrup, K., Marriott, I., Casonato, R., Lapkin, A., et al. (2013). *Gartner's top predictions for IT organizations and users, 2013 and beyond: Balancing economics, risk, opportunity and innovation.* Gartner.

Powell, B., & Zwolinski, M. (2012). The ethical and economic case against sweatshop labor: A critical assessment. *Journal of Business Ethics, 107*, 449–472.

Putnam, H. (2004). *The Collapse of the fact/value dichotomy and other essays*. Cambridge: Harvard University Press.

PWC. (2012). *Technologyforecast.* PWC.

Rawls, J. (1971). *A theory of justice*. Cambridge: Harvard University Press.

Raz, J. (1986). *The morality of freedom*. Oxford: Clarendon.

Rey, P. J. (2012). *Gamification, playbor & exploitation*. Retrieved from *The Society Pages*: http://thesocietypages.org/cyborgology/2012/10/15/gamification-playbor-exploitation-2/.

Rey, P. J. (2014). Gamification and post-fordist capitalism. In S. P. Walz & S. Deterding (Eds.), *The gameful world: Approaches, issues, and applications*. Cambridge: The MIT Press.

Robertson, M. (2010). Can't play, won't play. Retrived from *Hide&Seek*: http://hideandseek.net/2010/10/06/cant-play-wont-play/.

Roemer, J. E. (1985). Should marxists be interested in exploitaton? *Philosophy & Public Affairs, 14*, 30–65.

Sample, R. (2003). *Exploitation: What it is and why it's wrong*. Lanham, ML: Rowman & Littlefield.

Selinger, E., Sadowski, J., & Seager, T. (2014). Gamification and morality. In S. P. Walz & S. Deterding (Eds.), *The gameful world: Approaches, issues, and applications*. Cambridge: The MIT Press.

Sicart, M. (2013). *The ethics of computer games*. Cambridge: The MIT Press.

Sicart, M. (2014). Playing the good life: Gamification and ethics. In S. P. Walz & S. Deterding (Eds.), *The gameful world: Approaches, issues, and applications*. Cambridge: The MIT Press.

Snyder, J. (2009a). Efficiency, equity, and price gouging. *Business Ethics Quarterly, 19*, 303–306.

Snyder, J. (2009b). What's the matter with price gouging? *Business Ethics Quarterly, 19*, 275–293.

Snyder, J. (2010). Exploitation and sweatshop: Perspectives and issues. *Business Ethics Quarterly, 20*, 187–213.

Snyder, J. (2013). Exploitation and Demeaning Choices. *Politics, Philosophy & Economics, 12*, 345–360.

Steers, R. M., & Shapiro, D. A. (2004). The future of work motivation theory. *The Academy of Management Review, 29*, 379–387.

Steiner, H. (1984). A liberal theory of exploitation. *Ethics, 94*, 225–241.

Valdman, M. (2009). A theory of wrongful exploitation. *Philosopher's Imprint*, 9(6), 1–14.

Walz, S. P., & Deterding, S. (2014). *The gameful world: Approaches, issues, and applications*. Cambridge: The MIT Press.

Werbach, K. (2014a). *Gamification*. Retrieved from *Coursera*: https://class.coursera.org/gamification-003/lecture/preview.

Werbach, K. (2014b). *(Re)defining gamification: A process approach*. *Persuasive Technology: Lecure Notes in Computer Science* (Vol. 8462, pp. 266–272).

Werbach, K., & Hunter, D. (2012). *For the win: How game thinking can revolutionize your business*. Philadelphia: Wharton Digital Press.

Wertheimer, A. (1992). *Unconscionability and contracts. Business Ethics Quarerly, 2*, 479–496.

Wertheimer, A. (1996). *Exploitation*. Princeton: Princeton University Press.

Wertheimer, A. (2011). *Rethinking the ethics of clinical research: Widening the lens*. New York: Oxford University Press.

Wertheimer, A., & Zwolinski, M. (2012). *Exploitation*. In: E. N. Zalta, (Eds.), Retrieved from *Stanford Encyclopedia of Philosophy*: http://plato.stanford.edu/entries/exploitation/.

Wolff, J. (1999). Marx and exploitation. *The Journal of Ethics, 3*, 105–120.

Wood, A. (1999). *Kant's ethical thought*. Cambridge: Cambridge University Press.

Wood, A. (2004). *Karl Marx* (2nd ed.). New York: Routledge.

Wood, A. (2011). Humanity as end in itself. In D. Parfit & S. Scheffler (Eds.), *On what matters* (Vol. Two). Oxford: Oxford University Press.

Zicherman, G., & Linder, J. (2013). *The gamification revolution: How leaders ieverage game mechanics to crush the competition*. Rockefeller: McGraw-Hill.

Zichermann, G. (2012). *The coe of gamification ethics*. Retrieved from *GCO: Gamification corp*. http://www.gamification.co/2012/12/10/code-of-gamification-ethics/.

Zwolinski, M. (2007). Sweatshops, choice, and exploitation. *Business Ethics Quarterly, 17*, 689–727.

Zwolinski, M. (2008). What's the matter with price gouging? *Business Ethics Quarterly, 18*, 347–378.

Zwolinski, M. (2009). Price gouging, non-worseness, and distributive justice. *Business Ethics Quarterly, 19*, 295–306.

Zwolinski, M. (2012). Structural exploitation. *Social Philosophy and Policy, 29*, 154–179.