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## A Taxonomy of Virtual Work

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## ARTICLES

### A TAXONOMY OF VIRTUAL WORK

*Miriam A. Cherry\**

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## I. INTRODUCTION

The blockbuster movie *Avatar* begins as humans circle the planet Pandora in search of an element, unobtainium, which will boost the profits of their employer, a mining corporation.<sup>1</sup> Pandora, however, is already inhabited by the Na'vi, an alien species of tall, skinny, blue beings, who live in harmony with the natural environment.<sup>2</sup> With the goal of learning more about the Na'vi and their world, a team of human scientists controls and inhabits vat-grown bodies, using these avatars to interact with the Na'vi.<sup>3</sup> Jake, the protagonist, is a former soldier who has become a paraplegic.<sup>4</sup> When Jake's identical twin, a scientist, dies, Jake is offered the opportunity to control the vat-grown avatar that is tied to his brother's DNA.<sup>5</sup> Jake's official mission is scientific, but he also takes orders from a military commander.<sup>6</sup> If Jake spies on Na'vi defenses, he will earn the costly surgery that will restore the use of his limbs.<sup>7</sup> However, in a seeming-spin on the Pocahontas story, after Jake falls in love with the Na'vi warrior Neytiri, he realizes that he cannot aid in the destruction of Pandora.<sup>8</sup>

While many aspects of *Avatar* are pure speculative fantasy—assuming alien life exists and that humans will be able to travel in deep space, and replicate and control alien bodies grown in a vat—one premise, the idea that humans might perform paid work with an avatar as a proxy, is not far-fetched at all. To the contrary,

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<sup>1</sup> See Manohla Dargis, *On a Distant Moon in 2154: A New Eden, Both Cosmic and Cinematic*, N.Y. TIMES, Dec. 18, 2009, at C1 (reviewing the movie and describing unobtainium as “an emblem of humanity’s greed and folly”).

<sup>2</sup> See *id.*

<sup>3</sup> See Roger Ebert, *Avatar*, ROGEREBERT.COM (Dec. 11, 2009), <http://rogerebert.suntimes.com/apps/pbcs.dll/article?AID=/20091211/REVIEWS/912119998>.

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

<sup>6</sup> Andrew Pulver, *Avatar Review: ‘James Cameron Just Got Slack,’* GUARDIAN (Dec. 11, 2009), <http://www.guardian.co.uk/film/2009/dec/11/avatar-james-cameron-film-review>.

<sup>7</sup> Ebert, *supra* note 3.

<sup>8</sup> David Denby, *Going Native*, NEW YORKER, Jan. 4, 2010, at 76. A recent post on a popular blog features a “mashup” of the *Avatar* and *Pocahontas* movies, noting their similarities. *‘Avatar’ and ‘Pocahontas’ Get Much Deserved Mashup Trailer*, HUFFINGTON POST (Feb. 26, 2010, 4:19 PM), [http://www.huffingtonpost.com/2010/02/26/avatar-and-pocahontas-get\\_n\\_478845.html](http://www.huffingtonpost.com/2010/02/26/avatar-and-pocahontas-get_n_478845.html).

there are currently thousands of workers who spend the bulk of their days working in cyberspace in one form or another. These workers have sometimes been referred to as clickworkers,<sup>9</sup> cyberworkers,<sup>10</sup> or cloudworkers,<sup>11</sup> although I use “virtual workers” as an umbrella term. While virtual workers have different skills and labor under different conditions, their commonality is that their “workplaces” exist only in the ether. As more work enters cyberspace and virtual worlds, this will have a profound impact on the nature of work itself, not to mention the legal doctrines of labor and employment law.

Today, millions of people worldwide entertain themselves or supplement their incomes—or both—by working within virtual worlds such as Second Life or casually “clicking” to make a few dollars for simple tasks on websites like Amazon.com’s Mechanical Turk.<sup>12</sup> Because the money in virtual worlds is convertible to real world money,<sup>13</sup> virtual work is having an impact on real world economies. One economist, Edward Castronova, has estimated that the economy of Sony’s game *EverQuest* and its world, Norrath, has a GNP, per capita, equivalent to that of Bulgaria.<sup>14</sup>

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<sup>9</sup> Perhaps because of the connection to the computer, or to other virtual worlds, the “click” in clickworkers is onomatopoeia for the noise a worker makes when “clicking” his or her computer mouse. See Yochai Benkler, *Coase’s Penguin, or, Linux and The Nature of the Firm*, 112 YALE L.J. 369, 384–85 (2002) (describing “clickworker” volunteers for NASA).

<sup>10</sup> See, e.g., Nancy J. King, *Labor Law for Managers of Non-Union Employees in Traditional and Cyber Workplaces*, 40 AM. BUS. L.J. 827, 830 n.11 (2003) (defining “cyberworker” as an employee who uses electronic technology such as computers, e-mail, or the Internet in their work).

<sup>11</sup> Elance refers to its online workers as “cloud commuters.” *What Does Your Cloud Commute Look Like?*, ELANCE.COM, <http://www.elance.com/p/blog/2010/10/youtube-contest-what-does-your-cloud-commute-look-like.html> (last visited Mar. 30, 2011). Other terms that have appeared in the news media include “labor as a service” and “human computing.” E.g., Leena Rao, *CloudCrowd Takes on CrowdFlower to Outsource Labor to the Cloud*, TECHCRUNCH (Mar. 19, 2010), <http://techcrunch.com/2010/03/19/cloudcrowd-outsources-lab-or-to-the-cloud/>; Kyle Studstill, *Puzzle-Like Game Helps Solve Complex Genetic Problems Around Disease*, PSFK (Dec. 30, 2010), <http://www.psfk.com/2010/12/puzzle-like-game-help-s-solve-complex-genetic-problems-around-disease.html>.

<sup>12</sup> EDWARD CASTRONOVA, *SYNTHETIC WORLDS: THE BUSINESS AND CULTURE OF ONLINE GAMES* 2–3 (2005); see also *Amazon Mechanical Turk*, AMAZON WEB SERVICES, <http://aws.amazon.com/mturk/#highlights> (last visited Jan. 25, 2011) (detailing the service).

<sup>13</sup> See CASTRONOVA, *supra* note 12, at 2 (discussing relationship of virtual and real currency).

<sup>14</sup> *Id.* at 19.

Another commentator, discussing entrepreneurship in virtual worlds, had this to say:

[V]irtual worlds are home to serious business conducted by hundreds of thousands of users. One study suggests that virtual economies may reach the size of small countries. The business varies from mining virtual gold to real gambling and anything in-between.

Virtual world entrepreneurship is somewhat ironic. Much of the fun of virtual worlds is unpredictability. . . . Yet, entrepreneurship thrives in these worlds. Like any economy, where there is a demand for something of value and someone willing to supply it, a market will form.<sup>15</sup>

These pursuits are far more than mere “games.” Recently, employment agencies like Manpower and Randstad have begun recruiting, collecting resumés, and performing interviews with candidates on Second Life.<sup>16</sup> In the wake of the economic downturn, websites such as Elance, which serve to connect companies seeking short-term help with workers willing to take on

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<sup>15</sup> Michael Risch, *Virtual Rule of Law*, 112 W. VA. L. REV. 1, 6 (2009) (footnotes omitted); see also Theodore P. Seto, *When Is a Game Only a Game?: The Taxation of Virtual Worlds*, 77 U. CIN. L. REV. 1027, 1027 (2009) (“Ailin Graef, a Chinese-born citizen and resident of Germany, had parlayed an initial investment of \$9.95 into virtual planned communities and other virtual holdings having a real-world fair market value, in the aggregate, of more than one million U.S. dollars. In theory, Graef could have pulled her Second Life earnings out at any time; at some point, she did in fact withdraw enough to found an 80-employee real-world company.” (footnote omitted)); Andrea Vanina Arias, Comment, *Life, Liberty, and the Pursuit of Swords and Armor: Regulating the Theft of Virtual Goods*, 57 EMORY L.J. 1301, 1302 (2008) (citing sources estimating that trade in virtual goods amounts from approximately \$200 million to \$2 billion a year); Michael Capiro, *Virtual Worlds with Real-World Losses*, FED. LAW., Nov.–Dec. 2009, at 12 (reporting estimate from investment banking firm Piper Jaffray that sales of U.S. virtual goods in 2009 would amount to \$621 million in 2009 and were expected to grow to \$2.5 billion by 2013).

<sup>16</sup> Both Manpower and Randstad have advertisements posted on YouTube touting their recruiting services in Second Life. *Manpower’s Machinima on the World of Virtual Work*, YOUTUBE (July 12, 2007), <http://www.youtube.com/watch?v=sNjxucDI8bo>; *Virtual Jobs at Randstad*, YOUTUBE (Apr. 12, 2007), <http://www.youtube.com/watch?v=k5xF43POYv8>.

short-term assignments, have been doing brisk business.<sup>17</sup> Throughout cyberspace, workers hold various jobs that, in the words of leading commentators, make it possible to “work in a fantasy world to pay rent in reality.”<sup>18</sup> In addition to work in virtual worlds, we are also seeing the rise of crowdsourcing,<sup>19</sup> in which complicated tasks are broken down and distributed to thousands of workers throughout the cyberspace, then later consolidated into a finished product.<sup>20</sup>

Academics and commentators have started a dialogue about the legal issues present in virtual worlds,<sup>21</sup> including conceptions of property,<sup>22</sup> free speech,<sup>23</sup> intellectual property,<sup>24</sup> criminal law,<sup>25</sup>

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<sup>17</sup> See Ann Meyer, *Fewer Strings a Draw for Employers: Virtual Contract Workers, Internet Tools Help Firms Grow, Afford to Add Talent*, CHI. TRIB., Nov. 23, 2009, at 19 (“Year-over-year project hiring on Elance rose 40 percent in October, and more than 300,000 jobs have been posted on the Web site during the past 12 months.”); cf. Emma L. Carew, *Tough Times Lead Many into Virtual Work World*, STAR-LEDGER, July 12, 2009, at 6 (noting that the poor economy has pushed many employers into hiring virtual office assistants).

<sup>18</sup> F. Gregory Lastowka & Dan Hunter, *The Laws of the Virtual Worlds*, 92 CALIF. L. REV. 1, 11 (2004).

<sup>19</sup> See Debora Halbert, *Mass Culture and the Culture of the Masses: A Manifesto for User-Generated Rights*, 11 VAND. J. ENT. & TECH. L. 921, 929 (2009) (“Computer technology in the hands of the masses has made available software programs that can create music, documents, and art just as well as expensive studios did in the past. This democratization of technology disrupts the monopoly on the creative means of production. The world of amateur production also demonstrates that many are motivated by noncommercial reasons.”); see also, e.g., Jeff Howe, *The Rise of Crowdsourcing*, WIRED, June 2006, at 176, 178–79 (using term “crowdsourcing” to describe work performed with the aid of contributions from diverse groups of users on the Internet).

<sup>20</sup> See Howe, *supra* note 19, at 176.

<sup>21</sup> See generally BENJAMIN TYSON DURANSKE, *VIRTUAL LAW: NAVIGATING THE LEGAL LANDSCAPE OF VIRTUAL WORLDS* (2008) (providing practitioner’s guide to virtual worlds and discussing briefly some of the intellectual property, criminal law, property, and tort issues present in virtual worlds).

<sup>22</sup> See generally M. Scott Boone, *Virtual Property and Personhood*, 24 SANTA CLARA COMPUTER & HIGH TECH. L.J. 715 (2008) (discussing application of personhood theory to virtual world property); Joshua A.T. Fairfield, *Virtual Property*, 85 B.U. L. REV. 1047 (2005) (suggesting application of developed body of property law to inefficient allocations of rights on the Internet); Elizabeth Townsend Gard & Rachel Goda, *The Fizzy Experiment: Second Life, Virtual Property and a 1L Property Course*, 24 SANTA CLARA COMPUTER & HIGH TECH. L.J. 915 (2008) (using virtual worlds as a method of teaching property law class); Lastowka & Hunter, *supra* note 18, at 56–66 (describing property issues); Juliet M. Moringiello, *What Virtual Worlds Can Do for Property Law*, 62 FLA. L. REV. 159 (2010) (noting that disputes in virtual world can inform property laws); James Grimmelmann, *Virtual Worlds as*

tax,<sup>26</sup> corporate law,<sup>27</sup> alternative dispute resolution<sup>28</sup> and comparative law.<sup>29</sup> There have also been impassioned cries about

*Comparative Law*, 49 N.Y.L. SCH. L. REV. 147, 150–62 (2004–2005) (describing property and contractual issues within games).

<sup>23</sup> See generally Marc Jonathan Blitz, *The Freedom of 3D Thought: The First Amendment in Virtual Reality*, 30 CARDOZO L. REV. 1141, 1149–50 (2008) (arguing for First Amendment protection in virtual worlds for activities unprotected in the real world); Eric Goldman, *Speech Showdowns at the Virtual Corral*, 21 SANTA CLARA COMPUTER & HIGH TECH. L.J. 845 (2005) (analyzing tension between free speech rights and contract rights in virtual space); Jack M. Balkin, Essay, *Law and Liberty in Virtual Worlds*, 49 N.Y.L. SCH. L. REV. 63 (2004–2005) (discussing First Amendment freedom in virtual worlds); Bettina M. Chin, Note, *Regulating Your Second Life: Defamation in Virtual Worlds*, 72 BROOK. L. REV. 1303 (2007) (discussing possible legal recourse one virtual participant may have against another who tarnished his reputation).

<sup>24</sup> See generally Candidus Dougherty & Greg Lastowka, *Virtual Trademarks*, 24 SANTA CLARA COMPUTER & HIGH TECH. L.J. 749 (2008) (discussing how trademark law might apply in virtual worlds and economies). Cf. Woodrow Barfield, *Intellectual Property Rights in Virtual Environments: Considering the Rights of Owners, Programmers and Virtual Avatars*, 39 AKRON L. REV. 649 (2006) (discussing rights of virtual avatars, should they become sentient, although perhaps this discussion could be encompassed in the discussions that have developed around robotic intelligence in general, rather than be tied specifically to the virtual world); Capiro, *supra* note 15 (positing ways to protect intellectual property rights in virtual worlds).

<sup>25</sup> See generally F. Gregory Lastowka & Dan Hunter, *Virtual Crimes*, 49 N.Y.L. SCH. L. REV. 293 (2004–2005).

<sup>26</sup> See generally Bryan T. Camp, *The Play's the Thing: A Theory of Taxing Virtual Worlds*, 59 HASTINGS L.J. 1 (2007) (suggesting that player activity within the virtual world is not gross income and arguing for a “cash out” rule for determining gross income); Adam Chodorow, *Tracing Basis Through Virtual Spaces*, 95 CORNELL L. REV. 283 (2010) (analyzing question of how to account for tax basis of virtual items); Leandra Lederman, “*Stranger than Fiction*”: *Taxing Virtual Worlds*, 82 N.Y.U. L. REV. 1620 (2007) (presenting clear discussion of taxation issues within virtual worlds, based on existing tax concepts and policy analysis tailored to the type of world at issue); Seto, *supra* note 15 (discussing tax in virtual worlds); Scott Wisniewski, *Taxation of Virtual Assets*, 2008 DUKE L. & TECH. REV. 0005 (providing preliminary analysis of tax questions surrounding exchanges of virtual assets).

<sup>27</sup> See generally Joshua A.T. Fairfield, *The End of the (Virtual) World*, 112 W. VA. L. REV. 53 (2009) (describing bankruptcies of companies providing virtual worlds); Hannah Yee Fen LIM, *Who Monitors the Monitor? Virtual World Governance and the Failure of Contract Law Remedies in Virtual Worlds*, 11 VAND. J. ENT. & TECH. L. 1053, 1058–59 (2009) (describing virtual bank in the virtual world EVE Online that was actually revealed as a ponzi scheme); Shannon L. Thompson, *Securities Regulation in a Virtual World*, 16 UCLA ENT. L. REV. 89 (2009) (arguing for security registration and antifraud liability in virtual worlds); David R. Johnson, *Virtual Companies*, CONCURRING OPINIONS (June 15, 2008), <http://www.concurringopinions.com/archives/Virtual%20Companies3.doc> (discussing Vermont legislation attempting to allow easier online company formation).



the regulation of virtual worlds.<sup>30</sup> Perhaps to be more accurate, there have been many impassioned cries against regulation.<sup>31</sup> While there has been some discussion of the broader impact of technology on work in the labor and employment field, such as the impact of telecommuting on employment discrimination law and gender,<sup>32</sup> a broad survey of the intersections of employment regulation and computer technology by Professors Gabel and Mansfield,<sup>33</sup> the challenges of organizing a labor union via

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<sup>28</sup> See generally David Allen Larson, *Artificial Intelligence: Robots, Avatars, and the Demise of the Human Mediator*, 25 OHIO ST. J. ON DISP. RESOL. 105 (2010) (exploring whether artificial intelligence can replace humans in interpersonal tasks such as dispute resolution).

<sup>29</sup> See Caroline Bradley & A. Michael Froomkin, *Virtual Worlds, Real Rules*, 49 N.Y.L. SCH. L. REV. 103, 139–46 (2004–2005) (suggesting that virtual worlds can be a testing ground for governmental regulations, especially those with economic effects).

<sup>30</sup> See, e.g., Joshua A.T. Fairfield, *The God Paradox*, 89 B.U. L. REV. 1017, 1018 (2009) (“[C]ompanies wishing to limit their exposure to legal liability should view themselves less as gods and more like telephone companies.”); Joshua A.T. Fairfield, *The Magic Circle*, 11 VAND. J. ENT. & TECH. L. 823, 825 (2009) (describing earlier metaphor of real worlds and virtual worlds being separate and distinct, and disputing the “magic circle” metaphor; advocating instead looking at the scope of consent given by other players and their expectations); Llewellyn Joseph Gibbons, *Law and the Emotive Avatar*, 11 VAND. J. ENT. & TECH. L. 899, 902 (2009) (advocating for a permeable boundary between real and virtual worlds).

<sup>31</sup> See, e.g., Edward Castronova, *The Right to Play*, 49 N.Y.L. SCH. L. REV. 185 (2004–2005) (making impassioned argument that “play” spaces on the Internet should be preserved apart from regulation and real legal entanglements); cf. David G. Post, *Governing Cyberspace: Law*, 24 SANTA CLARA COMPUTER & HIGH TECH. L.J. 883 (2008) (making argument that law should be developed for virtual worlds, rather than forcing participants to rely on the maze of conflicts of law to determine which jurisdiction’s laws apply to virtual worlds).

<sup>32</sup> See Michelle A. Travis, *Equality in the Virtual Workplace*, 24 BERKELEY J. EMP. & LAB. L. 283, 284–312 (2003) (examining gendered effect of telecommuting; despite title, the article does not deal with virtual worlds).

<sup>33</sup> See generally Joan T.A. Gabel & Nancy Mansfield, *On the Increasing Presence of Remote Employees: An Analysis of the Internet’s Impact on Employment Law as It Relates to Teleworkers*, 2001 U. ILL. J.L. TECH & POL’Y 233 (providing broad survey of court cases involving new technology and employment law, including employee/independent contractor questions, common law invasion of privacy claims for intercepting employee e-mails, noncompetition contracts, sexually harassing e-mails, accommodation of disabilities by allowing employees to work from home, wage and hour issues, and workplace injuries); Joan T.A. Gabel & Nancy R. Mansfield, *The Information Revolution and Its Impact on the Employment Relationship: An Analysis of the Cyberspace Workplace*, 40 AM. BUS. L.J. 301, 302–03 (2003) (analyzing extent of the information revolution’s impact with regard to the adequacy of pre-existing law to regulate the modern cyberspace workplace). These two

electronic mail,<sup>34</sup> and the legal issues facing unemployed telecommuters,<sup>35</sup> there has yet to be full discussion of virtual work in the legal literature. Commentators have tended to view virtual worlds through the lens of other subjects like intellectual property or technology, rather than examining the labor and employment law issues that are present.<sup>36</sup>

Recently, Professor Jonathan Zittrain noted that the advent of virtual work simultaneously provides immense promise and peril for workers in the new digital economy.<sup>37</sup> New technology allowing collaboration can provide remarkable opportunities for workers and employers alike. Traditional limitations on collaboration—of travel, of meeting, of commuting—can be minimized or reduced. Employers can use virtual spaces to make contacts and recruit talent, without spending money on transportation.<sup>38</sup> Recently, in

articles present a valuable descriptive analysis of the state of litigation roughly five years ago.

<sup>34</sup> See Martin H. Malin & Henry H. Perritt, Jr., *The National Labor Relations Act in Cyberspace: Union Organizing in Electronic Workplaces*, 49 U. KAN. L. REV. 1, 1–4 (2000).

<sup>35</sup> See generally Michelle A. Travis, *Telecommuting: The Escher Stairway of Work/Family Conflict*, 55 ME. L. REV. 261 (2002) (discussing implication of telecommuting on existing inequality in the workplace); Beverly Reyes, Note, *Telecommuters and Their Virtual Existence in the Unemployment World*, 33 HOFSTRA L. REV. 785 (2004) (discussing needed evolution of employment law for application to telecommuters).

<sup>36</sup> For a recent exception, see Eric Goldman, *Wikipedia's Labor Squeeze and Its Consequences*, 8 J. ON TELECOMM. & HIGH TECH. L. 157, 170–73 (2010) (exploring why unpaid editors leave and noting that “turnover is due to typical life cycle changes that displace the time an editor has available to contribute to Wikipedia: students graduate from school and begin working full-time; employees change to a new and more demanding job; people get married or have children; and people develop new hobbies that consume their free time”).

<sup>37</sup> See Jonathan Zittrain, *Work the New Digital Sweatshops*, NEWSWEEK (Dec. 8, 2009), <http://www.newsweek.com/2009/12/07/work-the-new-digital-sweatshops.html> (“It all sounds great, and in many ways it is. The Internet has created new markets for human labor potentially gleaned anywhere in the world . . . [but] online contracting circumvents a range of labor laws and practices, found in most developed countries, that govern worker protections, minimum wage, health and retirement benefits, child labor, and so forth.”); see also Robert D. Hof, *Technology on the March*, BUS. WK., Aug. 20, 2007, at 80, 83 (“Will this be a new world of empowered individuals encased in a bubble of time-saving technologies? Or will it be a brave new world of virtual sweatshops, where all but a tech-savvy few are relegated to an always-on world in which keystrokes, contacts, and purchases are tracked and fed into the faceless corporate maw?”).

<sup>38</sup> See, e.g., Gabrielle Monaghan, *A Virtual Way to Find Real Talent*, SUNDAY TIMES, Mar. 16, 2008, at 19 (describing KPMG and Accenture recruiting events on Second Life, and the

his book, *The Wealth of Networks*, Professor Yochai Benkler has described the potential for collaborative work in cyberspace, especially in a nonmarket setting.<sup>39</sup> Certainly, the possibility of matching workers and jobs in cyberspace creates more opportunities and more efficient labor markets.<sup>40</sup> These changes can benefit workers, in part by increasing flexibility and allowing workers more control over when and how they are able to perform work.<sup>41</sup> In addition, employees have used virtual worlds as part of their protected right to organize and to protest.<sup>42</sup> For example, in September 2007, over 2,000 employees protested IBM Italy's pay package by appearing at IBM's headquarters in Second Life.<sup>43</sup>

Virtual work, however, presents many of the same enduring problems that workers' rights advocates have struggled with over the years. Gold farming operations and other types of virtual work have been criticized by commentators as creating new "virtual sweatshops."<sup>44</sup> For years, corporations have engaged in races to

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fact that the Manpower recruiting agency has opened an island within Second Life); *see also* Joel Dresang, *Manpower Opens Office in Online Virtual Society*, MILWAUKEE J. SENTINEL, July 13, 2007, at D1 (discussing Manpower's virtual-world island in Second Life).

<sup>39</sup> *See* YOCHAI BENKLER, *THE WEALTH OF NETWORKS* 9 (2006) ("As collaboration among far-flung individuals becomes more common, the idea of doing things that require cooperation with others becomes much more attainable, and the range of projects individuals can choose as their own therefore qualitatively increases. The very fluidity and low commitment required of any given cooperative relationship increases the range and diversity of cooperative relations people can enter, and therefore of collaborative projects they can conceive of as open to them."); *see also* Steven A. Hetcher, *Hume's Penguin, or, Yochai Benkler and the Nature of Peer Production*, 11 VAND. J. ENT. & TECH. L. 963, 967-68 (2009) (explaining concept of "peer production").

<sup>40</sup> *See* Kermit Pattison, *Enlisting a Global Work Force of Freelancers*, N.Y. TIMES, June 24, 2009, <http://www.nytimes.com/2009/06/25/business/smallbusiness/25freelance.html> (noting ways in which working with freelancers can increase productivity and save costs); *cf.* ALAN HYDE, *WORKING IN SILICON VALLEY: ECONOMIC AND LEGAL ANALYSIS OF A HIGH-VELOCITY LABOR MARKET* (2003) (noting pros and cons of high temporary employment in fields like technology).

<sup>41</sup> Carol Sladek & Ellie Hollander, *Where Is Everyone? The Rise of Workplace Flexibility*, BENEFITS Q., Apr. 1, 2009, at 17, 18 (noting that flexibility is "being able to be at Little League at 3:30 in the afternoon, with the ability to catch up on work after dinner with the family. Flexibility is a way for the employer to acknowledge and enable the whole person.").

<sup>42</sup> *See* 29 U.S.C. § 157 (2006) (codifying right to collective bargaining).

<sup>43</sup> *On Strike, Virtually*, ECONOMIST, Mar. 15, 2008, at 80.

<sup>44</sup> *See* David Barboza, *Ogre to Slay? Outsource It to Chinese*, N.Y. TIMES, Dec. 9, 2005, at A1; *cf.* TREBOR SCHOLTZ & LAURA Y. LIU, *FROM MOBILE PLAYGROUNDS TO SWEATSHOP CITY* (2010), available at [http://www.situatedtechnologies.net/files/ST7-MobilePlaygrounds\\_Swe](http://www.situatedtechnologies.net/files/ST7-MobilePlaygrounds_Swe)

the bottom, not only in selecting the jurisdiction of incorporation that will govern their internal corporate affairs,<sup>45</sup> but also to find the jurisdictions with the cheapest labor and the least regulation of employment relationships.<sup>46</sup> The concern about virtual work is that it will lead to further acceleration of the race to the bottom and ultimately the further erosion of workers' rights and benefits.<sup>47</sup> What will these rapid changes imply for the areas of labor and employment law? Certain current trends, such as outsourcing, will inevitably accelerate, while others, such as the brain drain, may actually be reversed. In addition, I predict that certain areas of regulation, such as the way that the law provides protection to whistleblowers, will also eventually change. There is much at stake for both employers and employees in numerous doctrinal areas, such as employment discrimination, sexual harassment, and workers' compensation.

In this Article, I provide an initial taxonomy of how traditional employment law doctrines intersect with the new forms of work occurring in cyberspace and virtual worlds. In Part II, I provide a brief overview of virtual work—what it is, who is performing it,

atshopCity.pdf (arguing that crowdsourcing may extend forms of labor exploitation); Wendy N. Duong, *Ghetto'ing Workers with Hi-Tech: Exploring Regulatory Solutions for the Effect of Artificial Intelligence on "Third World" Foreign Direct Investment*, 22 *TEMPLE INT'L & COMP. L.J.* 63, 70–71 (2008).

<sup>45</sup> See, e.g., Brett H. McDonnell, *Getting Stuck Between Bottom and Top: State Competition for Corporate Charters in the Presence of Network Effects*, 31 *HOFSTRA L. REV.* 681 (2003) (describing the decision process of choosing a jurisdiction of incorporation).

<sup>46</sup> See, e.g., Raul Delgado Wise & James M. Cyper, *NAFTA, Labor, and the National State: The Strategic Role of Mexican Labor Under NAFTA: Critical Perspectives on Current Economic Integration*, 610 *ANNALS AM. ACAD. POL. & SOC. SCI.* 120, 120–21 (2007) (discussing the impact of the North American Free Trade Agreement on outsourcing); Archie A. Alexander, III, *Perspective, American Diagnostic Radiology Moves Offshore: Is This Field Riding the "Internet Wave" into a Regulatory Abyss?*, 20 *J.L. & HEALTH* 199 (2006/2007) (analyzing outsourcing of medical services); Keith Woffinden, *Comment, Surfing the Next Wave of Outsourcing: The Ethics of Sending Domestic Legal Work to Foreign Countries Under New York City Opinion 2006-3*, 2007 *BYU L. REV.* 483, 484–85 (discussing the legal and ethical implications of outsourcing legal work); Christina Laun, *Note, The Central American Free Trade Agreement and the Decline of U.S. Manufacturing*, 17 *IND. INT'L & COMP. L. REV.* 431, 465 (2007) (considering impact of Central American Free Trade Agreement on U.S. manufacturing industries).

<sup>47</sup> See Katherine Van Wezel Stone, *To the Yukon and Beyond: Local Laborers in a Global Market*, 3 *J. SMALL & EMERGING BUS. L.* 93, 95–96 (1999) (describing race to the bottom phenomenon within global labor markets).

and how it is happening. With that background, Part III discusses issues of equality of opportunity in virtual worlds, sweeping in the questions of employment discrimination law, harassment, disability, and workers' compensation. Part IV discusses the doctrines of whistleblowing, unionization, and privacy at work.<sup>48</sup> The fifth Part of the paper discusses two areas of the law that coalesce around the idea of labor value arbitrage: the minimum wage and global dimensions of virtual work.<sup>49</sup> In the Conclusion, I draw together the broader themes explored throughout the Article.

## II. OVERVIEW OF VIRTUAL WORK

From telecommuting “work at home” arrangements,<sup>50</sup> to virtual meetings where employees from many different countries “gather” through avatars in Second Life, to workers answering calls directed to them on their cellphones as part of a crowdsourcing effort,<sup>51</sup> “virtual work” is becoming increasingly commonplace.<sup>52</sup> Given these extremely diverse types of work, it is useful to classify these occupational opportunities into categories, and examine the similarities and differences between them. First, I discuss the type of work that is happening in virtual worlds like Second Life. The second type of “virtual work” involves crowdsourcing. Finally, I discuss other new forms of work, including gold farming, which

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<sup>48</sup> Although many of these areas certainly are broad and will have to be developed in future work, I hope to set out a template here for thinking about the influence that virtual environments will have upon labor and employment law.

<sup>49</sup> For discussions of the impact of labor arbitrage on third-world nations, see Anupam Chander, *Diaspora Bonds*, 76 N.Y.U. L. REV. 1005, 1061 n.289 (2001) [hereinafter Chander, *Diaspora Bonds*] (describing work of economist Jagdish Bhagwati, who, in response to the “brain drain” phenomena, proposed that third-world nations levy a tax on citizens who become successful abroad), and Anupam Chander, *Homeward Bound*, 81 N.Y.U. L. REV. 60, 67 (2006) (“While the ‘brain drain’ still continues to draw skilled workers from poor to rich countries, thereby denying poor countries the talent they need for development, some countries have sought to take advantage of their expatriates.”).

<sup>50</sup> Kevin Courtney, *Con Text M-Worker*, IRISH TIMES, Apr. 1, 2008, at 17 (discussing mobile workers and their growing numbers).

<sup>51</sup> See LIVEOPS, <http://www.liveops.com/why-liveops/index.html> (last visited Mar. 10, 2010) (“[H]elp[ing] companies break away from the complexity and constraints of traditional call center models.”).

<sup>52</sup> See Steve Lohr, *Hello India? I Need Help with My Math*, N.Y. TIMES, Oct. 31, 2007, at C1 (describing the expansion of offshore outsourcing into consumer services).

are in essence a form of labor value arbitrage. All of these new forms of work either spring from, or are enabled by, technology.

#### A. VIRTUAL WORLDS

Numerous scholars and commentators have already written comprehensive overviews of how virtual worlds operate,<sup>53</sup> and therefore I provide only a brief description of them.<sup>54</sup> Beginning with text-based games in the late 1970s that adapted the plot and characters of author J.R.R. Tolkein,<sup>55</sup> they have evolved into “persistent, computer-mediated environments in which a plurality of players can interact with the world and each other.”<sup>56</sup> Today, it seems that most virtual worlds are fundamentally one of two types—scripted worlds that involve a quest, game, or puzzle, and those worlds that promote social interaction.<sup>57</sup> The first type are commonly known as “Massively Multi-player Online Role-playing Games” (MMORPG’s).<sup>58</sup> These games have the player/protagonist follow a quest or complicated series of puzzles to obtain an objective.<sup>59</sup> In the process of following the quest, the player/protagonist may interact with other real player characters

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<sup>53</sup> See, e.g., Andrew E. Jankowich, *Property and Democracy in Virtual Worlds*, 11 B.U. J. SCI. & TECH. L. 173, 177–84 (2005) (discussing development of governance and property issues in virtual worlds); Beth Simone Noveck, *The State of Play*, 49 N.Y.L. SCH. L. REV. 1, 6–10 (2004–2005) (describing the history and development of virtual worlds); Bobby Glushko, Note, *Tales of the (Virtual) City: Governing Property Disputes in Virtual Worlds*, 22 BERKELEY TECH. L.J. 507, 509–15 (2007) (describing the nature of a virtual world and its comparison to the physical world).

<sup>54</sup> For a fuller description of the evolution of virtual worlds, see generally Richard A. Bartle, *Virtual Worldliness: What the Imaginary Asks of the Real*, 49 N.Y.L. SCH. L. REV. 19 (2004–2005) (describing virtual worlds and rules from the point of view of game designer).

<sup>55</sup> J.R.R. TOLKIN, *THE LORD OF THE RINGS* (1954–1955).

<sup>56</sup> Bartle, *supra* note 54, at 19.

<sup>57</sup> See DURANSKE, *supra* note 21, app. I at 263–65 (providing list of virtual worlds current as of 2008).

<sup>58</sup> See Ung-gi Yoon, *A Quest for the Legal Identity of MMORPGs-From a Computer Game, Back to a Play Association*, 10 J. GAME INDUSTRY & CULTURE (2005), available at <http://ssrn.com/abstract=905748> (describing the nature of MMORPGs and their impact on the legal landscape).

<sup>59</sup> See *id.* at 22 n.48 (“A typical mission assigned to avatars within an MMO would be ‘kill the enemy commander and rescue the princess.’”).

and the computer (AI) characters (bots or nonplayer characters (NPCs)).<sup>60</sup>

On the other hand, there are worlds, such as *The Sims*<sup>61</sup> and *Second Life*,<sup>62</sup> which are fundamentally concerned with social interaction. Each person who enters these worlds assumes a character—an avatar—that can be tailored to reflect their personality.<sup>63</sup> (Fortunately, the popularity of the movie *Avatar* makes this easier to explain.<sup>64</sup>) Rather than requiring users to pursue a quest or play a game, these other social worlds depend on users to create their own content, economies, and entertainment.<sup>65</sup> I use the word “economies” deliberately, as *Second Life* is a commodified space, an environment friendly to businesses that encourages trading and wealth-building.<sup>66</sup> With this brief overview, I turn to the types of work that are available, not only in virtual worlds, but also as part of crowdsourcing or cloud computing websites.

In a previous article, I described an effort to go undercover in *Second Life* in order to find a “virtual job” and in the process to discover more about the work opportunities offered on *Second Life*.<sup>67</sup> At that time, I noted that the difficulties a job seeker encountered in *Second Life* mirrored those in the real world, but were compounded by the need to orient oneself to the new virtual

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<sup>60</sup> See generally *id.* (discussing how MMORPGs allow gamers to interact with many people).

<sup>61</sup> THE SIMS3, <http://thesims3.com/> (last visited Mar. 10, 2011).

<sup>62</sup> SECOND LIFE, <http://www.secondlife.com> (last visited Mar. 10, 2011).

<sup>63</sup> See Barfield, *supra* note 24, at 674–75 (noting difficulties of using copyright law to protect avatar identity, which includes “much more than just the character’s physical appearance”).

<sup>64</sup> See *supra* notes 1–8 and accompanying text.

<sup>65</sup> Cory Ondrejka, *Escaping the Gilded Cage: User Created Content and Building the Metaverse*, 49 N.Y.L. SCH. L. REV. 81, 82–83 (2004–2005) (describing the concept of a “Metaverse”).

<sup>66</sup> It is significant that one of the first academics to study virtual worlds is an economist. See CASTRONOVA, *supra* note 12, at 1–20 (introducing the commodified nature of *Second Life*).

<sup>67</sup> Miriam A. Cherry, *Working for (Virtually) Minimum Wage: Applying the Fair Labor Standards Act in Cyberspace*, 60 ALA. L. REV. 1077, 1085–89 (2009); see also Interview with Joshua Smith, Research Assistant, in Sacramento, Cal. (July 24, 2008) (on file with author).

environment.<sup>68</sup> The ubiquitous evils of the Internet—spam and pornography—made finding work even more difficult.<sup>69</sup>

In that article, I cautioned that virtual work is not a panacea, and that computer skills are extremely important for making real money in a virtual world.<sup>70</sup> With that said, there were many opportunities advertised, some for work that did not even exist in the real world. For example, many participants in Second Life work as travel agents, where a player will advise newcomers of what opportunities are out there in the world. Others work as greeters, in which a player represents a company (or store) and explains services to visitors.<sup>71</sup> Other opportunities include “custom avatar designers, party and wedding planners, casino operators, nightclub owner[s], car manufacturers, fashion designers, freelance scripters, [and] game developers.”<sup>72</sup>

While these forms of work are new, other more “traditional” forms of work can also be conducted in a virtual setting. The work that seems familiar is traditional service or counseling work, essentially similar to those positions in the real world. For example, during tax season, one can receive tax advice in the virtual world the same way as if one were to use a traditional medium such as visiting an accountant or tax preparer’s office, or talking to a tax professional on the telephone.<sup>73</sup> The only difference is that the consultation and “meeting” occurs in the virtual environment. Attorneys are beginning to establish virtual offices in Second Life, but so far the model seems to be the use of Second Life to meet clients, then taking the clients into the “real

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<sup>68</sup> Cherry, *supra* note 67, at 1086.

<sup>69</sup> *Id.* at 1086–87.

<sup>70</sup> *Id.* at 1088.

<sup>71</sup> See Monaghan, *supra* note 38, at 19 (describing use of Second Life by employers to recruit young employees).

<sup>72</sup> *Id.*; see also Ondrejka, *supra* note 65, at 94 (explaining that Second Life users have “become entrepreneurs, opening stores, bars, and strip clubs, and searching out creators to provide goods and services for them.”); Thompson, *supra* note 27, at 93–94 (noting Second Life careers such as “resort owner, detective, and virtual furniture store owner”).

<sup>73</sup> Indeed, the author visited Second Life during tax season and found that tax preparation services were available there, just the same way they would be in the real world.



world.”<sup>74</sup> It is not so much that Second Life exactly changes these “old economy” service occupations. Rather, it may just make the work more efficient, obviate the need for in-person consultations or conferences, and provide an additional way to stay connected, especially if clients are geographically far from service providers.

#### B. CROWDSOURCING

While crowdsourcing does not take place in a virtual environment, it is a new form of work that utilizes Web 2.0 technology and is rapidly growing in importance.<sup>75</sup> In crowdsourcing, computers automate and break down tasks, and then the work for which humans are needed is sourced out to them. The work is matched with thousands of computer workers who perform individual micro-tasks. Since I began writing about this topic two years ago, the number of crowdsourcing websites has multiplied. A list of currently operating crowdsourcing websites, along with a brief annotation of how each website functions is reproduced in APPENDIX A. With so many workers and websites in the marketplace (and with more joining), how might we think about classifying these various types of crowdsourcing?

In a recent popular press article, Professor Jonathan Zittrain set out a useful typology of crowdsourcing based on the level of knowledge required in order to complete a given work task.<sup>76</sup> In the level requiring the most skill, companies post difficult scientific problems and promise a reward for the answer. For example, on the Innocentive website,<sup>77</sup> highly skilled scientists try to solve complicated problems in order to reap financial prizes. In the middle skill level, some websites rate and grade workers at various tasks to ensure quality control for routine backroom

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<sup>74</sup> See, e.g., Monaghan, *supra* note 38, at 19 (describing attorney who used Second Life to find clients, and within two weeks had made \$7,000); Attila Berry, *Lawyers Earn Actual Cash in Virtual World*, LEGAL TIMES, July 30, 2007, at 15 (describing law firm that brought in \$20,000 in revenue in first year from its Second Life office).

<sup>75</sup> See generally Jonathan Zittrain, *Ubiquitous Human Computing* 2–3 (Oxford Univ. Research Paper Series, Paper No. 32/2008, 2008), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1140445](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1140445).

<sup>76</sup> Zittrain, *supra* note 37.

<sup>77</sup> INNOCENTIVE, <http://www2.innocentive.com> (last visited Mar. 10, 2011).

operations, such as that performed by customer service representatives. For example, on LiveOps,<sup>78</sup> telephone calls are routed to individual customer service workers on their cellphones. Finally, at the lowest end, there is work that encompasses tasks that require only minimal awareness, such as the entry of a few characters or the clicking of a mouse. Regardless of the level of skill involved, crowdsourcing takes the products of many workers to create something greater than the sum of its parts.<sup>79</sup>

Probably the most well-known crowdsourcing service to date is Amazon.com's Mechanical Turk.<sup>80</sup> Named after an eighteenth-century mechanical device that could beat humans at the game of chess (this was no "Deep Blue"—a chessmaster was hidden inside),<sup>81</sup> the Mechanical Turk is described as a "market for work," and claims that its services can provide an "on demand, scalable workforce."<sup>82</sup> Individuals or companies formulate and post tasks for the vast crowd of Turkers/Workers on the Mechanical Turk website.<sup>83</sup> These tasks may include tagging photos, comparing two products, or determining if a website is suitable for a general audience.<sup>84</sup> The Turkers<sup>85</sup> are able to browse among the listed tasks and complete them, then receive payment in the form of credits from Amazon.com.

<sup>78</sup> LIVEOPS, *supra* note 51.

<sup>79</sup> Howe, *supra* note 19, at 176, 178–79.

<sup>80</sup> *Amazon Mechanical Turk*, *supra* note 12.

<sup>81</sup> Katharine Mieszkowski, "I Make \$1.45 a Week and I Love It," SALON MAG. (July 24, 2006), <http://www.salon.com/tech/feature/2006/07/24/turks/index.html>.

<sup>82</sup> *Amazon Mechanical Turk*, *supra* note 12.

<sup>83</sup> See, e.g., *Amazon Web Services Launches New Web-Based Tools for Mechanical Turk*, DATAMONITOR TECH. WIRE, July 30, 2008, available at 2008 WNLR 14200460 (announcing launch of tools to make it easier for businesses to use Mechanical Turk to outsource work); *Amazon Mechanical Turk*, WIKIPEDIA, [http://en.wikipedia.org/wiki/Amazon\\_Mechanical\\_Turk](http://en.wikipedia.org/wiki/Amazon_Mechanical_Turk) (last visited Mar. 10, 2011).

<sup>84</sup> See Andrea James, *Service Offers Pay for Doing Tiny Tasks Online*, SEATTLE POST-INTELLIGENCER, July 31, 2008, at D2, available at 2008 WNLR 14344397 (giving examples of tasks).

<sup>85</sup> The Mechanical Turk website neutrally describes the Turkers/Workers as "Providers," most likely to avoid calling them employees or to give rise to any of the obligations that may attach if these workers were to be considered employees of Amazon.com. See *Amazon Mechanical Turk Participation Agreement*, AMAZON MECHANICAL TURK, <https://www.mturk.com/mturk/conditionsofuse>. Of course, the label that one party attaches to a relationship is far from dispositive in determining an employment relationship.

Requesters have many rights on the Mechanical Turk website; Turkers, on the other hand, have far fewer. Requesters may set hiring criteria and they may accept or reject the work product, which has an effect on a Turkers's online reputation and ability to compete for work in the future.<sup>86</sup> While Requesters must have a U.S. address, Turkers can be located anywhere in the world.<sup>87</sup> Amazon.com makes money by charging a service fee for requests, typically 10% of the value of the "wages" being sourced.<sup>88</sup> The tasks that Turkers perform are typically simple and repetitive.<sup>89</sup>

According to online accounts, Requesters "do not have to file forms for, nor to pay payroll taxes, and they avoid laws regarding minimum wage, overtime, and workers compensation."<sup>90</sup> Turkers, on the other hand, are still responsible for reporting their income to the IRS. How many Turkers actually *do* report these earnings, however, is another question, especially those Turkers who use the website only occasionally.<sup>91</sup> The ultimate result is a fuzzy gray market for casual clickwork services, where there is practically no regulation. Perhaps a good analogy would be that this is almost like hiring a neighborhood teen to mow your lawn twice a summer, but on a grand and global scale.<sup>92</sup>

Crowdsourcing and other types of distributed work are likely to increase in frequency in the years to come. While the Mechanical

<sup>86</sup> *Amazon Mechanical Turk*, *supra* note 83.

<sup>87</sup> *Artificial Artificial Intelligence*, *ECONOMIST*, June 10, 2006, at 10, 10–11.

<sup>88</sup> *Cf.* John Cook, *New Photo Tagging Service Gains Popularity*, *SEATTLE POST-INTELLIGENCER*, Apr. 1, 2008, at E2 (describing cost of photo tagging service using Amazon.com's Mechanical Turk).

<sup>89</sup> My research assistant was eager to mechanical turk the bluebooking citations for this Article.

<sup>90</sup> *Amazon Mechanical Turk*, *supra* note 83. The entry goes on to point out that the Mechanical Turk has given rise to other questionable employment practices, noting that some Requesters have had workers perform tasks, only later to reject their work so that they do not have to pay for the work. *Id.* In the real world, taking advantage of workers in a similar way would violate the FLSA and would result in fines and penalties.

<sup>91</sup> While I would suspect that given the incredibly low wages, this work would be de minimus, if someone worked steadily enough for long enough and then did not report the income, it could arguably create a tax problem for the Worker/Turker.

<sup>92</sup> See Richard A. Epstein, *The Moral and Practical Dilemmas of an Underground Economy*, 103 *YALE L.J.* 2157, 2157 (1994) ("[T]he . . . underground economy . . . embraces much more than the unreported, unrecorded, or informal economy.").

Turk was once almost synonymous with crowdsourcing, as noted in APPENDIX A, there are now many more websites that promise to help users harness the power of the crowd. The tasks that can be assigned through crowdsourcing are virtually limitless. In past years, NASA has used crowdsourcing to label craters on the surface of the planet Mars.<sup>93</sup> Other websites work discretely, sometimes without the knowledge of the user. For example, to prevent websites and blogs from being swamped with “spam” from automated comment generators, many sites require users to enter a word. The reCAPTCHA software uses this antispam device to digitize books and newspapers by aggregating them one word at a time.<sup>94</sup> In another twist, some websites are using fun games to entice users to work for them. For example, one website presents players with puzzles, the answers to which help scientists to determine how proteins fold.<sup>95</sup> Crowdsourcing has been used to check surveillance cameras between the United States–Mexico border to look for aliens, and to use computers to help SETI in their search for different types of aliens.<sup>96</sup>

#### C. OTHER WORK INVOLVING LABOR VALUE ARBITRAGE

A number of China’s new “factories” feature computer workers, typing and clicking away, playing video games, collecting coins and swords, and fighting monsters.<sup>97</sup> Known as “gold farmers,” these workers are paid to harvest virtual treasures for online gamers in the developed world. These first-world gamers want to advance quickly within the game and, tired of the repetitive tasks

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<sup>93</sup> Pamela Licalzi O’Connell, *Mining the Minds of the Masses*, N.Y. TIMES, Mar. 8, 2001, at G1 (describing NASA’s use of crowdsourcing); Jamar Younger, *Students Aid Mars Scientists*, ARIZ. DAILY STAR, Feb. 28, 2008, at 4 (describing NASA’s use of a high school class for crowdsourcing).

<sup>94</sup> RECAPTCHA, <http://recaptcha.net/> (last visited Mar. 10, 2011).

<sup>95</sup> *The Science Behind Foldit*, FOLDIT, <http://www.fold.it/portal/info/science> (last visited Mar. 10, 2011). One such game is described in more detail in Lewis Dartnell, *Your Computer Needs You: Addictive Online Games That Tap Your Brainpower Without You Noticing Can Help to Crack Problems That Have Defeated the Most Powerful Computers*, NEW SCIENTIST, Nov. 8, 2008, at 36, 37.

<sup>96</sup> See BENKLER, *supra* note 39, at 81–83 (describing SETI@home and other “Internet-based distributed computation projects”).

<sup>97</sup> See Barboza, *supra* note 44, at A1 (describing “gold farmers” at Fuzhou, China).

necessary to build a high-level character, would prefer to pay others to do the work.<sup>98</sup> As a result, gold farming operations have appeared in many third-world countries, where labor costs are low.<sup>99</sup> For example, a company named Blacksnow opened operations in Tijuana, Mexico, paying Mexican nationals dollars a day to kill dragons and obtain objects in Mythic Entertainment's online Camelot game.<sup>100</sup> Acting as an intermediary, Blacksnow later resold these virtual objects on eBay<sup>101</sup> and other online exchange sites to high bidders in first-world countries, thereby taking advantage of lower labor costs in developing nations.<sup>102</sup> Another model that uses these relative differences in wages involves third-world computer workers "playing" the characters of

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<sup>98</sup> According to another article on the Chinese gold farmers, there are now three models for reaping the bounty of the virtual world. In the traditional, more typical model, which is the one described above, the gold farmers use their experienced characters in order to perform repetitious tasks, garner valuables, and then, through intermediaries, sell the virtual property in exchange for cash. In the second model, called "leveling," a wealthy player will pay the gold farmers to play his character twenty-four hours a day, allowing the character to become vastly powerful in a short period. Finally, the third model involves assembling a team of Chinese players, who guide the first-world player to the highest levels, and then let the first-world player receive the most valuable objects (which cannot be sold). See Julian Dibbell, *The Life of the Chinese Gold Farmer*, N.Y. TIMES MAG., June 17, 2007, at 36, 38.

<sup>99</sup> See *id.* (giving abysmally low wage of one such gold miner).

<sup>100</sup> 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. Complaint, *Blacksnow Interactive v. Mythic Entm't, Inc.*, No. 02-00112 (C.D. Cal. Feb. 5, 2002); see also Richard Raysman & Peter Brown, *Novel Legal Issues in Virtual Property*, N.Y. L.J., Aug. 9, 2005, at 3 (describing complaint and legal issues surrounding complaint).

<sup>101</sup> EBAY, <http://www.ebay.com> (last visited Mar. 10, 2011).

<sup>102</sup> Class Action Complaint at 1-2, *Hernandez v. Internet Gaming Entm't, Ltd.*, No. 07-21403-Civ (S.D. Fla. May 31, 2007), 2007 WL 1799038. In this pending lawsuit, users who played the game *World of Warcraft* sued an online auction website that employed gold farmers, alleging that the monetization and sale of virtual property devalued the currency in the world and removed scarce resources. The complaint alleged that "IGE gold farmers are often citizens of developing third world countries who spend up to 14 hours per day, or more, logged into *World of Warcraft*® collecting resources and *World of Warcraft*® gold." *Id.* at 8; see also Complaint, *Blizzard Entm't, Inc. v. In Game Dollar, L.L.C.*, No. 07-00589 (C.D. Cal. May 22, 2007) (suing in tort over the hiring of third-world workers; action was terminated after permanent injunction was granted on January 28, 2008); Complaint, *MDY Indus., L.L.C. v. Blizzard Entm't, Inc.*, No. 06-02555 (D. Ariz. Oct. 25, 2006) (suing over intellectual property rights).

first-world gamers while the gamers sleep.<sup>103</sup> Workers in third-world countries are playing these online games not as entertainment, but as a means of making a living.<sup>104</sup>

While the gold farmers toil, clicking away in a remote location, the virtual fruits of their labor are sold on online auction sites.<sup>105</sup> Virtual sales of property are arranged so that after the financial transaction is completed, the auction company sends a representative's avatar into the world with the objects to transfer them to the new purchaser.<sup>106</sup> Even though many game rules technically forbid anyone from marketing objects,<sup>107</sup> the practice is a frequent one. Because of the number of players, the number of gold farmers, the difficulty in discerning who the farmers are, and the ease of transferring objects, this is a difficult practice to ban.

Some players resent the presence of these market intrusions into their fantasy worlds, and they sometimes take that frustration out on the third-world gold farmers.<sup>108</sup> These frustrations exist, even though the gold farmers are only acting rationally in an attempt to better their own (and, relative to the first-world gamers, considerably impoverished) economic situations. For those in the third-world, these games are not entertainment, they are just another form of work. Their alternatives may include far more dangerous work in a dirty, crowded, and unsafe factory or barely scraping by as a subsistence farmer.<sup>109</sup>

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<sup>103</sup> See David Barboza, *Video Game Sweatshops? Chinese Players Toil for Virtual Booty*, INT'L HERALD TRIB., Dec. 9, 2005, at 1 (noting that casual gamers often ask others to "baby-sit their accounts"); Dibbell, *supra* note 98, at 38 (discussing gold farming economy in China).

<sup>104</sup> See Barboza, *supra* note 103, at 1 ("By some estimates, well over 100,000 young Chinese work as full-time gamers . . .").

<sup>105</sup> *Id.*

<sup>106</sup> Cf. Julian Dibbell, *The Unreal Estate Boom*, WIRED, Jan. 2003, at 106, 108 (discussing auctions).

<sup>107</sup> See Hernandez Complaint, *supra* note 102, at 2 (providing World of Warcraft's policy against this practice).

<sup>108</sup> See *id.* at 9–12.

<sup>109</sup> According to 2003 data from an ILO survey, average employees in different countries work varying numbers of hours. In the United States, the average employee worked 280 hours per year more than the French in 2002, and worked more than many of the average workers in countries in industrialized Europe. Workers in the developing world worked

With this overview of “Work 2.0,” this Article now turns to describing the various legal issues that will rapidly become more important as virtual work becomes more common. For example, commentators have posited that technologically enabled forms of work might result in greater opportunity and the reduction of recurrent forms of unconscious bias. Perhaps I am less sanguine, but I also believe that these new forms of work have much to offer and, if deployed correctly, could help us uncover bias. In the next section, I examine some of the implications, applying traditional employment discrimination doctrines to these new forms of work.

### III. DOCTRINES OF EMPLOYMENT DISCRIMINATION AND EQUAL EMPLOYMENT OPPORTUNITY

#### A. APPLICATION OF TITLE VII TO VIRTUAL WORK

Employment discrimination on the basis of race, sex, religion, age, and other prohibited characteristics seems to be holding steady if not rising. Approximately 99,992 claims of employment discrimination are filed every year with the U.S. Equal Employment Opportunity Commission, indicating that the perception of bias at work persists.<sup>110</sup> Further, some discrimination may be happening without any effort or intent of those engaging in it. So-called “soft bias” or “unconscious bias” stems from cultural stereotypes and can creep into decisions without a particular intent to use a prohibited criteria as a reason for the employment decision.<sup>111</sup>

For example, a well-known study from 2004 documented that job seekers sending out resumés with Caucasian-sounding names fared more favorably than those job seekers with African-

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much harder. Press Release, Int’l Labor Org., New ILO Study Highlights Labour Trends Worldwide (Sept. 1, 2003), [http://www.ilo.org/wow/Articles/lang-en/WCMS\\_081311/index.htm](http://www.ilo.org/wow/Articles/lang-en/WCMS_081311/index.htm).

<sup>110</sup> For statistics on discrimination claims, see *Statistics*, EEOC, <http://www.eeoc.gov/eeoc/statistics/index.cfm> (last visited Mar. 10, 2010).

<sup>111</sup> See Linda Hamilton Krieger, *The Content of Our Categories: A Cognitive Bias Approach to Discrimination and Equal Employment Opportunity*, 47 STAN. L. REV. 1161, 1164–65 (1995) (“[S]ubtle, unconscious] forms of bias . . . represent today’s most prevalent type of discrimination.”).

American-sounding names.<sup>112</sup> The hypothetical “Greg” received more interview requests than a man with a similar resumé named “Jamal,” and the Caucasian sounding “Emily” received more interview requests than “Lakisha,” who had a virtually identical set of credentials.<sup>113</sup> One provocative question to ask would be whether, in virtual worlds, where not only names, but also appearances, are freely adoptable and changeable at will, this same result would hold true. Given that avatar choice might be a poor proxy for real world identity, there is some hope that race and gender issues might be transformed—or become far less important—in virtual work.<sup>114</sup> On the other hand, real world biases could easily become incorporated in virtual work. As part of my research in this area, I am devising an empirical study in order to test the extent of bias in virtual employment.

Recently, the writings of many critical legal scholars have focused on the social construction of identity.<sup>115</sup> The literature discusses the fact that the concepts of race, gender, and sexuality are not fixed, static, or immutable notions, but rather are heavily

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<sup>112</sup> See Marianne Bertrand & Sendhil Mullainathan, *Are Emily and Greg More Employable than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination* 1 (Nat'l Bureau of Econ. Research, Working Paper No. 9873, 2003), available at <http://www.nber.org/papers/w9873.pdf> (collecting empirical data showing that having an African-American-sounding name reduces the likelihood of receiving an interview when compared with similarly skilled and educated applicants with white-sounding names).

<sup>113</sup> Angela Onwuachi-Willig & Mario L. Barnes, *By Any Other Name?: On Being “Regarded As” Black, and Why Title VII Should Apply Even if Lakisha and Jamal Are White*, 2005 WIS. L. REV. 1283, 1283–90; see also STEVEN D. LEVITT & STEPHEN J. DUBNER, *FREAKONOMICS* 181–208 (2009) (discussing earning prospects for job seekers on the basis of their names).

<sup>114</sup> Of course, many of these traits should be irrelevant in general, and making decisions on that basis is illegal under Title VII, but the large number of discrimination filings and settlements each year indicate that discrimination is still occurring. More than 82,000 discrimination charges were filed by employees in the fiscal year 2007—an increase of 7,000 over the fiscal years 2005 and 2006. In the fiscal year 2010, the number of discrimination charges rose to 99,992. *Charge Statistics FY 1997 Through 2010*, EEOC, <http://www.eeoc.gov/eeoc/statistics/enforcement/charges.cfm> (last visited Mar. 10, 2011).

<sup>115</sup> See, e.g., KENJI YOSHINO, *COVERING: THE HIDDEN ASSAULT ON OUR CIVIL RIGHTS*, at ix–x (2006) (discussing how people “cover” to “tone down their stigmatized identities to get along in life”); Kenji Yoshino, *Covering*, 111 YALE L.J. 769, 771–72 (2002).



dependent on social context.<sup>116</sup> This insight, from critical legal studies, is innovative and radical in part because its adherents refuse to accept an externally defined and imposed idea of an unchanging meaning of identity. Instead, many critical race and feminist theorists would support the idea of individuals discovering diverse meanings of their “identity” and then reaching across boundaries in order to form coalitions based on shared goals and understandings between various affinity groups.<sup>117</sup>

This paradigm has meaning based on our current notions of the self, but what does identity even mean in the context of virtual worlds and freely assumed avatars? We have only begun to scratch the surface in dealing with these issues.<sup>118</sup> Online, one is faced with much greater freedom as to one’s presentation of oneself as an avatar. For example, I—a white woman—can choose to assume a different online identity and can change that identity with frequency. For example, on Monday I could decide to create a virtual world avatar named “Kenji,” an Asian male, who enjoys discussing law and identity issues.<sup>119</sup> On Tuesday, determined to see the world from a different perspective, I could become “Rodrigo,” an African-American-Italian LLM student who enjoys regaling his audience with semi-fictionalized dialogues in order to

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<sup>116</sup> See, e.g., JUDITH BUTLER, GENDER TROUBLE: FEMINISM AND THE SUBVERSION OF IDENTITY 4, 31 (1990) (critiquing conception of gender and sexual orientation as binary and decontextualized).

<sup>117</sup> See PATRICIA HILL COLLINS, BLACK FEMINIST THOUGHT: KNOWLEDGE, CONSCIOUSNESS, AND THE POLITICS OF EMPOWERMENT 145 (1st ed. 1990) (“[T]he struggle for group survival is designed to foster autonomy . . . [which] provides the foundation for the principled coalitions with other groups . . .”); Mari J. Matsuda, When the First Quail Calls: Multiple Consciousness as Jurisprudential Method, Address at the Yale Law School Conference on Women of Color and the Law (Apr. 16, 1988), in 11 WOMEN’S RTS. L. REP. 7, 7 (1989) (explaining that women of color embody the same “multiple consciousness” as “the confluence of the feminist and abolitionist causes”).

<sup>118</sup> See, e.g., Susan P. Crawford, *Who’s in Charge of Who I Am?: Identity and Law Online*, 49 N.Y.L. SCH. L. REV. 211, 211 (2004–2005) (questioning what the law of online identity will be because of the “real-world” consequences of “‘virtual world’ identities”); Neil Gotanda, *Computer Games, Racial Pleasure, and Discursive Racial Spaces*, 72 ALB. L. REV. 929, 933 (2009) (providing a brief outline of the author’s thoughts on race in computer games).

<sup>119</sup> I do not pretend that I write anywhere near as eloquently as Kenji Yoshino but hope he would forgive the (temporary) appropriation of his identity.

explore areas of social and legal inequality.<sup>120</sup> Wednesday might be viewed from the lens of “Tasha,” an African-American law student determined to analyze racial and sexual politics at her law school.<sup>121</sup> Such radical identity shifts would be much more difficult, if not impossible,<sup>122</sup> in the real world.

This raises many novel questions. How would each one of us view the world if we were not constrained by our physical appearance?<sup>123</sup> Would each of us freely choose a racial, gender, and sexual identity for ourselves in cyberspace that would closely match our “identity” in real life? Or, in the future, will such a suggestion of identity be seen as quaint or old-fashioned, given the extreme mutability of identity online? Would culture be homogenized or lost? Or would a greater number of people be able to appreciate the best that a diversity of cultures has to offer? Given the vast array of identities available in virtual worlds, perhaps the terms “identity” and “discrimination” are too narrowly defined. Instead of discrimination against one sex, sexuality, or ethnic group, perhaps in virtual worlds there will be some form of discrimination that will develop against nonhumans (or perhaps, humans).<sup>124</sup>

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<sup>120</sup> See, e.g., Richard Delgado, *Rodrigo's Chronicle*, 101 YALE L.J. 1357 (1992) (book review) (illustrating Rodrigo discussing many matters with his fictional “Professor”); see also Richard Delgado, *Rodrigo's Corrido: Race, Postcolonial Theory, and U.S. Civil Rights*, 60 VAND. L. REV. 1691, 1692 n.1 (2007) (providing a summary and a citation list of the entire Rodrigo epic).

<sup>121</sup> See Angela I. Onwuachi-Willig, Note, *Moving Ground, Breaking Traditions: Tasha's Chronicle*, 3 MICH. J. RACE & L. 255, 258 (1997) (describing the issues Tasha has to worry about as a student of color in law school).

<sup>122</sup> But see Natalie Clarke, *The Truth About the Expectant Dad*, DAILY MAIL, May 24, 2008, at 12, available at 2008 WLNR 9863250 (describing the pregnancy of a man).

<sup>123</sup> See Kevin Noble Maillard & Janis L. McDonald, *The Anatomy of Grey: A Theory of Interracial Convergence*, 26 LAW & INEQ. 305, 322 (2008) (“The superficial belief in colorblindness misinterprets the Kingian ideology of ‘not by the color of their skin but by the content of their character.’”).

<sup>124</sup> Not all of the characters in Second Life are human. See Berry, *supra* note 74, at 15 (“People in Second Life act pretty much like people do everywhere. They just might do it in the form of a fuzzy, tangerine-colored fox.”); Mitch Betts, *Virtual Worlds: Employee Avatars Will Need Dress Codes*, COMPUTERWORLD, Nov. 2, 2009, at 8, 8 (“Managers don’t want an employee showing up at a company function on Second Life as a green spiky animal or wearing barely-there club attire. So analysts . . . recently recommended that as more companies conduct business in virtual worlds, employers should establish ground rules

There is, however, the very real danger that some forms of real world discrimination could be replicated. For example, an article on work in virtual worlds took screenshots of avatars with the caption, “All avatars are not created equal. Who would you rather work with?”<sup>125</sup> The first screenshot showed an avatar of a middle-aged white male, who was wearing a crisp white shirt and tie and a pair of dress slacks, in what looked like a typical real world office environment, complete with a virtual ficus tree.<sup>126</sup> The second screenshot was of two avatars, one of whom had pink hair, appeared androgynous, and was wearing a pair of skintight leather chaps, and the second of whom was a duck-like character with horns who appeared to be waving a magic wand.<sup>127</sup> The implication was clear; the first avatar was supposed to represent someone trustworthy to do business with, while the second couple of avatars seemed odd, potentially unsettled, and not avatars you wanted to take tax advice from or entrust with your credit card number.

Besides the forms of discrimination we think about in relation to Title VII, other forms of discrimination could develop online—perhaps based on the length of time that the avatar spends in the virtual world or perhaps on one’s perceived social class in the real world. Despite these potential drawbacks, this freedom to make identity choices is appealing and has a great deal of potential for those interested in identity as well as for those interested in promoting a greater understanding among a wide variety of individuals.

Putting the above (more metaphysical) questions aside, how can someone suffer from employment discrimination if their “true”

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regarding employee avatars. . . . To avoid problems with employees mixing their personal and professional virtual lives, companies should suggest that employees use one avatar for work interactions and a different one for personal activities . . . .”). Among many children’s virtual worlds, humans are actually the exception, rather than the norm. See CLUB PENGUIN, <http://www.clubpenguin.com> (last visited Mar. 10, 2011) (displaying penguins as avatars in a virtual world that is popular with children).

<sup>125</sup> See *Immersive Environments*, INTERNET TIME WIKI, <http://internettime.pbworks.com/w/page/20095823/Immersive-Environments> (last visited Mar. 10, 2011).

<sup>126</sup> *Id.*

<sup>127</sup> *Id.*

identity is unknown to the ultimate decisionmakers? The paradigm for employment discrimination law largely depends on the basis of readily observable visual cues and traits.<sup>128</sup> Additional studies, however, have shown that some employment discrimination flows not only from such visual differences, such as skin color, but from unconscious bias and traits that may be associated with being of a particular race.<sup>129</sup>

One question would be why any employer would even care to know the “real world” identity of the workers if they are only to work in the virtual setting? There might be some overlap between real and virtual worlds in order to confirm certain professional degrees or educational qualifications that are necessary to perform the job. Slightly more suspect, but perhaps what will be very common, is a desire to know who the avatar is in real life so that you can build on some type of trust or rapport within the virtual world. One human resource professional had the following to say,

I interviewed three people on Second Life, but I found it harder than in real life because sometimes you don't know if it's a man or a woman, if they're young or old, and you have to ask more questions to find out what's behind the avatar . . . . It is challenging, but I'm not ready to let go of it yet.<sup>130</sup>

Perhaps, while it is challenging for human resource professionals to “interview blind,” it could provide an opportunity to combat unconscious bias. The virtual world might force employers to question why certain assumptions exist at all that

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<sup>128</sup> See, e.g., Miriam A. Cherry, *How to Succeed in Business Without Really Trying (Cases): Gender Stereotypes and Sexual Harassment Since the Passage of Title VII*, 22 HOFSTRA LAB. & EMP. L.J. 533, 543 (2005) (explaining that “only eight of the CEOs of Fortune 500 companies were women” in 2004); Christine Jolls, *Accommodation Mandates*, 53 STAN. L. REV. 223, 293 tbl.3 (2000) (listing many occupational fields that were over 95% male, including many mechanical and blue collar jobs, and also listing seven occupational fields, including receptionists, secretaries, and childcare workers, that were over 95% female).

<sup>129</sup> Tristin K. Green, *Discrimination in Workplace Dynamics: Toward a Structural Account of Disparate Treatment Theory*, 38 HARV. C.R.-C.L. L. REV. 91, 91–92 (2003) (explaining a shift in the character of discrimination from conscious antagonism to unconscious bias).

<sup>130</sup> Monaghan, *supra* note 38 (citing human resource professional).

would make someone's identity relevant to the job that is to be performed. Rather like questioning, "What is the color of a flesh-colored band aid?," thinking about why physical appearance matters could provide a refreshing perspective that may actually break through many limiting stereotypes.<sup>131</sup> Again, with virtual worlds there is either a great potential for achieving a more color-blind, meritocratic system of work, or the danger that there will be mere replication of ongoing patterns of discrimination.

A forthcoming article will explore these issues in more depth, as I am in the midst of empirical research that is testing for unconscious bias in employment opportunities within virtual worlds. In *Second Life*, the user can have the same resumé, but change outward appearance easily. Because the same person is controlling two different looking avatars, it is possible to control for and rule out differences in personality as the reason that one avatar might receive more job interviews than another. Last year, my employment discrimination class participated in this project, with each student creating avatars as well as contributing to the study design. Aside from providing a valuable window into measuring how much bias might exist in hiring, *Second Life* could also provide an opportunity for solutions.

Aside from "interviewing blind," as noted above, virtual worlds might also provide a more interactive forum for education about diversity. By changing identities, many Internet users could reach better and more real understandings of each others' real world identities. For example, if a real world heterosexual man, Victor, assumed the identity of a woman, Victoria, online, he would likely face the barrage of unwanted sexual innuendo that most women who go online must routinely deal with and attempt to ignore. The solicitations and inappropriate comments that Victoria receives might, for example, ultimately convince Victor that laws against

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<sup>131</sup> See COLSON WHITEHEAD, *APEX HEALS THE HURT* (2006) (describing in humorous and thought-provoking novel the marketing of flesh colored band aids in various skin tones); Patricia Tidwell & Peter Linzer, *The Flesh-Colored Band Aid—Contracts, Feminism, Dialogue, and Norms*, 28 HOUSTON L. REV. 791, 817 (1991) (using the concept of the flesh-colored band aid to illustrate the fact that "[d]iscovering the multidimensionality of people and their truths is a permanent job").

sexual harassment at work are necessary.<sup>132</sup> Such an experience could lead to real world consciousness-raising.

## B. HARASSMENT

A closely related issue is the fact that the potential for sexual harassment, as well as other types of harassment, abound in virtual work. Part of this may be due to the anonymous nature of cyberspace,<sup>133</sup> the fact that some worlds are loosely monitored, if at all, and the idea that the Internet is a relaxed area where the formal rules of social interaction do not typically apply.<sup>134</sup> Should the same standards that are applied to real world employers also apply to virtual work? If it is well-known that there are many overly sexualized characters roaming around, with the potential for creating a hostile environment, then perhaps someone who goes online looking for work has assumed the risk of a certain amount of crude and irrelevant spam.

Perhaps this idea, however, is already encompassed by existing sexual harassment laws. Under existing doctrine, sexual harassment by hostile environment must meet the high standard of “severe or pervasive,” as explained in the Supreme Court’s sexual harassment jurisprudence.<sup>135</sup> Or perhaps there could be two standards—a concept that could be borrowed from the obscenity and First Amendment jurisprudence, which depends on

<sup>132</sup> See *Meritor Sav. Bank v. Vinson*, 477 U.S. 57, 66–67 (1986) (discussing the application of Title VII to a hostile environment in the workplace).

<sup>133</sup> See Eric Krell, *HR Challenges in Virtual Worlds: Manage the Risks When Employees Join Virtual Communities*, HR MAG., Nov. 1, 2007, at 85, 85–88, available at 2007 WLNR 27002896 (“Employees entering public virtual worlds for the first time may also encounter potentially offensive images and behavior.”).

<sup>134</sup> For more on the issues of sexual harassment in cyberspace, see Ann Bartow, *Internet Defamation as Profit Center: The Monetization of Online Harassment*, 32 HARV. J.L. & GENDER 383, 410 (2009) (discussing a popular reputation defense service in light of “the poisonous climate in sectors of the Internet”); Danielle Keats Citron, *Law’s Expressive Value in Combating Cyber Gender Harassment*, 108 MICH. L. REV. 373, 375 (2009) (explaining that harassment impedes women’s participation in online activities).

<sup>135</sup> See *Pa. State Police v. Suders*, 542 U.S. 129, 133 (2004) (noting that plaintiff must show harassing behavior is “sufficiently severe or pervasive to alter the conditions of [their] employment” (alteration in original)); *Vinson*, 477 U.S. at 67 (same).

community standards.<sup>136</sup> Of course, one then has to ask, if we are addressing the virtual world, who exactly is the reasonable person? Who establishes community standards in a virtual world that is more male than female?<sup>137</sup> Perhaps in the context of the virtual world, the perspectives of a “reasonable woman in cyberspace” might make a great deal of sense.<sup>138</sup>

On the other hand, if, for example, a company establishes an island in Second Life that is accessible only to employees, and everyone’s understanding is that this is a space set aside for work, then there should be no difference between sexual harassment online and sexual harassment that would take place in a “real” office setting or building. Just because harassment takes place on a computer, unwanted advances and crude sexual content are no less offensive, although perhaps the threat of physical sexual assault or rape is removed from consideration.<sup>139</sup> These hostile environments may prevent women from taking positions that involve a good deal of online computer work, and this self-selection (albeit rational self-selection) could potentially be detrimental to women’s progress in employment equality online.<sup>140</sup>

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<sup>136</sup> See *Miller v. California*, 413 U.S. 15, 37 (1973) (holding that one of the prongs in a three-prong test for obscenity includes application of “contemporary community standards” of decency).

<sup>137</sup> As of January 2007, almost 59% of Second Life users were male. Zee Linden, *State of the Virtual World – Key Metrics, January 2007*, SECOND LIFE BLOG (Feb. 9, 2007, 1:50:42 PM), <http://community.secondlife.com/t5/Features/State-of-the-Virtual-World-Key-Metrics-January-2007/ba-p/556288> (select “Excel Workbook posted here”; then select Excel tab “Unique Gender % by Usage”). The 2000 Census lists the male population of the United States at 49%. *Popular Estimates*, U.S. CENSUS BUREAU, <http://www.census.gov/popest/national/asrh/NC-EST2007-sa.html> (select hyperlink to Excel spreadsheet for “Annual Estimates of the Population by Sex and Selected Age Groups for the United States: April 1, 2000 to July 1, 2007”).

<sup>138</sup> *Ellison v. Brady*, 924 F.2d 872, 879 (9th Cir. 1991) (adopting a “reasonable woman” standard). *But see Harris v. Forklift Sys.*, 510 U.S. 17, 21 (1993) (using a “reasonable person” standard instead).

<sup>139</sup> Cf. Julian Dibbell, *A Rape in Cyberspace*, VILLAGE VOICE, Dec. 23, 1993, <http://www.villagevoice.com/2005-10-18/specials/a-rape-in-cyberspace/> (discussing the possibility of virtual rape).

<sup>140</sup> Scott A. Moss, *Women Choosing Diverse Workplaces: A Rational Preference with Disturbing Implications for Both Occupational Segregation and Economic Analysis of Law*, 27 HARV. WOMEN’S L.J. 1, 8, 10–11 (2004) (making argument that women rationally choose to work in environments where they are less likely to be harassed, but that this logical choice prevents women from breaking into male-dominated fields).

If there is a large enough contingent of workers in a virtual world, it would make sense for an employer to establish the same kinds of antiharassment processes and procedures that are in place in the real world. For example, the presence of an effective reporting system establishes an affirmative defense for an employer to a claim for sexual harassment.<sup>141</sup> While some commentators have criticized internal company reporting systems as just another obstacle for workers to overcome,<sup>142</sup> the policies are important because they create education and training programs, which it is hoped will reduce the prevalence of harassment. There is no reason that a company could not translate the policy that it has in the real world into the virtual world, with only small changes as to relevance.

Perhaps the more difficult problem would be a mixed area of a virtual world that is 90% populated by company employees, but has a few unpredictable visitors who are not agents of the company. The company in these situations might have little to no control over these virtual denizens; yet these visitors could still harass employees, who may have to be online in order to work and thus would be forced into interactions with these players. Many of these situations, however, are similar to the “third party” harassment cases that have been litigated in recent years.<sup>143</sup> The doctrine that has developed has focused on the employer’s ability to control third parties and whether the employer is aware that

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<sup>141</sup> See *Burlington Indus. Inc. v. Ellerth*, 524 U.S. 742, 765 (1998) (holding that companies may insulate themselves from liability for sexual harassment by having policies and procedures in place to prevent incidents by “exercise[ing] reasonable care to prevent and correct promptly any sexual harassing behavior”); *Faragher v. City of Boca Raton*, 524 U.S. 775, 807 (1998) (same).

<sup>142</sup> See, e.g., Joanna L. Grossman, *The Culture of Compliance: The Final Triumph of Form over Substance in Sexual Harassment Law*, 26 HARV. WOMEN’S L.J. 3, 3 (2003) (arguing that reporting systems do little to eliminate harassment and instead just erect additional barriers to plaintiffs); Joanna Grossman, *Sexual Harassment in the Workplace: Do Employers’ Efforts Truly Prevent Harassment, or Just Prevent Liability?*, FINDLAW (May 7, 2002), <http://writ.corporate.findlaw.com/grossman/20020507.html>.

<sup>143</sup> See, e.g., *Galdamez v. Potter*, 415 F.3d 1015, 1022 (9th Cir. 2005) (holding that employers are liable for the third-party harassment of their employees when the employers “ratif[y] or condone[ ]” the conduct).



harassment is occurring and is failing to take steps to prevent it.<sup>144</sup> Despite some possible differences in standards to be applied, it does appear that sexual harassment law as it has developed could be adapted to virtual work, with perhaps some slight modifications.

### C. DISABILITY RIGHTS

A multitude of questions also arise in thinking about how disabled workers would fare on Second Life. Disabled individuals are diverse and the various problems and challenges that might be encountered while in a virtual environment would vary.<sup>145</sup> For those who have a physical disability, for example, virtual environments could provide a tremendous benefit. No one need be aware of a user's physical disability unless the user chooses to reveal it.<sup>146</sup> Avatars can walk or fly if their user commands it; again, this is a matter of individual choice. Likewise, some health care providers are using virtual reality to assist Asperger Syndrome patients with social interaction.<sup>147</sup>

Other disabilities, however, might fare worse under a virtual work regime than in the real world. If action in the virtual world is dependent on what the user in the real world is able to see and

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<sup>144</sup> See Lea B. Vaughn, *The Customer Is Always Right . . . Not! Employer Liability for Third Party Sexual Harassment*, 9 MICH. J. GENDER & L. 1, 5–6 (2002) (describing the employer's role in third-party sexual harassment); Amy Mathews, Comment, *The Sexual Harassment Revolution: Employer Liability for Third Party Sexual Harassment*, 65 UMKC L. REV. 977, 989 (1997) (describing development of third-party sexual harassment theory).

<sup>145</sup> See generally Michael Waterstone, *The Untold Story of the Rest of the Americans with Disabilities Act*, 58 VAND. L. REV. 1807 (2005) (discussing challenges and disappointments of implementing the ADA).

<sup>146</sup> See *id.* at 1832–35.

<sup>147</sup> See, e.g., Press Release, Univ. of Tex. at Dallas, *Avatars Help Asperger Syndrome Patients Learn to Play the Game of Life* (Nov. 18, 2007), <http://www.utdallas.edu/news/2007/11/18-003.html> (describing the use of virtual reality to help Asperger Syndrome patients learn about social interaction); Alvin Chang, *Virtual World Provides Learning Ground for KU Med Students*, KANSAS CITY STAR, July 15, 2008, at B1, available at 2008 WLNR 13191965 (describing use of Second Life to teach occupational and physical therapy students about the difficulties in maneuvering around a modern home).

hear, that could present problems for the blind and deaf.<sup>148</sup> Likewise, if crowdsourcing depends on human labor to perform actions a computer cannot, such as optical recognition, a blind person will have difficulty working. In addition, large components of what makes up cyberspace are projected on a screen; and integrating the blind or other disabled users seems to be more an afterthought than an integral element of website design.

However, some jobs could be designed in ways that would minimize any impact that the disability would have on job performance. For example, a recent article described an encounter with a Second Life virtual greeter who was deaf but who could communicate with visiting avatars by typing messages.<sup>149</sup> An environment in which you must constantly type would be difficult for someone with carpal tunnel syndrome or a repetitive strain injury (RSI). However, with appropriate voice recognition software, the environment could be made more accessible. Pursuant to the mandates of federal law, crowdsourcing and other websites that provide work opportunities should accommodate disabled workers who are otherwise qualified for positions.

#### D. WORKERS' COMPENSATION

Workers' compensation law will also inevitably face changes in the era of virtual work. The law and doctrine of workers' compensation has traditionally been tied to notions of accidents that occur within the time and space restrictions of the "workplace."<sup>150</sup> Workplace is a ubiquitous term used in practically every law textbook, law review article, and judicial opinion that deals with employment law issues.<sup>151</sup> The complementary areas of

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<sup>148</sup> Cf. Nina Golden, *Access This: Why Institutions of Higher Education Must Provide Access to the Internet to Students with Disabilities*, 10 VAND. J. ENT. & TECH. L. 363, 363, 391-92 (2008) (arguing in favor of giving disabled students access to Internet).

<sup>149</sup> Krell, *supra* note 133, at 85.

<sup>150</sup> See, e.g., Rachel M. Janutis, *The New Industrial Accident Crisis: Compensating Workers for Injuries in the Office*, 42 LOY. L.A. L. REV. 25, 33 (2008) (providing overview of workers' compensation system and noting that workers' compensation eligibility depends on whether an injury arose out of and in the course of employment).

<sup>151</sup> A recent search of the Westlaw journals and law review database revealed 1,804 articles with "workplace" in the title.

labor law and employment law are often grouped together under the rubric of “workplace law.”<sup>152</sup> Despite this offhand modern usage, the notion of “place” in workplace is becoming increasingly obsolete. The idea of cyberspace as “space” or as a “place” in and of itself is also a contested idea.<sup>153</sup>

The nature and frequency of workers’ compensation claims may also change with virtual work. Moving into an era of virtual work, one of the more serious injuries associated with the information age are RSIs. RSIs include carpal tunnel syndrome and other similar traumas to the hands, wrists, and upper extremities and are engendered by repetitive motions such as typing at a keyboard for extended periods.<sup>154</sup> While advanced technology—such as speech recognition software, ergonomic keyboards, and ergonomic desks<sup>155</sup>—may solve some of the problems surrounding RSI, these new technologies do not remediate all of the risks associated with excessive computer use. As virtual work increases, so does computer use. As a result, virtual workers are increasingly susceptible to RSI.

However, despite the prevalence of RSI many of these issues are still not taken seriously enough to merit action. When the Occupational Safety and Health Administration (OSHA) attempted to pass a safety standard for office equipment in 1997, employer groups managed to paint a picture of an agency out of control and intent on invading individual citizen’s home offices for

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<sup>152</sup> See, e.g., Paul M. Secunda, *About Workplace Prof Blog*, WORKPLACE PROF BLOG, [http://lawprofessors.typepad.com/laborprof\\_blog/aboutblog.html](http://lawprofessors.typepad.com/laborprof_blog/aboutblog.html) (last visited Jan. 30, 2011) (describing the weblog as designed for “law school professors teaching Employment Law, Employment Discrimination, Labor Law, Benefits, and related courses”).

<sup>153</sup> See Julie E. Cohen, *Cyberspace as/and Space*, 107 COLUM. L. REV. 210, 212 (2007) (describing resistance of cyberlaw scholars to using “place- and space-based metaphors”).

<sup>154</sup> See, e.g., Robert Preidt, *Physical Activity Cuts Risk of Repetitive Strain Injury*, HEALTH DAY, Mar. 29, 2007, available at 2007 WLNR 5927680 (“Upper body injuries (most commonly wrist/hand, shoulder and elbow) accounted for 63 percent of RSI in Full-time workers.”).

<sup>155</sup> See, e.g., Sally Brashear, *When It Hurts to Go to Work: What Law Firms Are Doing to Help Employees Avoid Repetitive Stress Injuries*, 13 LEGAL MGMT. 17, 18–23 (1994) (describing methods of preventing RSI in the law firm context).

inspections.<sup>156</sup> Meanwhile, hundreds of thousands of workers are unaware of the extent of these potentially career limiting injuries and instead click away often without proper equipment, adequate breaks, or appropriate exercises. Even more disturbingly, the Supreme Court ruled that painful repetitive strain injuries were not disabilities under the Americans with Disabilities Act (ADA).<sup>157</sup> While the 2008 Amendments to the ADA were intended to restore many aspects of the law,<sup>158</sup> we still must wait to see the development of precedent in this area.

The solutions to these issues are not easy, and perhaps it is justified to say that much of the answer lies not only in prevention, but also in the potential for continued technological fixes. Government regulators should press industry for alternatives to the traditional keyboard-and-mouse setup, which is injurious to many workers. Voice recognition software, touch screens, and writing recognition may all prove to be fruitful avenues that could reduce the rate of injury among virtual workers or could, at the very least, help workers regain their jobs if they have acquired an RSI through computer overuse. From discrimination and equal opportunity, I move to examine another core group of employment law doctrines.

#### IV. WHISTLEBLOWING, UNIONIZATION, AND PRIVACY

##### A. WHISTLEBLOWING

Whistleblowing and anti-retaliation statutes comprise one area of labor and employment law that I predict will change substantially in response to the advent of virtual work. Traditionally, whistleblowing was conceived as an exception to the

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<sup>156</sup> *Relax, Telecommuters: OSHA Inspectors Won't Be Dropping by*, TELECOMMUTING REV.: GORDON REP., Jan. 1, 1997, at 7, available at 1997 WLNR 6844972 (describing proposed regulations on home offices that never came to pass).

<sup>157</sup> See *Toyota Motor Mfg. v. Williams*, 534 U.S. 184, 187 (2002) (rejecting claim that RSI present in that case was impairment of substantial life activity). See generally *Americans with Disabilities Act*, 42 U.S.C. § 12102(2) (2006) (defining “disability”).

<sup>158</sup> See 42 U.S.C. § 12101(a)(8) (Supp. 2009) (noting purpose of amendments was to remedy continuing discrimination against people with disabilities).

employment-at-will rule,<sup>159</sup> allowing employees to report illegal activity within an organization or to outside authorities without fear of retaliation.<sup>160</sup> The rationale for protecting whistleblowers includes protecting the public from illegal behavior that would otherwise occur at work and providing a fuller enforcement for the underlying laws against that illegal activity.<sup>161</sup>

Studies have shown, however, that whistleblowers often face serious consequences for reporting wrongdoing, not limited to losing their jobs, despite the illegality of such employer actions. Often the whistleblower's decision to come forward results in blackballing within an entire industry, ruined career expectations, depression, and even the breakdown of personal friendships and other intimate relationships.<sup>162</sup> In the realm of virtual work, whistleblowers facing these potentially harsh consequences may well wish to avoid official channels. Instead of engaging in reporting in traditional ways where they might expose themselves to retaliation, in the future whistleblowers may use other forms of communication to spread the word about lawbreaking or other improper activity at work. Some of these methods of

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<sup>159</sup> The at-will rule is that an employee may be fired for a good reason, a bad reason, or no reason at all. In other words, it provides the employer the discretion to fire without having to explain the reason for letting the employee go. The at-will rule is the law in forty-nine states, with Montana the sole exception. In the past decades, there have been increasing incursions to the at-will rule, especially to limit the "bad reasons" that employers may use. Limitations include firing someone for a discriminatory reason or for whistleblowing by reporting wrongdoing. Miriam A. Cherry, *Whistling in the Dark? Corporate Fraud, Whistleblowers, and the Implications of the Sarbanes-Oxley Act for Employment Law*, 79 WASH. L. REV. 1029, 1042–45 (2004).

<sup>160</sup> *Id.* at 1043–44.

<sup>161</sup> See, e.g., Richard E. Moberly, *Sarbanes-Oxley's Structural Model to Encourage Corporate Whistleblowers*, 2006 BYU L. REV. 1107, 1113–25 (discussing Enron and corporate monitoring, and encouraging whistleblowing to protect shareholders, employees, and the public).

<sup>162</sup> See Cherry, *supra* note 159, at 1053 ("According to a study of eighty-four whistleblowers conducted in the early 1990s, '82% experienced harassment after blowing the whistle, 60% were fired, 17% lost their homes, and 10% admitted to attempted suicide.' Due to the extreme stress, many whistleblowers develop serious mental illness, such as depression, which can lead to other problems, such as alcohol or drug abuse." (quoting David Culp, *Whistleblowers: Corporate Anarchists or Heroes? Towards a Judicial Perspective*, 13 HOFSTRA LAB. & EMP. L.J. 109, 113 (1995))).

communication are enabled by new technologies that have gained in popularity in recent years.

There is currently a thriving discussion about the propriety of employees blogging,<sup>163</sup> more specifically about employees blogging about work.<sup>164</sup> There are a number of bloggers who have been fired because of commentary on blogs that they hosted and wrote during their free time.<sup>165</sup> Some of this commentary concerned supervisors or coworkers at work, and therefore could be considered disruptive; other times the blogs were concerned with personal topics that seemingly had little to do with work.<sup>166</sup>

Some plaintiffs who were “fired for blogging” have brought lawsuits alleging violations of their First Amendment rights.<sup>167</sup> This is a problematic way of characterizing their rights, however, because the widely accepted view is that employees largely turn over their “free speech rights” in exchange for their paychecks.<sup>168</sup> The spokesperson for a company must shill for it; a telemarketer may not deviate from the pre-approved script; and management at a few companies have chosen to ban any talking at work

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<sup>163</sup> “Blog” is short for “web log.” A blog is like a digitally maintained newspaper, except that it is more dynamic because readers can leave comments for the authors, and most authors of blogs welcome the opportunity for feedback from their audience. See, e.g., Paul S. Gutman, Note, *Say What?: Blogging and Employment Law in Conflict*, 27 COLUM. J.L. & ARTS 145, 145–47 (2003) (giving brief history of blogging).

<sup>164</sup> See, e.g., *id.* at 147–50 (discussing incidents where bloggers were fired, perhaps for topics covered by their blogs); David Kestenbaum, *Los Alamos National Lab Blog Draws Ire on Hill*, NPR (May 19, 2005), <http://www.npr.org/templates/story/story.php?storyId=46573377> (discussing controversy over anonymous employee comments on unofficial Los Alamos National Laboratories blog).

<sup>165</sup> Robert Sprague, *Fired for Blogging: Are There Legal Protections for Employees Who Blog?*, 9 U. PA. J. LAB. & EMP. L. 355, 355 (2007) (concluding that although bloggers may have some legal protections, the at-will doctrine, combined with statutory and constitutional limitations on potential causes of action, means that employees should blog with caution).

<sup>166</sup> See Correy E. Stephenson, *Companies Need to Be Aware of Blogging Risks*, VA. LAW. WKLY., Sept. 4, 2006, available at 2006 WLNR 24492515.

<sup>167</sup> See, e.g., Cathleen Flahardy, *Employees Fired over Personal Blogs Fight Back*, CORP. LEGAL TIMES, May 2005, at 26, available at <http://www.littler.com/PressPublications/Documents/11407.pdf> (recounting how employee sued Delta Airlines over blog-related firing, citing First Amendment claims).

<sup>168</sup> See *Garcetti v. Ceballos*, 547 U.S. 410, 417–20 (2006) (discussing First Amendment rights of government workers).

entirely.<sup>169</sup> Although this is rather disturbing, the fact is that in many private industries, there rarely is a true right of free speech, or at least one that cannot be “purchased.”<sup>170</sup>

However, as blogging becomes more commonplace and accepted, it is possible that the Internet will become a preferred venue for whistleblowing. It is up to authors of blogs to reveal their identities, and, with particularly sensitive information, some authors may choose anonymity.<sup>171</sup> Others may want to go public with their whistleblowing, hoping that the open nature of the Internet will protect them from retaliation, rather than relying on legal doctrines to provide that safety net. Whether such activity is protected whistleblowing activity depends on applicable state law.<sup>172</sup> Some states require whistleblowers to exhaust their remedies within their companies before reporting the wrongdoing to external sources.<sup>173</sup> Other states have no such obligations, and whistleblowers effectively can gain the protection of the statute by approaching the press directly.<sup>174</sup> Although blogging is not the traditional form of “the media,”<sup>175</sup> one assumes that posting the information on the Internet would be treated the same way for purposes of whistleblowing statutes.

Just as the landscape of whistleblowing doctrine must change in response to technology, so too must the tools for sorting,

<sup>169</sup> See Cherry, *supra* note 159, at 1053–54.

<sup>170</sup> The problem raises some interesting conundrums for conservative/libertarian legal scholars, who would like to promote free speech rights at work, but in order to do so would have to extend workers’ rights far more than even most liberals would advocate. See generally Eugene Volokh, *How Harassment Law Restricts Free Speech*, 47 RUTGERS L. REV. 563 (1995).

<sup>171</sup> See Sunny Woan, *The Blogosphere: Past, Present, and Future. Preserving the Unfettered Development of Alternative Journalism*, 44 CAL. W. L. REV. 477, 493–95, 502–03 (2008) (summarizing recent cases involving blogging, anonymity, and journalistic privilege); see also Henry Hoang Pham, Note, *Bloggers and the Workplace: The Search for a Legal Solution to the Conflict Between Employee Blogging and Employers*, 26 LOY. L.A. ENT. L. REV. 207, 219–20 (2005–2006) (discussing motivations behind anonymous blogging).

<sup>172</sup> See Cherry, *supra* note 159, at 1046–47, app. A at 1087–1120 (“The state whistleblowing statutes also differ in the type of disclosure they protect, the manner of disclosure they require, and the remedies they provide.” (footnotes omitted)).

<sup>173</sup> *Id.* app. A at 1087–1120.

<sup>174</sup> *Id.*

<sup>175</sup> See Woan, *supra* note 171, at 485 (“[T]he sentiment shows the unwillingness of traditional news media members to welcome bloggers into the news community.”).

assessing, and remedying any such claims of wrongdoing. If so much information is being put into the Internet—in many cases anonymously—there is certainly the possibility for false claims. Disgruntled or unhappy employees with an ax to grind against a former employer may provide wildly inaccurate information.<sup>176</sup> Business competitors could even jump on the bandwagon, hoping to denigrate a brand's reputation, manipulate stock, or otherwise wreak havoc against those perceived to be a threat.<sup>177</sup> As with all whistleblowing claims, the problem is one of separating the wheat from the chaff. How does one take notice of wrongdoing, stop it in time, and protect those that report on it, without encouraging false claims, or those that at the very least would be burdensome and interfere with the organization's mission? Perhaps it is possible that technology can also provide some sort of solution for sorting out these claims in the new world of virtual work.

One of these methods would simply be to use traditional journalistic techniques to publicize whistleblowers' claims. "WikiLeaks," which specializes in helping whistleblowers report on a variety of topics gained a great deal of notoriety over the release of classified documents.<sup>178</sup> With the advent of new and more powerful computer algorithms, there will be additional capability to transform the way that we assess and weigh the accuracy of whistleblowing claims. For example, a new website, GlassDoor,<sup>179</sup> asks anonymous users to provide information about their companies, the salaries that they receive, and to share information about the CEOs and other top management at various

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<sup>176</sup> See Cherry, *supra* note 159, at 1052.

<sup>177</sup> See, e.g., Andrew Martin, *Union of Whole Foods and Wild Oats Is Put in Doubt*, N.Y. TIMES, July 30, 2008, at C3 (detailing legal controversy arising from Whole Foods CEO posting hundreds of messages online that criticized competitor, only to have Whole Foods later target the same competitor for acquisition).

<sup>178</sup> WIKILEAKS, <http://wikileaks.org> (last visited Mar. 10, 2011); see also *Bank Julius Baer & Co. v. WikiLeaks*, 535 F. Supp. 2d 980, 982, 985 (N.D. Cal. 2008) (dissolving injunction that would have shut down WikiLeaks for publishing banking documents); Jonathan D. Glater, *At the Uneasy Intersection of Bloggers and the Law*, N.Y. TIMES, July 15, 2008, at C1 (discussing WikiLeaks and the broader legal implications of posting private information online).

<sup>179</sup> GLASSDOOR, <http://www.glassdoor.com> (last visited Mar. 10, 2011).



companies.<sup>180</sup> While this information is perhaps basic, how long will it be before GlassDoor, or its analogues/future competitors, begin asking for other types of information, and are able to provide an accurate snapshot of what it is truly like to work at a company? Along with other measures, such as surveys, these types of tools may help users to discern information about a company before they join as employees.

Of course, that brings out the possibility that there will be some users who will write undeserved negative comments. Perhaps they will not just be irascible, but may try to interfere deliberately with the information. In that case, these “trolls” will pose a real danger to the success of the endeavor, unless of course the website is programmed to deal with this eventuality. In which case, perhaps using the type of program similar to that which allows iTunes or Amazon to make recommendations based on items that each user likes, the website will be able—at least in a crude way—to sort the trolls from the workers providing objective information that would help prevent wrongdoing or provide advice to job seekers.

#### B. LABOR UNION ORGANIZING IN VIRTUAL WORLDS

As described in the Introduction, virtual worlds hold vast potential for labor union organizing. There are sites readily available in virtual worlds for educating workers about their rights and discussing unionization.<sup>181</sup> Some worker groups have taken advantage of Second Life in order to organize and protest. One of the most prominent examples of this was the 2007 IBM virtual strike, where avatars descended on IBM’s virtual offices to protest a pay package that had been offered to Italian IBM

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<sup>180</sup> *Overview*, GLASSDOOR, <http://www.glassdoor.com/about/overview.htm> (last visited Mar. 10, 2011).

<sup>181</sup> *See, e.g.*, Pixeleen Mistral, *IRS Says Virtual Greeters Are Real Employees*, ALPHAVILLE HERALD (Dec. 5, 2008, 9:42 AM), <http://foo.seconddlifeherald.com/slh/2008/05/irs-rules-in-wo.html> (containing discussion of a Second Life island dedicated to unionization and education about worker’s rights, which can be found at SLUNIONISLAND, <http://www.slunionisland.org/> (last visited Mar. 10, 2011)).

workers.<sup>182</sup> It was not just IBM workers who “showed up” at the IBM virtual island; the IBM workers were able to convince additional avatars to join their protest.<sup>183</sup> From the workers’ perspective, the concerted action resulted in a successful resolution.<sup>184</sup>

The potential for worker education and concerted action is amplified in Second Life and other virtual worlds. Because the free flow of information is encouraged in many ways, there are more possibilities for union organizers. Much of this activity would appear to be covered by the National Labor Relations Act,<sup>185</sup> in the same way that electronic communications and e-mails would also be protected activity under the statute.<sup>186</sup> The fact that virtual worlds draw from an international constituency expands the potential for increased collaboration between labor activists in different countries. Instead of rhetoric that divides workers of different nations and ethnicities, the trend toward virtual work will hopefully encourage unions, out of necessity, to adopt a more global perspective.<sup>187</sup>

### C. PRIVACY

The United States has comparatively weak protection of privacy rights at work.<sup>188</sup> Such privacy rights, as they exist, mostly arise

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<sup>182</sup> *On Strike, Virtually*, *supra* note 43, at 80.

<sup>183</sup> See *IBM Virtual Strike in Second Life!*, YOUTUBE (Feb. 17, 2008), <http://www.youtube.com/watch?v=dja5rlSGo0s> (stating that 1,853 avatars joined in the protest).

<sup>184</sup> *Id.* (depicting the virtual strike’s successful agreement on an improved pay package).

<sup>185</sup> 29 U.S.C. §§ 151–169 (2006).

<sup>186</sup> See generally Martin H. Malin & Henry H. Perritt, Jr., *The National Labor Relations Act in Cyberspace: Union Organizing in Electronic Workplaces*, 49 U. KAN. L. REV. 1 (2000).

<sup>187</sup> See Sarah Coleman, Note, *Enforcing International Framework Agreements in U.S. Courts: A Contract Analysis*, 41 COLUM. HUM. RTS. L. REV. 601, 620–21 (2010) (suggesting that, in the modern age of globalization, global unions are in a better position to globalize worker interests and to “serv[e] as a counterweight to the . . . influence of MNCs”).

<sup>188</sup> See Mindy C. Calisti, Note, *You Are Being Watched: The Need for Notice in Employer Electronic Monitoring*, 96 KY. L.J. 649, 650 (2007–2008) (describing the prevalent use of surveillance in the workplace and arguing that the United States has failed to adequately regulate employers’ surveillance and preserve workers’ privacy rights).

out of government employment,<sup>189</sup> derive from notions of property law, or draw upon criminal statutes designed to prevent involuntary wiretapping.<sup>190</sup> In fact, a large number of modern workers have their workplace communications, including phone calls and e-mails, monitored.<sup>191</sup> Other workers may be videotaped while they are working.<sup>192</sup> To the extent employers are not monitoring calls or computer usage, that is likely due to the employer's lack of resources to sort the amount of data available, rather than legal restraints or progressive attitudes.<sup>193</sup>

Although this lax approach to employee monitoring is a feature of the American system, other countries are far more protective of privacy.<sup>194</sup> For example, in France, there is a separate agency—CNIL<sup>195</sup>—that specifically supervises issues pertaining to privacy. France has much stricter laws governing workplace privacy, and that has, in some instances, led to conflict with the laws of the United States.<sup>196</sup> As a general statement, the countries of the European Union have much stricter privacy laws than the United States.<sup>197</sup>

<sup>189</sup> See, e.g., *O'Connor v. Ortega*, 480 U.S. 709, 717–18 (1987) (describing government employee privacy rights and noting limits the Fourth Amendment places on public employers).

<sup>190</sup> See Thomas R. Greenberg, Comment, *E-Mail and Voicemail: Employee Privacy and the Federal Wiretap Statute*, 44 AM. U. L. REV. 219, 222–24 (1994) (noting that a federal statute provides some protection from employer wiretapping).

<sup>191</sup> See, e.g., Michael L. Rustad & Sandra R. Paulsson, *Monitoring Employee E-Mail and Internet Usage: Avoiding the Omniscient Electronic Sweatshop: Insights from Europe*, 7 U. PA. J. LAB. & EMP. L. 829, 830 (2005) (noting that 74% of employers surveyed monitored their employees' e-mail).

<sup>192</sup> See Lisa Smith-Butler, *Workplace Privacy: We'll Be Watching You*, 35 OHIO N.U. L. REV. 53, 64 (2009) (noting video surveillance among employers).

<sup>193</sup> It may also be attributable to unions, which will pressure the employer for privacy rights for members.

<sup>194</sup> SAMUEL ESTREICHER & MIRIAM A. CHERRY, *GLOBAL ISSUES IN EMPLOYMENT LAW* 119–33 (2008).

<sup>195</sup> *Id.* at 134 (reproducing case that references the CNIL, the French Data Protection Authority).

<sup>196</sup> See John Gibeaut, *Culture Clash: Other Countries Don't Embrace Sarbanes or America's Reverence of Whistle-Blowers*, A.B.A. J., May 2006, at 10, 12 (noting France's resistance to Sarbanes-Oxley).

<sup>197</sup> ESTREICHER & CHERRY, *supra* note 194, at 134.

Virtual work environments present an even greater challenge to privacy advocates. Because of the globalizing force of virtual worlds, these are issues not merely important for those that would advocate expanding U.S. protections, but will also present unique regulatory challenges for those countries with more stringent privacy regimes. The stakes are high, as conceivably the platform operator can record every move, gesture, and statement that is made within the virtual world.<sup>198</sup> As many virtual worlds are heavily commercialized and commodified spaces, and cater to the needs of the employers who will be purchasing virtual property, one can imagine that the employer could record everything that happens within the virtual world.<sup>199</sup> Clearly, more disclosure and other protections are needed. From these issues of whistleblowing, unionization, and privacy, I now turn to the last two issues, which take up the difficult questions of minimum wage and labor value arbitration.

#### V. MINIMUM WAGE PROTECTIONS AND THE GLOBAL DIMENSIONS OF VIRTUAL WORK

One of the more vexing legal issues to be raised by these technological changes is the blurring of the line between work and leisure. In the beginning of the twentieth century, when many of the regulations for labor and employment law were first passed, work was performed at a factory or office. It was clear that those who showed up were “working” and thus entitled to minimum wage under the Fair Labor Standards Act (FLSA). But with modern computers, individuals often perform work on someone else’s behalf while in their own home, on their own computer, using their own Internet connection. The work is done on a more

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<sup>198</sup> Indeed, the game necessarily has to record some basic elements, for example, possessions and the amount of money that an avatar has. It would certainly be possible to record text or even voice exchanges in the virtual world, especially if the employer were willing to spend the money for it.

<sup>199</sup> See Tal Z. Zarsky, *Information Privacy in Virtual Worlds: Identifying Unique Concerns Beyond the Online and Offline Worlds*, 49 N.Y.L. SCH. L. REV. 231, 235–39 (2004–2005) (describing how virtual worlds have to save information in order to preserve continuity of characters, thus leading to potential intrusions into privacy).

flexible basis, and oftentimes it might even be as part of a contest. In other words, it might feel more like “fun” than “work.” Below I set out some of the arguments for how the FLSA might be appropriately applied in the context of Web 2.0 technologies.<sup>200</sup>

However, the FLSA is only applicable to employees located in the United States. If websites or employers can decide to “relocate”—to shift their businesses to jurisdictions with lower labor standards—any attempt to improve working conditions could be easily circumvented. Further, with online technology that is geared to be more like a game or contest, child labor could become a problem. It therefore makes sense, in tandem, to examine what could be done to ensure labor protections regardless of the domicile of the worker.

#### A. MINIMUM WAGE AND FLSA ISSUES

In crowdsourcing schemes, as described in Part II, each individual is paid a small amount for their participation in certain simplistic tasks that are later consolidated.<sup>201</sup> The amount may be half a cent or two pennies for brief tasks such as tagging or labeling a photo. While browsing Amazon.com’s Mechanical Turk website, I have seen many tasks advertised at pay rates of pennies or fractions of pennies. The hourly return on these tasks is not calculated, and ultimately would depend on how quickly a worker is able to complete the tasks. However, even if a worker was exceedingly efficient at these tasks, it would be difficult to perform enough of them to equal the current U.S. federal minimum wage of \$7.25 per hour, considering the low base rate. When economist Edward Castronova studied the economy of Norrath, the virtual world in the online Camelot game, he found that the average wage was \$3.42 an hour—a little less than half the wage mandated by the FLSA.<sup>202</sup>

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<sup>200</sup> These issues are set out in greater detail in another article, Cherry, *supra* note 67, at 1077–78.

<sup>201</sup> See *supra* Part II.B.

<sup>202</sup> As for virtual worlds like Second Life, it is difficult to discern the rates of pay, because, as my research assistant found, it was difficult to even obtain a paying position, let alone one that paid minimum wage in U.S. dollars when converted from Lindens. The

The FLSA only applies to “employees.”<sup>203</sup> Whether a worker is an employee or independent contractor is determined via a multifactor test that depends on the facts of the work relationship.<sup>204</sup> The multifactor test derives from the case law and decisions on agency law, and attempts to classify whether workers have independent judgment and control over their own work, the manner in which the work is performed, and whether it is customary to use employees to perform this type of work. The control test is well-known for determining independent contractor versus employee status, and, in addition, the courts will look at the economic realities of the relationship to determine whether the employee is dependent upon the employer.<sup>205</sup> Some of the factors for finding employee status are whether the employer may direct the way in which the work is accomplished, determine the hours involved, and provide the employee with direction.<sup>206</sup> On the other hand, elements that lean toward independent contractor relationships include workers providing their own equipment, setting their own schedules, and getting paid per project, not for their work hours.<sup>207</sup>

Work in virtual worlds falls somewhere in the middle of this employee-independent contractor spectrum. On the one hand, virtual workers may have more control over their schedules and

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comparison cannot be tied to the cost of any particular good or necessity, because mere existence in Second Life, although thoroughly commodified, does not cost anything. Having an avatar on Second Life is free, unless a user wishes to purchase or sell “real” estate there, in which case the user pays Linden Labs for a premium membership.

<sup>203</sup> See 29 U.S.C. § 206(a) (2006) (declaring that minimum wage provisions only apply to “employees”).

<sup>204</sup> See Katherine V.W. Stone, *Legal Protections for Atypical Employees: Employment Law for Workers Without Workplaces and Employees Without Employers*, 27 BERKELEY J. EMP. & LAB. L. 251, 257–58 (2006) (listing factors to consider when determining whether an employment relationship exists). Oft-cited cases on this subject include *Nationwide Mutual Insurance Co. v. Darden*, 503 U.S. 318, 326 (1992); *Rutherford Food Corp. v. McComb*, 331 U.S. 722, 728–29 (1947); *Ira S. Bushey & Sons, Inc. v. United States*, 398 F.2d 167, 169–72 (2d Cir. 1968).

<sup>205</sup> Stone, *supra* note 204, at 257–58.

<sup>206</sup> See, e.g., *Herman v. Express Sixty-Minutes Delivery Serv., Inc.*, 161 F.3d 299, 303 (5th Cir. 1998) (weighing five factors to determine employee status under FLSA, including “degree of control exercised by the alleged employer” and “the skill and initiative” required by the job).

<sup>207</sup> *Id.* at 303–04.

more ability to come and go from the virtual environment than real workers tethered to a workplace desk or factory floor. But this may not be true of all positions in the virtual world; after all, one cannot perform the duties of a greeter in a virtual store if one is not “there” (i.e., logged on) to meet the shoppers or to explain what is happening. On the one hand, the workers need to supply their own avatars, computer equipment, and Internet connections, which would lean toward making them independent contractors. On the other hand, the degree of freedom to control their own actions in the virtual world seems, again coming back to the greeters, to be extremely limited. In short, although the test might lean toward a finding of an employment relationship (especially with the IRS decision also indicating this direction), it would still be a close question, and one that will have to be carefully considered.

Another challenging issue is how to classify many of the activities that occur in virtual worlds—are these activities even work?<sup>208</sup> Many who immerse themselves in virtual worlds view what they are doing as “play” or leisure. Research indicates that time spent in the virtual world is time that people used to spend on the computer, surfing the Internet, watching television, or reading books.<sup>209</sup> In other words, Second Life is seen as a substitute for other forms of entertainment.<sup>210</sup> What makes the worlds fun? Virtual worlds are new, interesting, and in short, “cool.” They incorporate “play” as the cornerstone that attracts new users. Their novelty, the fact that you can change your avatar into an animal, have your avatar fly, and encounter new and unexpected situations all contribute to the “fun factor” that simply does not exist in many jobs. But if the activity is monetized and commodified, perhaps that is some indication that the market activity that goes on there should properly be classified as paid

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<sup>208</sup> Cf. David C. Yamada, *The Employment Law Rights of Student Interns*, 35 CONN. L. REV. 215, 224–34 (2002) (analyzing the application of the FLSA to unpaid student interns to determine if they are “employees”).

<sup>209</sup> Cherry, *supra* note 67, at 1098.

<sup>210</sup> See, e.g., Erez Reuveni, *On Virtual Worlds: Copyright and Contract Law at the Dawn of the Virtual Age*, 82 IND. L.J. 261, 262 (2007) (asserting that players use virtual spaces for entertainment, among other things).

work? No one has ever attempted to determine whether workers are “having fun” or “derive satisfaction” from their jobs and attempted to pay them accordingly.<sup>211</sup> Some of the most fun jobs may also be well-paid. Further, work that some would find pure drudgery others find fascinating and fun. These hedonic differences do not result in differential pay; rather, workers are paid based on what the market will bear, taking into account minimal hard-won limitations that have been imposed in order to protect the lowest-paid workers.

In his book *The Wealth of Networks*, Professor Yochai Benkler focuses his attention on nonmarket collaborative efforts, making the argument that they allow for motivations beyond the economic ones that in the past have driven the traditional information economy.<sup>212</sup> For example, Benkler discusses the reasons that people would be willing to produce knowledge for free on websites such as Wikipedia.<sup>213</sup> Some of this type of “social production” is the result of the humanistic urge to learn and to teach; it is not done for profit, but as a substitution for passive forms of entertainment, such as watching television or reading.<sup>214</sup> Benkler’s view is progressive, humanistic, and ultimately optimistic about the future of the Internet. At various points he celebrates the collaborative nature of these new modes of social production, the open-source nature of the collaboration, and the vibrancy of these networks.<sup>215</sup>

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<sup>211</sup> For example, Facebook tried to have its users translate its pages for it (without pay), and many users balked at the notion. See Cherry, *supra* note 67, at 1099–1100 (noting how Facebook users have criticized its attempt to get volunteer work); Tomoko A. Hosaka, *Users Around the Globe Translating Facebook for Free*, SEATTLE TIMES, Apr. 21, 2008, at E4, available at 2008 WLNR 7448363 (“[S]ome critics say Facebook just wants free labor.”).

<sup>212</sup> See BENKLER, *supra* note 39, at 91–99 (“They have come to play a substantial role as modes of motivating, informing, and organizing productive behavior at the very core of the information economy.”).

<sup>213</sup> See *id.* at 71–74 (noting such “social, human, and intensively discourse- and trust-based” motivations to post information to Wikipedia).

<sup>214</sup> Hetcher, *supra* note 39, at 965 (“What is earth shattering about [user generated content] . . . is that because it is produced by literally millions of ordinary people, apparently without any expectation of economic gain, the very rationale for providing copyright protection to this growing body of creators and their works is called into question.”).

<sup>215</sup> BENKLER, *supra* note 39, at 59–132.



However, this vision neglects in some ways the valuable nature of information that may be gleaned from crowds, especially those who would ordinarily be compensated in a market setting.<sup>216</sup> Further, it reinforces the notion of the separate and distinct spheres of work and leisure, setting to the side the fact that this is an artificial distinction.<sup>217</sup> And as pointed out by Professor Noah Zatz in his article on prison labor, Benkler also ignores work that is on the margins between voluntary and coerced.<sup>218</sup> In proposing nonmarket alternatives, Benkler may instead be proposing leaving a class of people out of paid work, which may have the result of marginalizing them.<sup>219</sup>

Of course, part of the question might be why anyone would agree to work at such a reduced rate, either for free or practically for free. Perhaps at this time, virtual work is seen as a novelty. In other words, right now it might be fun and interesting for a person to tell others that he or she was participating in the development of cool, new crowdsourcing websites. One must wonder how long that novelty will last, however, and when this type of work will instead be considered low-paid virtual drudgery.

One of the questions we need to ask is how the law (or a set of private best practices) might facilitate distinguishing between those who are participating in crowdsourcing websites or other virtual work for fun, even though some of their services might be paid in another context (Wikipedia), and those who are opting to work in the market economy and, thus, arguably should receive the traditional legal protections for employment activity (Amazon's Mechanical Turk). If the majority of users participate just for fun, that might weigh in favor of an opt-in regime to obtain protection

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<sup>216</sup> See, e.g., Miriam A. Cherry & Robert L. Rogers, *Tiresias and the Justices: Using Information Markets to Predict Supreme Court Decisions*, 100 NW. U. L. REV. 1141, 1142 (2006) (exploring "the power of the information market" as "an economic instrument").

<sup>217</sup> See Cherry, *supra* note 67, at 1098 (describing the blurring of the line between work and leisure).

<sup>218</sup> See Noah D. Zatz, *Working at the Boundaries of Markets: Prison Labor and the Economic Dimension of Employment Relationships*, 61 VAND. L. REV. 857, 916 n.274 (2008).

<sup>219</sup> Women's rights advocates have long made the argument that child care is undervalued because this service was traditionally performed as part of women's unpaid labor in the private sphere. See Zatz, *supra* note 218, at 916 ("Feminist scholarship has pioneered broader accounts of where economic activity, and particularly productive work, occurs.").

from the labor laws. On the other hand, I would argue that the default rule should be protection, and then users must deliberately and unequivocally state they are volunteers, acknowledge that they will not receive monetary payment, and clearly opt out. Of course, this runs the risk of making the opt-out process potentially burdensome for those just looking for fun and not looking to be bogged down with legalities. Another way to deal with the opt-out—although far from a panacea—would be to include it in the form clickwrap agreements that users must necessarily agree to in order to use many of the websites.<sup>220</sup>

## B. CROSS-BORDER AND INTERNATIONAL ISSUES

This discussion of the applicability of the FLSA necessarily opens up crucial questions regarding globalization, outsourcing, the brain drain, and labor value arbitrage, and I discussed these global aspects in a recent symposium essay.<sup>221</sup> In the new information economy, outsourcing is no longer about manufacturing or factory work migrating overseas.<sup>222</sup> Instead, it affects jobs in the technology and information sectors, which have been the mainstay of the U.S. economy in the past few decades.<sup>223</sup> Law, medicine, and other forms of skilled work are now seeing some of the changes that used to impact only the manufacturing sector.<sup>224</sup>

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<sup>220</sup> This is merely one suggestion, and it is far from perfect. There are critiques of these clickwrap licences, due to the fact that so few users take the time to read the text. See, e.g., Nancy S. Kim, *Clicking and Cringing*, 86 OR. L. REV. 797, 801–03 (2007) (analyzing the problem of assent with clickwraps); cf. Robert A. Hillman & Jeffrey J. Rachlinski, *Standard-Form Contracting in the Electronic Age*, 77 N.Y.U. L. REV. 429, 440 (2002) (emphasizing how boilerplates could “exploit a gap in [users’] knowledge”).

<sup>221</sup> Miriam A. Cherry, *The Global Dimensions of Virtual Work*, 54 ST. LOUIS U. L.J. 471 (2010).

<sup>222</sup> See KATHERINE V.W. STONE, FROM WIDGETS TO DIGITS: EMPLOYMENT REGULATION FOR THE CHANGING WORKPLACE 5 (2004) (suggesting that digital production is global).

<sup>223</sup> Cf. Press Release, Info. Tech. Assoc. of Am. (ITAA) & Global Insight, ITAA/Global Insight Study Finds IT Outsourcing Results in Net U.S. Job Growth (Mar. 30, 2004), <http://www.ihsglobalinsight.com/About/PressRelease/PressRelease855.htm> (summarizing a study on “global sourcing of computer software and services”).

<sup>224</sup> See Alexander, *supra* note 46, at 200 (“Even those white-collar jobs traditionally considered immune to outsourcing pressures, such as those held by medical specialists, are now threatened.”).

The benefit here is that some of the outsourcing may raise the standard of living in third-world countries. However, the larger issue is a concern for all workers regardless of the first-world/third-world divide. The danger is that professional tasks are increasingly broken down to its least common denominator. The way that tasks and human capital are being viewed and handled is, far from Professor Stone's promising vision of the new information economy, one that could serve to dehumanize workers.<sup>225</sup> To a greater or lesser degree, private entities have adopted standards that are independent of government in order to ensure the protection of and benefit to workers in third-world countries.<sup>226</sup> Adhering to these codes of conduct allows a certain sense of security that the work that went into a product or service has not been coerced and that the labor was not exploitative.<sup>227</sup>

The idea that virtual work could enable workers from many different countries to join together and collaborate on a project is enticing; it allows for a sharing of truly diverse ideas and thoughts. But at the same time, it opens the door to potential worker oppression and the specter of taking advantage of those workers in the developing world. Of course, this raises the issue of extraterritoriality of U.S. law.<sup>228</sup> Traditionally, courts have examined the jurisdiction in which the employees are physically domiciled to determine labor and employment law regulations.<sup>229</sup> In a virtual world, however, does it make sense to put employers in a situation where they might be simultaneously subject to the

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<sup>225</sup> See *infra* notes 241–42 and accompanying text.

<sup>226</sup> For example, many business entities have adopted codes of corporate social responsibility or adhere to programs that certify that they comply with minimum labor standards in third-world countries. See ESTREICHER & CHERRY, *supra* note 194, at 22–30 (discussing exposé campaigns, describing corporate codes of conduct, and reproducing Levi Strauss's Code of Conduct).

<sup>227</sup> Some of these corporate codes were adopted out of the hope of stemming bad publicity arising from poor labor practices or in the hopes of staving off such bad publicity. Whatever the reason for adoption, however, these efforts at private standard setting are positive developments.

<sup>228</sup> See ESTREICHER & CHERRY, *supra* note 194, at 187–89 (discussing application of domestic laws abroad).

<sup>229</sup> See, e.g., *Smith v. Raytheon Co.*, 297 F. Supp. 2d 399, 401 (D. Mass. 2004) (citing 29 U.S.C. § 207(a) (2004), stating that the FLSA does not apply in a “foreign country,” and therefore declining to extend minimum wage protections to workers in Antarctica).

laws of many different countries?<sup>230</sup> From a worker's perspective, work is work. The value is the same regardless of the cost of living in a certain area. Of course, people may find better paying work in a country that has a higher standard of living.

As for the brain drain, one of the problems that the developing world has seen is that the most intelligent people with the most career skills and options tend to leave their homes for countries where they will be best able to advance their careers.<sup>231</sup> While that is a fortuitous result for those in the developed world, who get some of the smartest and most talented immigrants to make contributions to their nations, it has a negative impact on the country of origin. The emigrants from those countries do send home remittances, which cushion the blow somewhat for their families, but the loss of human capital is still a drain to the country of origin's economy if it happens often enough.<sup>232</sup> With the advent of virtual work, there is less reason for the brain drain to occur.

## VI. IMPLICATIONS AND CONCLUSION

### A. BROADER IMPLICATIONS

1. *The Promise of Virtual Work.* Breaking down work into new forms that are more fun and engaging could have widespread utilitarian benefits. For example, in explaining the factors that motivate happy and productive individuals to do their best work, Mihaly Csikszentmihalyi describes a concept that he terms "flow."<sup>233</sup> According to Csikszentmihalyi, flow states involve concentration, the use of skills, learning, and adaptation.<sup>234</sup> Engaging in activities that are challenging and at the same time

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<sup>230</sup> See Post, *supra* note 31, at 893 (describing this problem of choosing which jurisdiction's regulations would apply as "Jurisdictional Whack-a-Mole").

<sup>231</sup> See *supra* note 49 and accompanying text.

<sup>232</sup> Cf. Chander, *Diaspora Bonds*, *supra* note 49, at 1061 n.289 (raising the possibility of a tax to offset the brain drain).

<sup>233</sup> See generally MIHALY CSIKSZENTMIHALYI, *FLOW: THE PSYCHOLOGY OF OPTIMAL EXPERIENCE* (1990) (relating flow to positive feelings of joy and creativity).

<sup>234</sup> See *id.* at 41 (explaining flow as a "state of deep concentration" where thoughts, interests, and feelings are focused on the same goal).

enjoyable, an individual experiences flow, “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 cost, for the sheer sake of doing it.”<sup>235</sup> Csikszentmihalyi attributes much of a person’s happiness and feelings of accomplishment to entering flow states.<sup>236</sup>

Perhaps if employers and managers can determine the elements that make virtual worlds and some forms of crowdsourcing so much fun to engage with, more forms of work would become enjoyable.<sup>237</sup> Since work comprises so much of what each of us does during the day, and in fact is in some ways central to the building of one’s professional and personal identity,<sup>238</sup> making work a form of fun rather than a form of drudgery could benefit workers as well as employers. Many workers would find the occasional element of play that a game provides a welcome break from work that, in many instances, might not be particularly intellectually stimulating. For example, identifying and tagging photographs is a fairly boring task that does not require much of the average person’s intellect or interest. However, set two or more individuals to compete against each other to identify the pictures, and award the winner after a certain period with a monetary prize in addition to the money they make for identifying the pictures, and you have an exciting game.<sup>239</sup> Routine tasks are still accomplished in both of these scenarios, but it is my suspicion that the overall happiness and engagement of the workers increase when the employer uses technology and games to achieve the result.

Another promise of a knowledge economy was that workers would generate value through their creativity, intelligence, and

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<sup>235</sup> *Id.* at 4.

<sup>236</sup> *See id.* at 40–41 (providing examples of the benefits of the flow experience).

<sup>237</sup> *See* JOHN STUART MILL, UTILITARIANISM 10 (11th ed. 1891).

<sup>238</sup> Vicki Shultz, *Life’s Work*, 100 COLUM. L. REV. 1881, 1890–92 (2000) (showing how work alters our personal identities).

<sup>239</sup> In fact, this is how the website GAMES WITH A PURPOSE, <http://www.gwap.com> (last visited Mar. 10, 2011), operates. 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.

insight.<sup>240</sup> In her book, *From Widgets to Digits*, Professor Wezel Stone comments on the shift from the traditional manufacturing economy (widgets) to one based on knowledge work (digits).<sup>241</sup> Throughout the book, Professor Stone catalogues the systemic changes that technology has brought to work.<sup>242</sup> Mostly, Professor Stone concentrates on knowledge workers and how the human capital that individuals possess is going to be among a worker's (and a business's) most valuable assets.<sup>243</sup> She claims the old economy involved piecemeal, de-skilled assembly lines, while the new economy values skills, training, and education.<sup>244</sup>

Will crowdsourcing fulfill or negate this promise? With crowdsourcing, only a few individuals need do the thinking, planning, and designing. The rest of the work can be broken down into discreet tasks that can be performed by legions of untrained and unskilled clickworkers, who might not even have an understanding of the aims of the larger project. This type of crowdsourcing scheme, far from fulfilling the democratizing potential of the Internet,<sup>245</sup> seems to contradict its democratizing promise. Instead, some of the crowdsourcing sites seem to be back to de-skilling work to its lowest common denominator. The Mechanical Turk of the eighteenth century falsely concealed a human chessmaster pretending to be a machine.<sup>246</sup> The current day Amazon Mechanical Turk seemingly treats the workers

<sup>240</sup> See generally Peter Murphy, *Creativity and Knowledge Economies*, in CREATIVITY AND THE GLOBAL KNOWLEDGE ECONOMY 149 (2009) (explaining creativity's role in a knowledge economy).

<sup>241</sup> STONE, *supra* note 222, at 4 (noting the shift from industry to digital production); see also Miriam A. Cherry, *No Longer Just Company Men: The Flexible Workforce and Employment Discrimination*, 27 BERKELEY J. EMP. & LAB. L. 209 (2006) (reviewing STONE, *supra* note 222).

<sup>242</sup> STONE, *supra* note 222, at 67–116.

<sup>243</sup> See *id.* at 5 (“One defining characteristic of the digital era is the central role of human intellectual capital — skills, knowledge, information, know-how, tacit knowledge, imagination, and capacity for learning and innovation embodied in employees.”).

<sup>244</sup> See *id.* (discussing industrial production).

<sup>245</sup> See Lawrence Lessig, *Open Code and Open Societies: Values of Internet Governance*, 74 CHI.-KENT L. REV. 1405, 1416 (1999) (discussing the “open-evolution” of the Internet and analogizing it to a democratic government).

<sup>246</sup> *Von Kempelen's Chess Turk Recreated*, CHESSBASENEWS, <http://www.chessbase.com/newsdetail.asp?newsid=1574> (last visited Mar. 10, 2011).

hidden behind computer algorithms as machines themselves, ignoring their very real economic needs.

2. *To Be Commodified, or Not to Be?* Crowds, properly channeled, can provide results in many different areas that far surpass the work of individuals. In his popular book, *The Wisdom of Crowds*, author James Surowiecki describes the many ways in which groups can provide powerful insights.<sup>247</sup> In previous work, I have described how another technology, prediction markets, can be used to harness the power of the crowd.<sup>248</sup> Prediction markets, which are currently used to obtain knowledge about everything from who will win an election to which movies will be blockbusters, are a relatively new technology that allow many individuals to express their opinions in a market setting.<sup>249</sup> Correct predictions are rewarded within the market,<sup>250</sup> and incorrect predictions result in a loss. More importantly, however, the market itself gathers information into the price via the semistrong version of the efficient market hypothesis (EMH), which holds that, in a properly functioning capital market, the prices of securities will reflect all relevant publicly available information.<sup>251</sup> Because of antigambling regulations in the United States that might sweep in some of these emerging prediction markets, they mostly use play money.<sup>252</sup>

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<sup>247</sup> See generally JAMES SUROWIECKI, *THE WISDOM OF CROWDS* (2004) (providing examples of collective wisdom).

<sup>248</sup> See Miriam A. Cherry & Robert L. Rogers, *Markets for Markets: Origins and Subjects of Information Markets*, 58 RUTGERS L. REV. 339, 339–42 (2006) (describing the history and development of prediction markets, including the factors that either create or inhibit the growth of such markets); Miriam A. Cherry & Robert L. Rogers, *Prediction Markets and the First Amendment*, 2008 U. ILL. L. REV. 833, 837 [hereinafter Cherry & Rogers, *Prediction Markets and the First Amendment*] (“[P]rediction markets organize and aggregate individual knowledge into a collective result.”); Cherry & Rogers, *supra* note 216, at 1144 (“Information markets take the idea of group decisionmaking . . . [and] allow thousands of people to join together to predict events.”).

<sup>249</sup> See Cherry & Rogers, *Prediction Markets and the First Amendment*, *supra* note 248, at 837–38 (explaining how prediction markets work).

<sup>250</sup> See *id.* at 838 (noting “financial incentive for making a correct prediction”).

<sup>251</sup> See, e.g., Eugene F. Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 J. FIN. 383, 383 (1970) (“[P]rices efficiently adjust to . . . information that is obviously publicly available . . .”).

<sup>252</sup> The Iowa Electronic Markets (IEM) uses real money, and does so pursuant to an exemption from the Commodities Futures Trading Commission. See Cherry & Rogers,

What is interesting about both prediction markets and crowdsourcing is that both acknowledge that large groups, when properly harnessed, can be better than the efforts of individuals. And, at the same time, because of the way that technologies have developed, and the way that regulation has emerged, both straddle the line between commodified and noncommodified space. Virtual work, rather like many other aspects of emerging technologies on the Internet, is a diverse mix of free collaboration coexisting with monetized and commodified settings.<sup>253</sup> As Professor Lior Strahilevitz has described, one of the models for clickwork depends on collaboration, and this collaboration is not always successful if the market economics are subtracted from the equation.<sup>254</sup> It is possible that virtual worlds may be big enough for several economies (or noneconomies, as the case may be) to coexist with each other. Collaborative work does show great potential, but as a matter of fairness and equity this type of employment relationship cannot take place by disregarding what should be an appropriate and proper extension of our current labor and employment protections into cyberspace.

3. *The Clash Between the Race to the Bottom and Worker Rights: The Role of Voluntary Standard Setting.* Having analyzed the legal implications, I want to return to the clash between worker rights and the race to the bottom presented by some forms of virtual work. How might we think about addressing fair treatment of workers without stifling the growth and creativity of these new forms of work? In my view, self-regulation and voluntary standard setting is a necessary first step in resolving these issues.

In a symposium article discussing the global dimensions of virtual work, I note that employers who are experimenting with virtual work and websites, platforms, or other intermediaries that

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*Prediction Markets and the First Amendment*, *supra* note 248, at 844–45 (discussing reach of antigambling laws and their effect on various entities including IEM).

<sup>253</sup> For example, while the Internet is encouraging a culture of sharing, open source software, and distributed, collaborative work, *see* Benkler, *supra* note 9, at 371–73, many aspects of virtual worlds or crowdsourcing are commodified.

<sup>254</sup> *See* Lior Jacob Strahilevitz, *Wealth Without Markets?*, 116 YALE L.J. 1472, 1498 (2007).



act like virtual employment agencies and are facilitating such interactions might want to attempt a voluntary response.<sup>255</sup> Such a proposal draws on existing notions of certifying “fair labor” already employed by many multinational companies, independent of any government regulation. Adhering to codes of conduct that promote good labor practices, prevent child labor, and discourage exploitation will only promote stability and increase the growth of crowdsourcing and other forms of virtual work.<sup>256</sup>

The reason that I propose voluntary standard setting—both in the domestic context, to figure out where the work–leisure dividing line is, and in the international context, where the issue is the risk of exploitation of remote workers—is that it would benefit both employers and workers. I say this because there is a very real risk of the wrong kind of regulation being imposed. For employers and website facilitators who would like the kind of efficiency gains that virtual work promises and who would also like to attract more capital and potential customers to their projects, virtual work must be seen as stable. To be subject to the whims of any one national government where workers are domiciled—and possibly have a burgeoning market for both providers and consumers cut off—seems like a significant risk. This recently happened in China, where during the summer of 2009 there was a government crackdown on virtual economies.<sup>257</sup> Without any attempt at self-regulation, virtual work runs the risk of over-enforcement and under-enforcement (that leads to a lack of minimum guarantees for those who are working on these websites). Private standard setting could help find the equilibrium.

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<sup>255</sup> Cherry, *supra* note 67, at 1082–83.

<sup>256</sup> ESTREICHER & CHERRY, *supra* note 194, at 23–24. Some of these corporate codes were adopted out of the hope of stemming bad publicity arising from poor labor practices or in the hopes of staving off such bad publicity. *Id.* But whatever the reasons for adoption, these efforts at private standard setting are positive developments.

<sup>257</sup> See, e.g., David Barboza, *Beijing Limits Use of Virtual Currencies in Gaming Industry*, INT’L HERALD TRIB., July 1, 2009, at 13; David Barboza, *In China, New Limits on Virtual Currency*, N.Y. TIMES, July 1, 2009, at B4; David Barboza, *Power Game: Virtual Currency vs. Real Thing*, SAN JOSE MERCURY NEWS, July 6, 2009, at 5C (“Last year, nearly \$2 billion in virtual currency was traded in China, according to the China Internet Network Information Center. Some experts say they believe there is a much larger underground economy in the virtual world.”).

Recently, a working group of students and faculty at Harvard Law School's Berkman Center began developing a series of protocols for crowdsourced work.<sup>258</sup> The preliminary document collects many of the concerns that have been expressed about the potential for worker exploitation with new forms of crowdsourced work. The first section addresses the question of disclosure, so that workers (even those working on just a tiny piece of a project) will be able to tell what their work will be used for. Such disclosure addresses the concern that a worker on a crowdsourced project might later find out that his or her labor has been used for a purpose that the worker might find objectionable.<sup>259</sup> Under "fairness," the protocol advocates for guidelines that will enable the payment of the federal minimum wage and also for monitoring so that child labor does not become a problem.<sup>260</sup> The document also addresses other concerns, such as reputation portability for a worker between different websites and privacy concerns, so that personal information that has been collected through work is not disclosed or sold to third parties.<sup>261</sup> This is a thoughtful collection of ideas around crowdsourcing and more efforts in this direction are needed.

## B. CONCLUSION

Ultimately, virtual worlds present fascinating and novel labor and employment law issues that have yet to be resolved, and this Article has discussed many of these, along with the beginnings of suggested solutions. Certain current trends, such as outsourcing, will inevitably accelerate, while others, such as the brain drain, may actually be reversed. In addition, certain areas of regulation, such as the way that the law provides protection to whistleblowers, will also have to change. Virtual work will also influence numerous areas of employment law, such as discrimination, sexual harassment, and workers' compensation.

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<sup>258</sup> "Cloudwork: Best Practices," draft sent to the author on January 26, 2010 (on file with author).

<sup>259</sup> *Id.*

<sup>260</sup> *Id.*

<sup>261</sup> *Id.*

The original mechanical turk was a device with a man hidden inside; the latest innovations in work also can disguise the very real human needs of workers. If those needs are taken into account properly, there is hope that these new types of work will lead to increased economic opportunities and greater efficiency while at the same time maintaining the hard-won gains made by labor advocates.

## APPENDIX A: CURRENT CROWDSOURCING WEBSITES

The following is a list of currently functioning crowdsourcing websites, compiled from news articles on crowdsourcing as well as numerous Internet searches.

**99DESIGNS**

<http://99designs.com/>

99designs describes itself as the “#1 marketplace for crowdsourced graphic design.” The website aims to connect small businesses searching for a logo or in need of a more professional look for their webpages with graphic designers. Businesses write up a short description of what they are looking for, name a bounty, and designers submit their proposals to the website. At the end of the contest (usually one week), the business chooses a winner.

The drawback is that, because the bounty is not certain, designers might end up wasting their time, or perhaps not invest that much in the contest at all. Also, strangely, later contestants can see the early entries and perhaps improve on them (unless the contest is made “private”).

**AMAZON’S MECHANICAL TURK**

<http://www.mturk.com/mturk/welcome>

This is probably the most well-known crowdsourcing website. The Amazon Mechanical Turk notes that its website

is based on the idea that there are still many things that human beings can do much more effectively than computers, such as identifying objects in a photo or video, performing data de-duplication, transcribing audio recordings, or researching data details. Traditionally, tasks like this have been accomplished by hiring a large temporary workforce (which is time consuming, expensive, and difficult to scale) or have gone undone.

**CROWDFLOWER**

<http://crowdfLOWER.com>

CrowdFLoWer's website notes that it helps customers access an always-on, scalable workforce. "CrowdFLoWer takes large, data."

Interestingly, CrowdFLoWer has partnered with a refugee camp in Kenya. Through an application downloaded to an iPhone, workers do small discrete work tasks. The refugees in Africa are also employed doing these tasks, and their efforts are matched with the microdonations of time by those in other parts of the world.

**CROWDSPRING**

<http://www.crowdspring.com/>

crowdSPRING runs contests for everything from branding and name design to logos. The website touts its "free, binding legal contract generation for every transaction and advanced digital watermarking to a built-in, secure escrow service and a feedback rating system . . . to make a safe environment for both Buyers and Creatives alike." The drawback is that, because the prize is not certain, creators might waste their time or perhaps not invest that much in the contest at all.

**ELANCE**

<http://www.elance.com>

Elance describes itself as "the world's leading online talent marketplace," which "helps companies hire and manage professionals online to get work done and grow their businesses." In essence, Elance is like a job board, except that it does more, since the website is also involved in screening and evaluation of the workers. Elance claims it has a "qualified workforce of more than 160,000 rated and tested professionals with technical, marketing and business skills," and that its website provides the tools to "manage online" and "pay for results."

**GWAP (Games with a Purpose)**

<http://www.gwap.com>

The website has a series of games that are fun, but that also use your inputs in various ways. As the website describes, “[w]hen 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.”

**GENIUSROCKET**

<http://www.geniusrocket.com>

GeniusRocket provides contests for new forms of marketing, including videos (such as YouTube), social networks, and blogs. As Crowdsourcing.org puts it: “The community of ‘geniuses’ can generate virtually any type of creative project—whether a video, flash ad, graphic design or copy-writing.” The drawback here would be the possible waste of time for those who do work and are not chosen.

**GURU**

<http://www.guru.com>

Guru describes itself as the “world’s largest online marketplace for freelance talent and a leader in providing quality freelance services you can trust.” Guru allows for screening of workers based on proficiency of skills in almost every imaginable category, including legal work.

**INNOCENTIVE**

<http://www2.innocentive.com>

InnoCentive describes its business as follows: “Seeker organizations post their Challenges [on the InnoCentive web site] and offer registered Solvers significant financial awards for the best solutions.” “Seeker™ identities are kept completely confidential and secure . . . [, and] InnoCentive facilitates the intellectual property (IP) transfer from solver to seeker . . . .”

Describing its niche as solving “problems that matter,” the target audience is engineers, scientists, inventors, and business people from all over the world.

#### LIVEOPS

<http://www.liveops.com>

LiveOps provides “On-Demand Contact Center Platform, as well as Call Center Outsourcing Services through [its] network of over 20,000 independent at-home agents, to hundreds of companies in both direct response and enterprise markets.”

#### ODESK

<http://www.odesk.com>

oDesk describes itself as “the marketplace for online workteams,” matching customers with the work of “web developers, software programmers, graphic designers, writers, customer service representatives and virtual assistants.” The website “guarantee[s to buyers] that an hour billed is an hour worked and that an hour worked is an hour paid.”

#### QUIRKY

<http://www.quirky.com/about>

Quirky allows entrepreneurs to float product ideas quickly and inexpensively. Users of the website can rate various product ideas, in essence forming an online focus group. Users can also buy products that are being developed.

#### reCAPTCHA

<http://recaptcha.net>

In order to prevent automated spam from swamping their blogs and other websites, some websites require that users of those sites enter a word. According to reCAPTCHA’s website, “reCAPTCHA channels this human effort into helping to digitize books and newspapers. When you solve a reCAPTCHA, you help preserve literature by deciphering a word that was not readable by computers.” Users may or may not know that these antis spam words are serving another purpose.

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**THREADLESS**

<http://www.threadless.com>

Threadless describes itself as “an online design community where users can score designs, offer comments and critiques, and post about whatever is on their minds.” Threadless is also “an ongoing open call for tee shirt design submissions.” Anyone can sign up, download a tee template, and submit ideas, which are then evaluated by the Threadless community for seven days. Tee shirt designs are selected from the pool of the most popular designs as scored by the community.

**VIRTUAL ASSISTANTS**

<http://www.virtualassistants.com>

Virtual Assistants specializes in matching “at home jobs including medical transcription, virtual assistant, transcription, administrative, data entry, customer service, writing, computer, [and] programming . . . work . . . .”

**WORTH1000**

<http://www.worth1000.com>

Worth1000 describes itself as:

a collection of online arenas where the world[’s] best artists compete daily in creative competitions. Worth1000 has hosted thousands of daily competitions since it launched and is well known across the web for inadvertently triggering hoaxes, celebrity amusement and even major media scandals when an entry created here is mistaken for real.



