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In the science fiction novel *Ender's Game*,[1] a young boy, Andrew "Ender" Wiggin, believes that he is at military school, learning how to play a computer war simulation game.[2] In reality, Ender has been genetically engineered to excel in military tactics and is the final hope of humanity, which is under attack by the Formics, an alien insect species.[3] For his final examination, Ender must defend the Earth from a series of attacks.[4] He passes the exam by attempting a desperate aggressive maneuver, which utterly wipes out the attacker's home world but which also destroys part of his own fleet.[5] After completing the battle simulation, the young Ender—along with the reader—learns that the simulated "final exam" was actually a real life battle and that, in fact, many of the warships that Ender ordered to be sacrificed were manned by his own friends from the military academy.[6] Although Earth won the war, Ender sank into a deep depression and only recovered when, in a later sequel, he was able to understand and heal the rift with the surviving Formic, who had attacked the Earth in error.[7]

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1. ORSON SCOTT CARD, ENDER'S GAME (1991 ed. 1985) [hereinafter CARD, ENDER'S GAME].
2. *See id.* at 14-17, 181-82.
3. *See id.* at 14-18.
4. *Id.* at 203.
5. *Id.* at 204-08.
6. *See id.* at 207-08.
7. *See* ORSON SCOTT CARD, SPEAKER FOR THE DEAD 37-38, 370-71, 380-82 (1991 ed. 1986). Upon realizing that he is too dangerous to return to Earth because of the potential that his military knowledge will be used for bad ends by rival political factions, Ender decides to live in a colony in space that once belonged to the Formics. *See* CARD, ENDER'S GAME, *supra* note 1, at 209, 219. Upon finding a living Formic queen, he realizes that the Formic aggression, indeed, the entire war, was based on a cultural misunderstanding. *See id.* at 223-25. The Formics believed they were dealing with lesser beings, since they could not discern a hive mind. *See id.* at 224. Ender in turn helps the Formic queen to survive and agrees to tell her story to others. *See id.* at 225-26.

Ender's Game and its element of attack by a hostile alien species are, thankfully, wholly within the realm of science fiction. However, the idea that people could be working while they play a video game—in some instances *without even knowing that they are working*—is becoming part of our reality. In the language of cyberspace, introducing elements of play and gaming into non-game situations is known as the process of "gamification."[8] Gamification is an important element of what in previous writing I have termed "virtual work," that is, work taking place at 'the intersection of the Internet, crowdsourcing arrangements, and virtual worlds.[9] Virtual work is part of a broader transformation of work from assembly lines to knowledge and information. Indeed, in her book *From Widgets to Digits*,[10] Katherine Van Wezel Stone documents how the manufacturing economy is increasingly giving way to work based on knowledge work.[11] Professor Stone insightfully catalogues these systemic changes.[12] Gamification, like some other forms of virtual work, blurs the line between "work" and "leisure." The gamification of work is a growing trend with important implications for employment law.[13] Analyzing this topic will help us make sensible choices about regulation (or the lack thereof) of these new forms of work.

The gamification of work can be classified in a few different ways. First, some gamification is designed to sell copies of more in-depth gaming software or to keep eyeballs fixed on a social networking site or another Internet Web site for longer periods of time. Second,

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8. *Compare* Jeff Gelles, *Panels, Policy Talk, and Play*, PHILA. INQUIRER, Apr. 20, 2012, at A23 (defining gamification as "using game play in nontraditional ways"), *with* Anna Wilde Mathews, *Playing for Wellness*, WALL ST. J. (Apr. 7, 2012), http://online.wsj.com/article/ SB10001424052702303816504577322240000793770.html (describing gamification in the health insurance context, where those insured are encouraged to engage in healthy behavior through contests, prizes, and other types of games).

9. *See* Miriam A. Cherry, *The Global Dimensions of Virtual Work*, ST. LOUIS U. L.J. 471, 473 (2010); Miriam A. Cherry, *A Taxonomy of Virtual Work*, 45 GA. L. REV. 951, 962-69 (2011); Miriam A. Cherry, *Working for (Virtually) Minimum Wage: Applying the Fair Labor Standards Act in Cyberspace*, 60 ALA. L. REV. 1077, 1078 (2009) [hereinafter Cherry, *Virtually Minimum Wage*].

10. KATHERINE V. W. STONE, FROM WIDGETS TO DIGITS: EMPLOYMENT REGULATION FOR THE CHANGING WORKPLACE (2004).

11. *See generally id., supra* note 10. *See also* Miriam A. Cherry, *No Longer Just Company Men: The Flexible Workforce and Employment Discrimination*, 27 BERKELEY J. LAB. & EMP. L. 209 (2006) (reviewing Stone's book).

12. *See generally* STONE, *supra* note 10.

13. *See* DOUG PALMER & AARON PATTON, DELOITTE CONSULTING LLP, *Gamification*, *in* TECH TRENDS 2012: ELEVATE IT FOR DIGITAL BUSINESS 8 (2012), *available at* http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/ us_cons_techtrends2012_013112.pdf (predicting gamification to be a quickly growing technology trend of 2012 and estimating that twenty-five percent of business processes will incorporate some form of gamification by 2015).

gamification may be designed to alleviate tedious and repetitive work tasks by making them more engaging through a gaming mechanism. Third, some gamification of work occurs without anyone necessarily knowing about it—people may just believe they are playing a game or doing some other innocuous task, when they, in fact, really are working. Fourth, the last form of gamification involves the converse of the third form, where workers are hired to play video games for others—often utilizing labor from the Third World. In this Idea, I will briefly discuss each of these types of "gamification of work" and provide some of my thoughts on this increasingly common trend.

First, gamification can be employed to get more attention or attract increasing numbers of users, which in turn increases the perceived valuation of many Internet companies. On Facebook, games such as *Farmville*[14] and *Angry Birds*[15] have attracted millions of players, with over fifty-three percent of Facebook users participating.[16] Aside from the inherent fun of connecting with friends, getting back in touch with people, seeing their status updates, and writing your own, these games are another attraction to spend time on the Facebook Web site.[17] And the more time that one spends on Facebook, the more the site is worth, in terms of "eyeballs" to potential advertisers. In this context, gamification takes something that was already a mixed version of commercial entertainment and adds another level to the Web site. In many circles, this is the only reason to have gamification—it is a way of offering users a free service that will draw them to your Web site.

Second, gamification can be used at existing jobs in order to increase worker engagement, especially if those jobs are tedious or repetitive.[18] Using gaming concepts and benefits could result in both productivity and utility gains. My thoughts here derive from Professor

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14. Zynga Inc. developed Farmville. *See* *About Zynga*, ZYNGA, http://company.zynga.com/about/ (last visited Nov. 5, 2012).

15. Rovio Entertainment Ltd. developed Angry Birds. *See Who We Are*, ROVIO ENT. LTD., http://www.rovio.com/en/about-us/Company (last visited Nov. 5, 2012).

16. *See* Sam Anderson, *Just One More Game...: How Time-Wasting Video Games Escaped the Arcade, Jumped into Our Pockets and Took over Our Lives*, N.Y. TIMES, Apr. 8, 2012, § 6 (Magazine), at 28, 28-29 (documenting the rise of the game *Angry Birds* and analyzing what games say about society at particular times); Press Release, Lightspeed Online Res., Inc., It's Game on for Facebook Users (Sept. 14, 2010), http://www.lightspeedresearch.com/press-releases/it%E2%80%99 s-game-on-for-facebook-users/.

17. *See What Americans Do Online: Social Media and Games Dominate Media Activity*, NIELSEN (Aug. 6, 2010), http://blog.nielsen.com/nielsenwire/online_mobile/what-americans-do-online-social-media-and-games-dominate-activity/ (estimating that games and social media overlap and make up a large percentage of time that users spend on the Internet).

18. *See* JANE MCGONIGAL, REALITY IS BROKEN: WHY GAMES MAKE US BETTER AND HOW THEY CAN CHANGE THE WORLD 62 (2011).

Mihaly Csikzentmihalyi's description of what he terms "flow."[19] The concept of "flow" involves concentration, the use of skills, learning and adaptation.[20] As an individual engages in activities that are challenging as well as enjoyable, he or she enters "the state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great costs, for the sheer sake of doing it."[21] Indeed, Csikszentmihalyi ascribes much of a person's happiness and feelings of accomplishment to the entrance of flow states.[22] We all know this inherently. Even the most boring jobs can fly by if we are with friends or have a fun attitude toward the tasks we are assigned.

Gamification therefore holds great promise. If employers and managers can engage workers and liven up repetitive forms of work, that certainly would benefit workers.[23] As work is central to one's sense of self as well as economic well being,[24] a way to make work fun would be a boon. Workers might find the "play" that a game provides to be a welcome break from work that could turn into drudgery.[25] For example, identifying and adding descriptions to picturers would seem to be a boring task. However, if you turn the task into a game with a monetary prize for quick completion, it lightens up the task and helps to pass the time.[26] On the other hand, if used in a careless or negligent way, gamification could potentially cause psychological damage—for example, a structure in which the "losers" in a game suffer adverse employment action. If not handled appropriately, this could trivialize the difficult experience of job loss. Additionally, the introduction of gamified, extrinsic motivation could undermine existing, intrinsic motivations to complete a task. This is especially true of tasks that were already beneficial or interesting to the worker.

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19. *See generally* MIHALY CSIKSZENTMIHALYI, FLOW: THE PSYCHOLOGY OF OPTIMAL EXPERIENCE (1990).

20. *Id.* at 6-7.

21. *Id.* at 4.

22. *Id.* at 40.

23. *See* JOHN STUART MILL, UTILITARIANISM (1861), *reprinted in* ESSAYS ON ETHICS, RELIGION AND SOCIETY 203, 215-17 (J. M. Robson ed., 1969).

24. Vicki Shultz, *Life's Work*, 100 COLUM. L. REV. 1881, 1890-92 (2000).

25. McGonigal, *supra* note 18, at 62.

26. In fact, this is how the website Games With A Purpose ("GWAP") operates. *See* GWAP, http://www.gwap.com/gwap/ (last visited Nov. 5, 2012); *see also* Luis von Ahn, *Hello World*, GWAP (May 13, 2008, 6:25 PM), http://blog.gwap.com/2008/05/hellow-world.html ("GWAP stands for 'Games With A Purpose', a phrase coined by Lenore Blum to describe the types of games found on this site."). Of course, a positive outcome would depend on how the game was structured; if one person could be fired as a result of the game, it could lead to over-competitive behavior as well as a great deal of stress.

Third, gamification includes some forms of work that do not feel like work to the people who are performing them. As an example, take the Games With A Purpose ("GWAP") Web site.[27] GWAP explains: "When you play a game at [GWAP], you aren't just having fun. You're helping the world become a better place. By playing our games, you're training computers to solve problems for humans all over the world."[28] I decided that I would spend an afternoon of my time at work playing the games on the GWAP Web site. First, I tried their *ESP Game*, in which I was supposed to agree with a partner on a description of a picture.[29] It was interesting to be paired with another player and try to come to an agreement. It was definitely much more fun than just labeling pictures on one's own.

However, I had some concerns with the game. The reasons for asking users to do the labeling were not transparent. In fact, users are not told who, if anyone, would benefit from the time they spend on photo labeling. I was told that *ESP Game* would give a search engine a "better idea of what's in those images."[30] But which search engine? Does GWAP make a profit from helping search engines? Further research revealed that Luis von Ahn, in conjunction with Carnegie Mellon University, designed and implemented GWAP.[31] Google licensed the technology behind the game in 2006, [32] but when I was on the GWAP site, had I been working for Google? Assuming, but not deciding, that I was working for Google and that I was working for Google for free, *should* I be working for Google for free? After all, Google's searches are free, but Google also profits based on advertisements viewed by the sheer number of users of its technology. In the GWAP chat room, I attempted to ask some of these questions about who exactly we users were helping, but received no reply.

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27. GWAP, *supra* note 26.

28. *About*, GWAP, http://www.gwap.com/gwap/about/ (last visited Nov. 5, 2012).

29. *See ESP Game*, GWAP, http://www.gwap.com/gwap/gamesPreview/espgame/ (last visited Nov. 5, 2012).

30. *See About, supra* note 28.

31. Press Release, Carnegie Mellon Univ., Carnegie Mellon Launches Web Site for "Games With a Purpose" (May 14, 2008), http://www.cmu.edu/news/archive/2008/May/may14_games withapurpose.shtml.

32. *Google Acquires ReCAPTCHA*, CARNEGIE MELLON U., http://www.cmu.edu/homepage/ computing/2009/summer/perfect-fit.shtml (last visited Nov. 5, 2012). Google used the licensed technology to launch *Google Image Labeler*, a similar game, on their Web site, which Google removed in 2011. Press Release, Carnegie Mellon Univ., *supra* note 31; Alan Eustace, *A Fall Spring-Clean*, GOOGLE OFFICIAL BLOG, http://googleblog.blogspot.com/2011/09/fall-spring- clean.html (last visited Nov. 5, 2012).

While at the GWAP Web site, I also played a game called *Verbosity*, which was a variant on the "pyramid" game on television.[33] Again, there was no explanation of how this game assisted computers in functioning faster or who this game ultimately benefited. More disturbingly, there was also a game called *Gender Test*.[34] In this game, the user had to choose favorites between different photographs. Then, based on these choices, the computer algorithm would try to guess your gender. I chose outdoor scenes (which I enjoy) rather than pictures of weddings or small children. The computer guessed it highly likely that I was a man. I found it rather troubling that the computer game was apparently reinforcing gender stereotypes.[35] Further, I had no idea what my choices or information were being used for, in terms of future gender predictions. While GWAP could be a very useful Web site, more disclosure to its users is surely needed, and I will discuss more about this below.

The fourth type of gamification occurs when people work within the structure of online games that others view as leisure time activities. This fourth type of gamification is the converse of the second and third types: in those, game elements are making work fun, whereas, with this fourth type, games are being turned into work. For example, Third World workers known as "gold farmers" make a real world living in the virtual world by playing games for those who live in the First World.[36] This often works well because of the time difference between the locations in question: Third World workers play the games while the First World gamer sleeps. In other words, these types of operations are the embodiment of labor value arbitrage, taking advantage of cheap labor in different parts of the world.[37] For example, Chinese and Mexican nationals work daily to kill dragons and obtain objects in Mythic Entertainment's online *Camelot* game.[38] And, more disturbingly,

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33. *See Verbosity*, GWAP, http://www.gwap.com/gwap/gamesPreview/verbosity/ (last visited Nov. 5, 2012).

34. *Gender Test*, GWAP, http://www.gwap.com/gwap/features/gender_test/ (last visited Nov. 5, 2012).

35. Further, the game just seems to have it wrong. My (male) research assistant played the game as well, and he was told he was eighty-eight percent likely to be female.

36. David Barboza, *Ogre to Slay? Outsource it to Chinese*, N.Y. TIMES, Dec. 9, 2005 at A1 [hereinafter Barboza, *Ogre*]; *see* Julian Dibbell, *The Life of a Chinese Gold Farmer*, N.Y. TIMES, June 17, 2007, § 6 (Magazine), at 36.

37. Barboza, *Ogre, supra* note 36, at A1.

38. Complaint, Blacksnow Interactive v. Mythic Entm't Inc., No. 02-00112 GLT (C.D. Cal. filed Feb. 5, 2002). When Mythic Entertainment attempted to shut down Blacksnow's trading site, Blacksnow brought suit in the Central District of California, but the suit was settled before trial. *Id.*; *see also* Richard Raysman & Peter Brown, *Novel Legal Issues in Virtual Property*, 234 N.Y. L.J., Aug. 9, 2005, at 3 (describing complaint and legal issues surrounding complaint).

former North Korean dictator Kim Jong-il was linked to a group of computer hackers who used their skills to accumulate points and sell their characters, netting millions of dollars.[39] Workers in Third World countries do not view these online games as entertainment, but rather as a way to pay for their real world expenses.[40] Some players, however, dislike and criticize the role of the Third World gold farmers, given that they represent a market intrusion on their leisure activities.[41]

Having identified the categories of gamified work, I do want to explore briefly the employment law implications of gamification. One major legal issue, as I have noted in previous writing about virtual work, is the intersection of gamification with the Fair Labor Standards Act (the "FLSA"),[42] our minimum wage and hour law.[43] While the FLSA provides a rather circular definition of "employer" and "employee," it does contain certain limitations on volunteer work.[44] But these points fail to capture what happens in gamification, which is an activity that some people choose to engage in for fun, sometimes helping a for-profit company and sometimes not. The issues are complicated because some gamification draws in "playbor"[45] from many different countries, all of which having their own sources of rules and standards of minimum wage.

A second legal consideration, currently absent from gamification, would be transparency and disclosure. At a minimum, users/workers should be informed about whom they will be working for, volunteering for, or otherwise helping. This is important since many users might not even know that they are actually working, and it is important that this information is transparent. Arguably, some people might want to play a game that helps computers process information faster, but might be strongly against gaming that has the ultimate result of reinforcing gender stereotypes. While some who are against immigration might enjoy a game that uses many eyes to police the border between the United States and Mexico, others who favor a more open immigration policy would

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39. *See* Choe Sang-Hun, *Seoul Warns of Latest North Korean Threat: An Army of Online Gaming Hackers*, N.Y. TIMES, Aug. 5, 2011, at A4.

40. David Barboza, *Boring Game? Hire a Player: For Chinese, Real Money in a Virtual World*, INT'L HERALD TRIB., Dec. 9, 2005, at 1.

41. Barboza, *Ogre, supra* note 36, at A1.

42. Fair Labor Standards Act of 1938, 29 U.S.C. §§ 201–219 (2006 & Supp. IV 2011).

43. *See* Cherry, *Virtually Minimum Wage, supra* note 9, at 1095-102.

44. *See* 29 U.S.C. § 203(d), (e)(1), (g); Letter from Monty Navarro, Fair Labor Standards Team, Office of Enforcement Policy, Wage & Hour Div., U.S. Dep't of Labor (Feb. 29, 2008), *available at* http://www.dol.gov/whd/opinion/FLSANA/2008/2008_02_29_03NA_FLSA.pdf.

45. *See* Ben Schott, *Playbor: The Increasingly Blurred Distinction Between Online Play and Labor*, N.Y. TIMES (Mar. 12, 2010, 4:22 AM), http://schott.blogs.nytimes.com/2010/03/12/playbor/ (discussing playbor, the portmanteau of play and labor).

find such a game abhorrent. The point is that each user should have such information available in order to make a fair and full choice as to how their time—volunteer or paid—will be used.

Ultimately, the gamification of work is an appealing notion in some of its permutations. If deployed skillfully, gamifying work could lead to enormous productivity gains and could make tedious work more enjoyable. On the other hand, if used in a way that is not thoughtful, it could cause great psychological damage—for example, a structure in which the "losers" in a game suffer adverse employment action. As gamification continues to grow in popularity, it is important to recognize these opportunities and challenges, as well as consider the legal implications—minimum wage and disclosure-related issues—from all angles.