VIRTUAL CHINA

STEVEN HETCHER

ABSTRACT

Although the Chinese government has devoted significant resources to censoring the online activities of its citizens, it may soon be facing a new challenge. Virtual-world computer games in which player controlled personas interact in cyberspace are growing in both sophistication and popularity. In such games, the very actions of the characters may represent banned themes which unfold in real time. These lucrative games do not lend themselves to the traditional text-based censorship techniques and site blocking may not be feasible for economic reasons. A deeper understanding of the threat virtual-world gaming represents to Chinese censorship efforts can be gained by exploring: (1) whether use by political activists is likely; (2) the influence such a use is likely to have and whether it represents a threat; (3) if future censorship techniques will be adequate; and (4) what effect such techniques will have on China’s economy. To what extent political freedoms exist in a virtual China may turn one who is better able to manipulate emerging computer technologies.

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VIRTUAL CHINA

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What will censorship look like when China is forced by the logic of its convictions and the further emergence of virtual worlds to censor the participatory behavior of its citizens in these worlds? In this article, I will take up the conceptual question of what censorship means or amounts to in the sorts of virtual worlds that have emerged or are likely to emerge, given the sorts of illiberal tendencies China has thus far exhibited with regard to monitoring and censoring of its citizens' activities.¹

The Chinese government has been widely maligned in the press—outside of China—for its censorship of its citizens' online activities.² In the heady pre-crash days of Web 1.0, some commentators optimistically speculated that the Web would prove difficult or even immune to censorship.³ A decade later, it is evident that China has put great effort into censorship and has arguably met with a good deal of success.⁴ China censors search results for key search terms such as, “Tibet independence,” “Tiananmen shooting,” “democracy,” and “Falun Gong.”⁵ Part of the

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¹ Available at www.jmrpl.com

² Indeed, there is reason to think that due to its one-child policy, young Chinese may be especially interested in spending time in virtual worlds and thus, by the CCP’s way of thinking, such worlds may be especially in need of policing. See The Internet in China: Alternative Reality, ECONOMIST, Feb. 2, 2008, at 69, 70.

³ See, e.g., Philip P. Pan, Chinese Evade Sensors To Discuss Police Assault, WASH. POST, Dec. 17, 2005, at A01 (reporting how the Chinese government barred newspapers and broadcasters from reporting the shooting of rural protesters in Guangdong province, but how Chinese citizens have used the internet to communicate the event); see generally Living Dangerously on the Net: Censorship and Surveillance of Internet Forums, REPORTERS WITHOUT BORDERS, May 12, 2003, http://www.rsf.org/article.php3?idarticle=6793 (discussing the use of internet forums in China and the filtering, censoring, and monitoring of those forums).


⁶ See OPENNET INITIATIVE, supra note 4, at 36; Tim Wu, The World Trade Law of Censorship and Internet Filtering, 7 CHI. J. INT’L L. 263, 263 (“[T]he Chinese government prevents its citizens from using various foreign Internet services, including foreign e-mail and certain foreign news sources, and requires foreign search engines and blog sites to filter unwelcome content . . . .”)

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reason this activity has received wide attention in the United States is that major U.S. companies are facilitating the censorship.6

A regime's censorship capabilities are facilitated to the extent that it is able to monitor its citizens' communications. Technological developments are enhancing the ability of regimes to engage in monitoring. The U.S. government is able to monitor communications between domestically domiciled U.S. citizens and people abroad by means of automated searches of their communications for key terms.7 Given that the technology is readily available, it is safe to assume that the Chinese government is engaged in the same sorts of monitoring of its citizens' communications with people abroad. Lacking Fourth Amendment protections, presumably, China goes further and monitors internal communications as well.8 Derogations of the sorts of behavior expected by the Chinese Communist Party ("CCP") can be expected to lead to punishment of various sorts.9 Fear of punishment in turn may lead to self...

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6 See, e.g., Matthew Forney, China's Web Watchers, TIME, Oct. 3, 2005, http://www.time.com/time/magazine/article/0,9171,1112920,00.html ("Beijing's control of the Internet is bolstered by its success at enlisting the aid of foreign companies such as Microsoft, Google and Yahoo!, all of which run online operations on the mainland."); David Greising, Baidu v. Google: The Battle for the Hearts and Searches of China's Web Surfers, Ch. Trib., Dec. 3, 2006, at C1. In 2006, Google made a new search engine available to Chinese Internet users. Id. Prior to this, Chinese users were able to access Google.com in the Chinese language version. Id. In the new search engine, Google.cn, Google cooperates with the Chinese Communist Party in blocking illegal content. Id. When searching for sensitive subjects on the new Google site, government sites or sites with the Chinese suffix ".cn" are retrieved; see Christopher Bodeen, Google Launches Censored China Site, Jan. 25, 2006, SFGate.com, http://www.sfgate.com/cgi-bin/article.cgi?f=/n/a/2006/01/25/financial/1f3325s64.DTL&hw=google&sn=001&ac=1000. Given that these websites are subject to government Registration Measures, the Chinese Communist Party can ensure that searches yield only government approved information. Id.; Luis Ramirez, Press Freedom Advocates Blast Google's Decision to Censor Itself in China, VOANews.com, Jan. 25, 2006, http://www.voanews.com/english/archive/2006-01/2006-01-25-voa5.cfm; Trina K. Kissel, License to Blog: Internet Regulation in the People's Republic of China, 17 Ind. Int'l & Comp. L. Rev. 229, 247 (2007). Describing the filtering capabilities of the routers supplied to China by Cisco, Kissel writes: "The version of Cisco routers that was purchased for China's network is capable of handling 750,000 filtering content rules. It is clear that China's network relies on Cisco routers: a Cisco whistleblower further alleged that Cisco customized and developed a type of router or firewall box specifically for China's specialized filtering needs. The router hardware and software that Cisco has provided to China is used both to "filter web traffic" and "conduct surveillance of Chinese Internet users." Id.; see also OpenNet Initiative, supra note 4, at 7–8; Derek Bambauer, Cool Tools for Tyrants: The Latest American Technology Helps the Chinese Government and Other Repressive Governments Clamp Down, LEGAL AFF., Jan.-Feb. 2006, at 56.

7 See Barton Gellman, Dafna Lizner & Carol D. Leonning, Surveillance Net Yields Few Suspects, WASH. POST, Feb. 5, 2006, at A01 ("[T]he [National Security Agency] has acknowledged use of automated equipment to analyze the contents and guide analysts.... The agency's filters are capable of comparing spoken language to a 'dictionary' of key words....").

8 Forney, supra note 6 (indicating that China "maintains control by instilling the fear in Web scribes and online businesses that they are being watched and that, if they cross the line, they are risking their investment, their business, even their freedom"). If, for example, the Dali Lama's characteristic words or voice could be searched for, this would be valuable to the CCP as it would allow it to, for example, locate citizens who were engaged in sending or receiving communications that had prohibited text, audio or audiovisual files attached.

9 Bruce Einhorn & Olga Kharif, China: Falling Hard for Web 2.0: Youngsters are Flocking to Homegrown Versions of MySpace and YouTube, BUS. WK., Jan. 15, 2007, available at
censorship, on the assumption that those who wish to engage in prohibited communications would be those most likely to have some knowledge of the government's abilities to monitor their communications and the potentially hazardous consequences to them of its doing.\textsuperscript{10}

China's text-based censorship would have been ideally suited to the earliest type of virtual world, the best known of its kind was LambdaMoo.\textsuperscript{11} Given the colorful manner in which commentators at the time spoke of LambdaMoo—most infamously, the so-called rape in LambdaMoo—one might have thought it more than text-based.\textsuperscript{12}

At the end of the day, however, inhabitants of this world, so to speak, sat at their keyboards and typed in text, and what they encountered on the screen as they

http://www.businessweek.com/print/magazine/content/7_03/b4017078.htm. One mild form of punishment for the site operator and its users is that sites that violate government policies may disappear. In discussing the potential benefits that may accrue to users who snitch on other users, one site operator notes that users "don't want their community to be destroyed by somebody putting up inappropriate content . . . ." \textit{Id.} "In the U.S. a naughty video might anger a few parents or religious group[s] in China, a far tamer clip could spur censors to shut down your company." \textit{Id.; see also} Forney, supra note 6.

\textsuperscript{10} Kissel, supra note 6, at 242–46. "One of the reasons many people choose to self-censor is the fear of imprisonment." \textit{Id.} at 243. "Through regulations that hold ISPs, ICPs, and BBS operators liable for content posted on their sites or by using their technology, the Party also induces these entities to self-censor topics that might be deemed illegal." \textit{Id.} at 245; \textit{see also} Einhorn, supra note 9.

While YouTube monitors videos for pornography and violations of intellectual property, in China the self-censorship goes much further. For instance, [Chinese website] WangYou gets about 6,000 video files a day, and the company can't afford to let a single one go live without checking it first. "All of this content has to be screened and scrubbed before it gets uploaded to the Web site," says Chief Financial Officer Edward Haynes, a 42-year-old Long Island native who worked as a banker at HSBC before helping to launch WangYou in 2005. \textit{Id.} WangYou employs a team of about two dozen in-house censors who screen videos twenty-four hours a day, seven days a week. \textit{Id.} In addition, the site encourages its users to flag problematic clips posted by other users by giving prizes such as free ringtones. \textit{Id.}

\textsuperscript{12} \textit{Id.} at 15–17. The event occurred in a room inside LambdaMoo where users could describe their characters and actions, build objects, make new rooms, all of which appeared as "a kind of slow-crawling script, lines of dialogue and stage direction creeping steadily up your computer screen." \textit{Id.} at 15. The accused rapist was a virtual character named Mr. Bungle, created by someone logged in from an NYU computer. \textit{Id.} Rather than describing his own actions, he used a "voodoo doll," a subprogram that attributed actions (that they did not actually perform) to other characters. \textit{Id.} Armed with the doll, Mr. Bungle created sadistic fantasies involving the two women in the room. \textit{Id.} Both women expressed to the other members of the MUD that they felt violated, that they had been virtually raped. \textit{Id.} at 17. This "rape in cyberspace" first came to public attention in an article in the Village Voice. See Julian Dibbell, \textit{A Rape in Cyberspace: How an Evil Clown, a Haitian Trickster Spirit, Two Wizards, and a Cast of Dozens Turned a Database Into a Society}, VILLAGE VOICE, Dec. 23, 1993, available at http://www.juliandibbell.com/texts/bungle_vv.html. However, especially after the story was expanded into a book, \textit{My Tiny Life: Crime and Passion in a Virtual World}, the event was covered in mainstream media and the aftermath of the rape (in which the victims called for Mr. Bungle's removal from the MUD) is often used as an example of one of the first virtual democracies as well as virtual crime. \textit{See, e.g.,} Emily Gordon, \textit{You've Got MOO}, NEWSDAY, Jan. 10, 1999, at B13: Alan Sipress, \textit{Does Virtual Reality Need a Sheriff? Reach of Law Enforcement Is Tested When Online Fantasy Games Turn Sordid}, WASH. POST, June 2, 2007, at A01; \textit{see also} LAWRENCE LESSIG, CODE: VERSION 2.0, 97–102 (2006) (recounting the "rape in cyberspace" event).
interacted with their LambdaMoo peers was more text. Thus, such a world would have been ideally suited to the sort of text-based censorship China has successfully engaged in. The first question, then, is whether and how this basic form of censorship translates to the more fulsome sorts of virtual worlds that are beginning to emerge?13

One of the distinctive features of the new breed of virtual world sites such as Second Life14 is that they are not fundamentally text-based. For such sites, the CCP will need to engage in other forms of monitoring and censorship. One rudimentary means of doing so is to physically monitor the Internet behavior of Chinese citizens. This is possible because use of Internet cafes is still prevalent in China.15 At such public venues, censors literally watch over the shoulders of users in order to observe their visitations to prohibited sites.16 Due to China's booming middle class,17 however, this method will become less relevant over time, as greater numbers access the Internet from the privacy of their homes.18

Another method the CCP employs is to have employees directly search for sites it deems worth censoring.19 This form of monitoring might present a moral hazard because the same harmful impact the regime fears will befall its ordinary citizens through exposure to prohibited material may befall the censors as well. It seems entirely possible that censors, no matter how disciplined, might be subject to a sort of Stockholm Syndrome in which they come to sympathize with the democracy-promoting content to which they are being exposed.20 Nevertheless, this form of direct monitoring may be necessary, at least under current technologies, in order to

13 Mechanisms for censorship are also generally unable to recognize banned words that users have altered by adding dashes, asterisks, or other characters. See OPENNET INITIATIVE, supra note 4, at 48.
15 See Kissel, supra note 6, at 253 (“Control of Internet cafes is critical for the CCP because many Chinese citizens are unable to afford a personal computer, and they use Internet cafes as the primary method for gaining Internet access.”).
16 See Forney, supra note 6.
18 Wray, supra note 17, at 29 (“China now has more than 56 million [internet users] and looks set to overtake the US as the world’s largest broadband market this year.”).
19 See Living Dangerously on the Net: Censorship and Surveillance of Internet Forums, supra note 2 (describing methods to censor and control information posted online). The Chinese Communist Party is estimated to employ 30,000 individuals to check websites. Id.
20 See Carol Jacobsen et al., Battered Women, Homicide Convictions, and Sentencing: The Case for Clemency, 18 HASTINGS WOMEN’S L.J. 31, 38 n.66 (2007) (citing Sharon Allard, Rethinking Battered Woman Syndrome: A Black Feminist Perspective, 1 UCLA WOMEN’S L.J. 191, 192 (1991); LENORE E. WALKER, THE BATTERED WOMAN 16 (1979)). Characteristics of Stockholm Syndrome include: identification with captors, fear that rescuers may hurt captors, and empathy for captors. Id. The theory explains that captives may actually be safer when they begin to think in ways incompatible with their situation as a means of survival, because they are not antagonizing their captors. Id.
locate the problematic sites and disable far greater numbers from being exposed to the prohibited content.

Even though virtual worlds are moving beyond text, nevertheless, such sites also contain text in a variety of forms that will remain of interest to the CCP. After all, if the regime is interested in searching e-mail, web searches, and voice communications for discussion of, or searches for, prohibited terms and topics, presumably the same would hold for use of the same terms and topics when they appear in virtual world contexts. The conversations of avatars, for instance, will clearly be of interest.\(^2\) While avatars speak to one another in venues such as Second Life,\(^2\) this speech must first be typed in by the avatar's real world persona. Presumably this will change as it clearly will be of interest to many avatars to be able to converse directly in audio rather than first having their words translated to text form. Thus, censors will need to be able to locate prohibited spoken words such as "Falun Gong," "democracy," etcetera.

The sophistication of searches must expand from there, however, as it presumable would not do were these same avatars able to communicate prohibited thoughts via sign language.\(^2\) This is where new difficulties may arise, however, for while it may have been relatively straightforward to come up with a list of problematic terms to search for in the speech of virtual world participants, behavior appears more difficult to categorize into prohibited and un-prohibited categories. For instance, what would it mean to exclude all democratic behavior that takes place in a

\(^{21}\) See 2 Richard Raysman et al., Emerging Technologies & the Law: Forms & Analysis app. E (2008). An "avatar" is defined as:

An on-line, real-time graphical representation of an interactive computer service user visible to other users accessing (or sharing) the same virtual three-dimensional world. Depending on its implementation, an Avatar may communicate by a combination of body movements (such as walking, gesturing and making facial expressions), text and speech, all of which may be seen and heard by other occupants of the virtual world. Avatars may grasp, possess and exchange objects with other Avatars and entities within the virtual world. Avatars present an alternative to text-based interactive communication.

Id.

\(^{22}\) See Cory Ondrejka, Escaping the Gilded Cage: User Created Content and Building the Metaverse, 49 N.Y.L. SCH. L. REV. 81 (2004). Ondrejka, then Vice President of Product Development at Linden Research, Inc., described Second Life as an online world built by its users with in-world tools that allow for collaborative real-time creation. Id. at 87.

\(^{23}\) Based on what we have seen so far, there is every reason to believe that search engines will greatly expand their capacities, if for no other reason than because doing so is likely to be highly desirable for purely commercial reasons if the success of Google and China's leading commercial search engine, Baidu, are any guides. David Barboza, Shy of Publicity but Not of Money, N.Y. TIMES, Nov. 7, 2007, at C1. Robin Li, founder of Baidu, which is called China's Google, is now worth about $2.4 billion. Id. Image searching has already had some success. For example, Flickr and Ditto (formerly known as Arriba Soft) are commercial websites that provide images in response to searches. See Ditto Home Page, http://www.ditto.com (last visited May 3, 2008) [hereinafter Ditto.com]; Flickr Home Page, http://www.flickr.com (last visited May 3, 2008) [hereinafter Flickr.com]. These sites, however, are still text-based in the sense that the searcher enters words in order to do the search. See Ditto.com; Flickr.com. The images retrieved are those with metadata that correspond to the search terms. See Ditto.com; Flickr.com. This raises the question of what type of non-text-based searches would be most effective. See Lateef Mtima, The Changing Landscape of Internet Use and Dissemination of Copyrighted Works: New Tools, New Rules, or the Same Old Regime?, COMPUTER & INTERNET LAW., Oct. 2007, at 7 (2007).
virtual world? Perhaps news coverage on election nights in Western democracies is the sort of paradigmatic democratic activity that would appear most obviously worth censoring. Another easy case might be the well-known video of the student standing in front of the tank in Tiananmen Square, or to take a recent example, footage of Tibetan monks protesting would seem clearly at the core of what the CCP appears to deem censor-worthy. But once we move away from iconic examples like these, it will be harder to characterize the sort of prohibited behavior that avatars should not be allowed to engage in. The emergence of virtual worlds, then, will force China to redefine what constitutes prohibited activity.

Currently there seems little behavior of an overtly democratic caste in virtual worlds such as Second Life. Consider the types of behavior that have gotten the most media attention. The important leap that distinguishes sites like Second Life from LambdaMoo is the presence of a representational visual space and the presence of avatars. One wears clothes and can do usual types of actions such as walking, going shopping, or meeting a friend for coffee. The space one inhabits contains representations of reality that extend to oneself. For example, if you meet a friend for coffee, you can meet him or her at a Starbucks and the Starbucks is really there in the sense that there is a virtual building with a sign out front. When you are there, other people who stop by will see you—embodied as your avatar—there and can come up and interact with you. Not only is the virtual space three-dimensional in appearance, but it also functions according to a clock and calendar. You can go to Starbucks, but it might be closed for the night or a holiday, or you might get there at rush hour and have to stand in line with the other avatars. Undoubtedly, virtual worlds still have a long way to go. This is perhaps a mixed blessing—one will not be able to smell the coffee but nor will one be able to smell the body odor of the person in front of one in line.

Second Life is the best known of a new type of virtual world in which the controllers are opening up the options for the players such that they are free to engage in a parallel universe of activities that mimic their ordinary lives, or alternatively, mimic someone else’s perhaps not so ordinary life. For example, the Wall Street Journal did a story about a man who is married in real life but who is married to someone else in Second Life. In his first life, he is balding and sports a

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23 LESSIG, supra note 12, at 12 (“In [the extraordinary community of Second Life], people create both things and community, the avatars are amazingly well crafted, and their owners spend hundreds of thousands of hours building things in this place that others see, and some enjoy.”).
24 Id.
25 Cf. John W. Crittenden, Real I.P., Virtual Worlds—Issues in Litigating Trademark and Unfair Competition Cases in Second Life and Like Spaces, in LITIGATING TRADEMARK, INTERNET, AND UNFAIR COMPETITION CASES 2008, 241, 244 (ALI-ABA Course of Study), available at WL, SN053 ALI-ABA 239 (noting some “real world” brand owners such as Toyota and Pontiac have virtual dealerships, while others such as Comcast sponsor virtual venues).
26 See LESSIG, supra note 12, at 12.
27 But see Shogo Matsuda, Sending Touch, Smell Over Net, NIKKEI WKLY., Nov. 13, 2006, available at 2006 WLNR 22890311 (“Hearing and seeing will soon be no longer the only senses that can be digitized and transmitted over the Internet—touch, smell and taste are next in line.”).
In Second Life, he is in his twenties, buff, and drives a Harley.\textsuperscript{34} It may seem easy to scoff at the diminished shadow world that is Second Life, but this man’s real wife would disagree.\textsuperscript{35} She feels that she has lost her husband, not body but soul, because he has given his attention span to his virtual persona, and his virtual persona’s virtual wife.\textsuperscript{36} Newsweek did a cover story on Second Life.\textsuperscript{37} The focus was on the possibility for making money and having diverse social relationships and taking a diverse persona for one’s avatar.\textsuperscript{38} Another development that is receiving attention is the migration of real world companies to Second Life. These companies are starting to develop virtual brick and mortar presences, with employees engaged in developing commercial opportunities.\textsuperscript{39} Reuters for example was the first media organization to open a branch office in Second Life.\textsuperscript{40}

In order to have a robust economy there must be a means of exchange. Linden Labs’ currency is the Linden dollar.\textsuperscript{41} It is early in the development of economies like Second Life. There might have been a time when just the fact that sites like Second Life are developing market economies would have been enough to interest the CCP’s censors. But today, China has an exploding market economy.\textsuperscript{42} Thus, presumably, it is not the fact that virtual world sites are developing market economies, per se, that would necessarily cause the censors to shut off access to such sites. The critical issues are democracy and individual rights, not markets.\textsuperscript{43} It has sometimes been facilely assumed that markets require democracy, but to all appearances the CCP thinks otherwise and with apparent good reason given that their economy has had one of the top growth rates in the world over recent years and has what would appear to be an undemocratic yet stable political regime.\textsuperscript{44}

\begin{footnotesize}
\begin{itemize}
\item\textsuperscript{33} Id.
\item\textsuperscript{34} Id.
\item\textsuperscript{35} Id.
\item\textsuperscript{36} Id. ("Basically, the other person is widowed," she says. "This other life is so wonderful: it’s better than real life. Nobody gets fat, nobody gets gray. The person that’s left can’t compete with that.").
\item\textsuperscript{38} Id. ("The people who are coming to this online universe aren’t just socializing, however. They’re also doing business, collaborating on research, teaching courses, dating and even having sex.").
\item\textsuperscript{39} Id. ("The multinational companies are using Second Life in a different way: some are holding staff meetings where avatars representing employees can discuss ideas via instant message, e-mail or Skype, in a souped-up virtual office.").
\item\textsuperscript{40} Andrew Adam Newman, \textit{Reuters Enters Domain of the Geeks}, INT’L HERALD TRIB., Oct. 16, 2006, at 10 ("While many independent journalists and bloggers have published inside such virtual worlds, Reuters is the first established news agency to dispatch a full-time reporter to do so.").
\item\textsuperscript{41} Dean Takahashi, \textit{Giving a New World Currency}, WALL ST. J., Mar. 12, 2008, at D8.
\item\textsuperscript{42} David Barboza, \textit{A Rapid Rebound: Chinese Stocks Set Record}, N.Y. TIMES, Mar. 22, 2007, at C12.
\item\textsuperscript{43} See Sophie Richardson, \textit{Olympic Word Games}, WALL ST. J., Aug. 8, 2007, at A12 ("It’s a means of limiting what people can talk about . . . .")
\item\textsuperscript{44} Despite the fact that Second Life is peopled with avatars of varying colors and species, it is more life-like than many other virtual world sites in that a world is being created by the users. This is in contrast to most early virtual world sites which have been shoot-'em-up worlds or Dungeon & Dragons type worlds. These worlds can hardly be seen as promoting democracy. In fact, one could more easily argue the opposite: that such worlds teach social hierarchy, or teach users to be
If China feared that its citizens would be negatively influenced by seeing photos or video of events like Tiananmen Square, then one might reasonably assume that the sorts of enhanced experiences that are possible in virtual worlds would be especially troublesome to the CCP, given the necessarily vivid experiences that are possible in virtual worlds. Things are not so simple, however, because having access to virtual worlds may also allow Chinese citizens to display their loyalty to the Chinese regime. If a user was role playing as the student in front of the tank in the Tiananmen Square situation, he could instead unfurl a sign that said, “Down with U.S. imperialism.” In this situation, one can only prove one’s loyalty to the regime if one is given the freedom to choose.

Alternatively, the role-playing situation could be coded so as to take away the person’s free will and force him to choose the course of action preferred by the CCP. A citizen’s avatar would be put in front of the tank and then through causal forces outside of the volition of the citizen in question, his avatar would be caused to act in the manner deemed appropriate. Doubtless, for many people, the CCP’s supplanting of avatar autonomy will call into question the point of taking part in virtual worlds in the first place. One would be a witness to one’s own actions; watching as one’s arms and legs moved in a manner that was directed externally.

It will be worthwhile to consider the main options available to the CCP for dealing with the arrival of virtual worlds. One obvious option would be to not let its citizens take part in virtual worlds in the first place. One initial question is whether this would be possible as a technical matter. Clearly, China is capable of restricting its citizens’ access to particular websites. Even if it was not possible to produce an airtight regulatory regime, it may be good enough, even if porous and imperfect. The CCP has demonstrated a willingness to use high levels of physical coercion to achieve its aims. While even these extreme actions do not squelch prepared to serve as citizen soldiers. Thus, the important question is whether the sorts of virtual worlds that are likely to come about pose a greater threat to China than those that have emerged thus far.

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45 See Alter, supra note 32.

46 One would be a homunculus. See CAMBRIDGE DICTIONARY OF PHILOSOPHY 392 (Robert Audi ed., 2d ed. 1999). The homunculus is a term from the philosophy of mind to capture one Medieval conception of the mind in which it was characterized as like a little man inside one's head that observed one's external activities. Id. (defining “homunculus” as “a miniature adult held to inhabit the brain (or some other organ) who perceives all the inputs to the sense organs and initiates all commands to the muscles”). Whereas the homunculus looked out over the body's physical movements and reactions, one in the situation of an avatar whose actions are directed externally would be a witness to one’s physical movements but not in combination with witnessing one’s will direct these motions. One would be a passenger and not a driver in the two-person vehicle that is the self.


48 See, e.g., Loretta Chao & Jason Leow, World News: China Says Tibetans Plot Suicide Attacks, WALL ST. J., Apr. 2, 2008, at A9. The International Olympic Committee demanded that China suspend its Internet blocking policies during the Olympics, but the Ministry of Foreign Affairs responded, “Our Internet policies are clear. Some sites are blocked because they disseminate information that we have banned.” Id.

49 See Fallows, supra note 4.
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dissident activities completely, they may nevertheless lower the level of dissident
activities in virtual worlds to a minimum such that the regime would deem the effort
a success, given its goals.

In the long run, however, it would seem impractical for China to attempt to
restrict all participation in virtual worlds. There will be too much good that can
come from its citizens spending time there, or at least this would seem true for some
of the possible virtual worlds one can imagine. Currently, many virtual worlds are
for the most part in the domain of recreation and leisure. This is changing, however.
The more sophisticated these worlds become, the harder it will be for China to
restrict access. Some have made this argument on technological grounds. I am
making it on economic grounds. For example, imagine a situation in the future in
which say 10% of the Gross Domestic Product ("GDP") of many countries is based
on economic activity in virtual worlds. The reason should be obvious why China
would have to think twice about not allowing its citizens to participate in virtual worlds in
such circumstances, given China's evident desire to grow its economy and further
integrate itself into the world economy, as is evident in its recent successful effort to
join the World Trade Organization.

Other reasons for participation will emerge as these worlds become more
complex and diverse. For example, handicapped people are choosing to spend time in
Second Life in part due to the ability to shed some of the real world impact of the
handicap. A 100-year-old person in real life can choose to be an Olympic sprinter in
virtual reality. Well, not yet, but down the road, if Second Life or some other site
decides to host an Olympics, this will become possible. With each country that
decides to participate, the pressure and incentives on other countries to participate
will grow. Imagine as well that further down the road participation in the virtual
Olympics became highly competitive. In this world, China would presumably have
an enhanced reason to compete in these Olympics, namely for the same reason it has
for competing in the present Olympics: national pride.

Although the regime may well decide to let citizens participate in virtual worlds,
there are other options besides either allowing full access or alternatively no access
to such worlds. For instance, the CCP could require a valid passport for travel
outside of the world or worlds it deems acceptable. This would be a very effective
means of restricting travel, just as in the United States where one needs a passport

50 Shawn Healy, The Great Firewall of China: Looking at the Law, 71 SOCIAL EDUCATION 158
(2007) ("Despite the duplicity of American companies and China's seemingly endless firewall across
the information superhighway, cracks are emerging along its surface ... Proxy sites ... allow
Chinese users to circumvent government censorship.").
51 Takahashi, supra note 41, at D8 ("As of April 2007, the company reports, Second Life
economic activity averaged the equivalent of about $1.5 million a day in U.S. currency.").
52 See World Trade Organization, Protocol on the Accession of the People's Republic of China,
WT/L/432 (Nov. 10, 2001), available at http://www.wto.org/English/thewto_e/acc_e/
completeacc_e.htm#chn.
53 See Bennett & Beith, supra note 37 (describing the Second Life experiences of a man
suffering from cerebral palsy and a woman suffering from reflex sympathetic dystrophy).
54 Ma Ruiguang & Jia Bingwei, How to Make Olympics Work For Your Firm,
content_6009794.htm ("The modern Olympics is not just about sports, because human values,
aesthetics, competition between nations and regions, national pride ... are entwined with the
Olympics.").
to leave the country, which means that one’s travel is thereby restricted to travel within the country unless one applies for and receives a passport, which requires money, time and an unencumbered legal status. Alternatively, just as certain websites are family-friendly or child-friendly, the CCP might only let its citizens participate in virtual worlds that are CCP value-friendly. One commentator has noted that because of the CCP’s censorship of pornographic materials, China’s online experience may be family-friendly and hence attractive to some foreigners. \(^5\) While the commentator was talking about websites, the same logic pertains to virtual worlds. In other words, the CCP might not restrict access to certain virtual worlds whose values are acceptable to it, and these worlds might be desirable to others as well, either because they share the same values or have an instrumental reason to spend time in the same worlds as the censor-compliant Chinese.

Contra wise, if worlds emerge that bear a strong U.S. stamp, then, other things equal, one would expect the Chinese government to be concerned that free access to these worlds might have too large an influence on its people in terms of giving them a desire for a greater degree of democratic participation. Indeed, the harmful influence of unrestricted access to a virtual world that largely instantiated Western values might be perceived as potentially harmful apart from any overtly democratic institutions that might be instantiated there.\(^5\) The whole way of life of a people might be perceived as threatening. This is the logic behind the evident fear of exposing one’s citizens to say television programs from a country whose values are perceived as antithetical to that of the censoring regime?\(^5\)

It is worthwhile to look into the future and make some speculations of where things may lead, based on the intrinsic logic of the situation. First, consider the stakes involved. The most significant issues are likely to concern basic freedoms and political rights. Past history indicates that some people will take great chances and make extreme personal sacrifices in the pursuit of fundamental political freedoms. Clearly, this cannot be said for the mass of people, who in times of great political unrest can be seen to mainly watch from the sidelines.\(^5\) But just as this is true for the masses, it is equally true that small, albeit often causally significant numbers, will make political sacrifices. In the particular context of China, this has been seen very recently in the behavior of those Tibetan monks who have stood up in various ways to the Chinese government at great personal risk.\(^5\)

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\(^5\) See generally RUSSELL HARDIN, COLLECTIVE ACTION (1982) (discussing how people sometimes act contrary to public choice theory, which postulates that people will act in their individual interests in making collective decisions).

Falun Gong. Despite continued persecution by the Chinese government, many members of this political sect continue to take actions to promote their religious freedoms.

Because of the upcoming Olympics in Beijing, there is an even higher degree of attention being paid to the regime. Some commentators have expressed the expectation that given that the regime is under the spotlight, it might be on its best behavior. In fact, however, the regime has continued its activities to squelch political dissent. One might read this as an implicit message by the CCP that it will not slack off in its zeal. Thus, the background set of intentions, desires and prerogatives are in place such that one can expect both those seeking greater political freedoms and those seeking to squelch the freedoms to each take full advantage of the possibilities to further their respective agendas that may be presented in virtual worlds. The question, then, becomes one of outlining the possibilities that will become available to those warring parties to pursue their agendas in virtual worlds to come. To some extent this is unknowable of course as it asks for a prediction about the possibilities presented by future technology. Nevertheless, it is possible to engage in informed speculation based on key functional concerns of the parties.

Once these desires of the parties for how they plan to function in virtual worlds are established, accomplishing these goals becomes a matter of code writing and possession of the ways and means to insure that the virtual world in question comes to instantiate the desired coded outcome. Thus far, virtual worlds display features that reflect the fact that they have emerged as products of commercial companies. In general terms, sites have constricted the activities of the participants in order to promote the site's financial success. In large part, the early worlds reflect the fact that they grew out of the commercial gaming world. Thus, the sites are designed to be compelling games, not compelling political societies. Blizzard Entertainment, for instance, has stated its intention to take legal action to stop third-party sales of helmets, shields, and other equipment that would enhance a player's ability to

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(60) On This Day, July 23, 1999, TIMES (LONDON), July 23, 2007, at 51 (“China mobilises a wide array of forces against the Falun Gong sect in the biggest state clampdown since the Tiananmen Square democracy protests.”).

(61) Elisabeth Rosenthal, China Admits Banned Sect Is Continuing Its Protest, N.Y. TIMES, Apr. 21, 2000, at A9 (“China’s state-controlled media for the first time acknowledged today the government’s persistent difficulty in stamping out the banned Falun Gong spiritual movement . . . .”).

(62) Interview by Terry Gross, Radio Host of Fresh Air, NPR, with Pico Iyer, Journalist, on NPR, (Mar. 26, 2008), available at www.npr.org/templates/story/story.php?storyId=89109552 (discussing the Tibetan uprising and the Dalai Lama's reaction to it: "Everyone is assuming that China will put on its best face and will be on its best behavior while the world's attention is turned to it in these next few months.").


(64) See Ondrejka, supra note 22, at 87–88.

(65) Indeed, one might wonder if it is the natural course of things that the commercial should develop before the political. See ROBERT ELIICKSON, ORDER WITHOUT LAW, 5–7, 123–37 (1991). The so-called taming of the West has been characterized in these terms. Id. It was initially commercial opportunities that drove people to head West and, early on, the government was largely informal norms and power relationships. Id. It was only later as populations increase and social frictions developed that a need for government developed. See id.
prevail against adversaries while playing World of Warcraft. This is also important to Sony’s business model for more than the straightforward reason that when third parties make money in this way, Sony may suffer lost sales. The larger concern is that the basic logic of the Sony’s Everquest game relies on the quest of players for higher status in the game. Typically, one must spend time on the site in order to hone one’s skills and take the time to achieve the higher status. Given that Everquest makes money by subscription fees, it is important that its players spend time playing the game. Thus, to the extent that the means to achieving higher status may be purchased, players will spend less time acquiring this status through play. This evident desire to keep sites such as Everquest a domain of fun and games explains why the Terms of Use of the site and other sites like it have policies that discourage or prohibit the sort of activities that might be expressive of political freedom. Controversial political activities might potentially detract from the basic entertainment value of the game for other players, who may not share the politics of those being expressive.

This baseline of virtual worlds as loci for uncontroversial entertainment explains why Second Life has gone to such great effort to sell itself as distinctive in the fact that it encourages creation, ownership, and exploitation of property by its participants. Flexible property rules allow for a significantly greater degree of freedom of action in virtual worlds for the same reason they do in the real world, namely, they give people more choices about how they can spend their time and increase the range of options people can choose to accomplish their goals. Even in the case of Second Life, however, the site has proven that it will quickly take actions to preserve its perceived business interests, despite the fact that doing so may conflict with its promise of private ownership for its users. This was seen in the lawsuit, Bragg v. Linden Research, Inc., in which Bragg sued Linden Labs for canceling his account and consequently forcibly repossessing virtual real estate that

6 Kathryn Balint, Selling Fantasy-World Assets for Profit Raises Real-Life Concerns, SAN DIEGO UNION-TRIB, Jan. 1, 2007, at C1. Undoubtedly, there is a public relations aspect as well as the workers have a parallel to situations in which workers in less developed nations labor under questionable labor conditions. Because Blizzard isn’t a private company, it is natural that it cast the situations in terms of public relations. Id: see also Matt Richtel, Vivendi to Acquire Activision, Producing a Leader in Video Games, N.Y. TIMES, Dec. 3, 2007 at C1 (discussing Blizzard’s publicly traded parent company, Vivendi). As a publicly traded company, Vivendi has fiduciary duties to its shareholders to maximize shareholder value. Id. In pursuit of this goal, it is structured by U.S. law to view issues concerning work standards in foreign countries in terms of impact on shareholder value, not in basic political terms, that is, not in terms of whether social welfare or fundamental rights would benefit from exploitative labor conditions. Id.

6 Nick Wingfield, Online Startup to Sell Virtual Goods, GLOBE & MAIL, Dec. 17, 2007, at B5 (“[Players] can achieve status and advancement for their in-game characters by acquiring powerful weapons, armour, and game currency.”).


6 See Ondrejka, supra note 22, at 94–96 (discussing what a gamer can do under a typical Terms of Service); see also World of Warcraft, Terms of Use Agreement, http://www.worldofwarcraft.com/legal/termsofuse.html (last visited May 3, 2008).

70 Nick Balint, Everquest II in an effort to recoup lost opportunities).

Bragg had purchased in Second Life using real money. It is fair to conclude, then, that as long as virtual worlds remain in the hands of private commercial enterprises, we should expect functional opportunities in these virtual worlds to ultimately serve commercial ends.

Thus, it is essential that for present speculative purposes, we move beyond the sorts of virtual worlds that are likely to emerge, given the market norms of private enterprise. If a public domain virtual world emerged, it would naturally be inclined to be more influenced by non-market norms such as fairness, equality, free speech, freedom of association, etc. At least one hopes this would be true of such worlds if they are instantiated in U.S. servers. Such a world is plausibly not utopian for a few reasons. First, advances in technology are likely to dramatically lower the cost of virtual worlds. Currently, they are very expensive to develop and maintain. But this might easily change. As the cost of building virtual worlds is reduced, at some point they will emerge not as sponsored by a company, but on their own as free code, or perhaps sponsored by particular political regimes. It will be interesting to see how common virtual worlds will be. Many possibilities emerge. Will virtual worlds develop for small groups? Will people spend time in more than one world?

Can worlds remain fully private or will complexity necessarily bring the sorts of developments that make some form of government intervention, oversight, or regulation inevitable? There will be a natural dynamic by which private interactions will cease to remain private when third parties are affected by the behavior of the first and second parties. One sees this emergence of public-regarding features in U.S. law through this process. For example, in tort law, courts sometimes evaluate contracts between parties in terms of impact on the public interest. Similarly, we can expect courts to be interested if private virtual worlds begin to have deleterious impacts on people, especially if the persons impacted are third parties to whatever set of contracts and informal relationships that emerge between the immediate parties who are engaged in building, regulating and occupying these worlds. Indeed, it would seem reasonable to speculate, given present norms, that there will be a demand for a public domain virtual world.

Even within the commercial virtual worlds that exist, there may well be a dramatic increase in more overtly political activity. Unless the controllers of these worlds actively seek to stop the development, it would seem likely that groups would attempt to use sites like Second Life to form groups such as Falun Gong. If it becomes the case that virtual worlds serve as staging grounds for affinity groups to gather, this will take on great political significance for the CCP for the obvious reason that these meetings may be antithetical to the regime's goals.

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72 Id. at 585–97.
73 See Viktor Mayer-Schonberger & John Crowley, *Napster's Second Life?: The Regulatory Challenges of Virtual Worlds*, 100 NW. U. L. REV. 1775, 1802 n.140 (2006). As new virtual world providers with the latest software adding improved features and options enter the market, the existing virtual world providers face increasing costs to modify and adapt their software to compete. Id. The improved features in the updated software can make it more expensive for participants. See F. Gregory Lastowka & Dan Hunter, *The Laws of the Virtual Worlds*, 92 CAL. L. REV. 1, 10 (2004) (describing the expensive property a user can purchase and accumulate).
74 See, e.g., Dalury v. S-K-I, Ltd., 670 A.2d 795, 799 (Vt. 1995) (noting that a ski hill was open to a large public, thus affecting the duty analysis and effectively creating a public duty for the ski hill).
The first question is of course whether these sorts of scenarios will in fact emerge. The previous discussion may have overstated their likelihood. We are talking about virtual worlds, after all, not the real world. Perhaps the reasons that motivate the CCP to monitor and censor its citizens' activities with regard to a number of subjects of direct political significance, such as the repression of democratic activity, will not occur. It may turn out that it is not necessary to regulate in this repressive manner as it turns out that dissident groups simply do not end up spending time together in virtual worlds. This is an important question. While this outcome is possible, the basis for the thought vests on inferring future participation in virtual worlds based on past participation, when the more important consideration is whether the trend line for growth will continue. If growth in participation in virtual worlds continues, there will quickly come a time when dissidents participate in virtual worlds if for no better reason than the fact that they grew up in relatively typical circumstances and these included, for many, having an avatar. Moreover, if some virtual worlds come to offer attractive opportunities for autonomy and engagement in activities outside the censor's eye, these opportunities will give added incentive to dissidents to seek out these worlds.

The response that affinity groups will not spend time in virtual worlds may rely too much on the fact that these groups are relatively unfamiliar to the majority of people presently. Given the limited nature of virtual worlds in terms of complexity, it is not surprising that the vast majority of people do not presently spend time in a virtual world. A few considerations lead us to think beyond the limited worlds that presently exist. One consideration is the rate of growth of virtual worlds. This suggests continued growth. The second key factor is that virtual worlds are likely to become much more complex, diverse, and more powerful in coming years, making them more attractive and useful to people. The question then is not whether such worlds look attractive based on the worlds that currently exist, but, rather, given the desires and determinations of the various actors, what do virtual worlds allow for, and what will they not allow for, in terms of meeting the needs of people in a low cost manner? While not all members of most affinity groups will be spending time in virtual worlds, a significant percentage of many affinity groups will have members spending time in virtual worlds, and for these people, it seems very plausible to think that they will, in significant numbers, find it of interest to meet up or engage in collective activities. Another feature of virtual worlds that is significant is that people report strong affinities to these worlds. Some 22% in one study reported that their virtual world lives were more meaningful than their non-virtual lives.

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75 Dawn C. Chmielewski & Alex Pham, Disney Adds Fantasy Lands: The Company and Others are Pushing Heavily Into Creating Virtual Worlds for Children, Eyeing Subscriber Revenue and Brand Recognition, L.A. TIMES, Jan. 28, 2008, at C1 ("As many as 20 million children and teens will visit virtual worlds by 2011, up from 8.2 million in 2007. . . .").
76 In an increasingly populated and resource dependant world, reality may well become a luxury good. People who can afford to do so go parasailing off a beach in Costa Rica on their vacation, and those who cannot afford the real thing can have their avatar go parasailing off a beach in Costa Rica that may come to exist in some virtual world.
78 Id. (reporting that 22% of respondents agreed with the statement: "If I could, I would spend all my time in Norrath").
Given the inherent logic when these factors are combined, we should expect that virtual worlds increasingly exhibit the influence of non-commercial normative influences. The question, then, is what features will characterize these emerging, normatively more complex virtual worlds? Other things equal, it would be expected that they will reflect the norms of those with the ability to wield power in these worlds. To the extent that those who wield power are say typical U.S. citizens, one would expect that real world norms would be extended to the virtual world in question to the extent that virtual world situations have structural parallels. An early example of this can be seen in the comments made about the situation of hiring Mexican workers to mine gold in Dark Age of Camelot.\(^7\) The situation was evaluated through the lens of exploitation of workers in low wage countries as on par with the sort of analysis one would use with third-party sweat shops where shoes and clothing for the first world are manufactured.\(^8\) Thus, the relevant issue is what sorts of developments we can expect to see in virtual worlds given the background norms of developers or powerful inhabitants? From the perspective of the CCP, the key factor would be the fact that virtual worlds that emerge from a Western democratic context will reflect the norms dominant there. Thus, the fact that sites like Second Life are presently dominated by market norms will provide cold comfort as the CCP should expect that over time virtual worlds will become more public-norm oriented, and that these public norms are likely to be those of the West.

The potential normative structure of these worlds is as open as are the possibilities for coding different alternatives. One of the leading ideas that people have taken away from Lessig's work is the idea that code is law.\(^9\) In a non-legal sense, one can claim that code is law is as much as it can limit one's behavior. In this broader sense, law is better understood as more akin to a law of nature. In this sense, code can determine the range of behavioral options in a virtual world in a manner compatible to that in which laws of nature can determine or confine one's options in the real world. Whether an avatar is likewise restricted in a virtual world such as Second Life will be a function of the possibilities offered by the manner in

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\(^7\) Chua Hian Hou, *Gold Diggers May Be Violating Law: Online Gamers are Selling Virtual Bounty for Real Money, But They May Find Their Game Accounts Banned—Or Worse, Even Be Sued*, STRAITS TIMES (SINGAPORE), May 23, 2006, available at 2006 WLNR 8789299 ("In early 2002, Black Snow Interactive set up the world's first virtual sweatshop. It employed eight Mexican workers to sit in an office 'farming' virtual gold and equipment in the online game Dark Age Of Camelot.").

\(^8\) Id.

\(^9\) Orin S. Kerr, *The Problem of Perspective in Internet Law*, 91 Geo. L.J. 357, 369 (2003) ("Professor Lawrence Lessig is today's most influential cyberlaw theorist. Lessig has popularized the idea that 'code is law.'"); see LESSIG, supra note 12, at 5. Worlds could be created to instantiate particular normative conceptions. For example, there could be a virtual world in which all participants started out with the same amount of resources. Another world could be constructed in which all participants had the same natural endowments. In fact, virtual worlds could be constructed to instantiate a variety of normative theories such as the varieties of egalitarianism just mentioned. The Rawls/Nozick debate defined political theory in the last quarter of the twentieth century. See JOHN RAWLS, A THEORY OF JUSTICE (Oxford Univ. Press rev. ed. 1999 (1971); ROBERT NOZICK, ANARCHY, STATE, AND UTOPIA (1974). Each proffered his version of the ideal society as justified by the competing set of normative principles each proffered. See RAWLS, supra; NOZICK, supra. If virtual worlds grow in their attractiveness, people will be able to choose whether they prefer to spend their time in the Rawlsian or the Nozickian world.
which the particular world is coded. For example, Second Life might be coded to be a world in which people could choose whether or not they had hair. As currently constituted, Second Life allows one this choice. One could imagine other choices being made, however. For example, someone might develop a world in which one is required to take on those features one possesses in the real world. One might retort, however, that in a free and competitive market, no one would choose to live in this world, when they could instead choose to inhabit a world where one could be younger, better looking, etc.

Indeed, from what we have seen so far, the ability to alter one’s physical characteristics seems like one of the leading features that attracts people to virtual worlds. We are at such an early stage in the development of virtual worlds, however, that it is hazardous to speculate regarding the sorts of preferences people will develop with respect to the virtual worlds they choose to spend time in. The relevance of this discussion to the topic of China is that just as code will determine the options regarding possibilities such as whether one’s avatar can have hair for life, or for that matter, have wings and be able to fly, is a matter of which laws are coded into the world. Thus, issues concerning how the world is coded take on political significance. To take some flagrant examples, a world that is coded in differences in ability or opportunity based on one’s race or gender would be deeply offensive to fundamental and widely shared norms of equality. Indeed, even coding choices such as whether avatars can choose whether or not to be younger, better looking, et cetera, are not without political significance. If virtual worlds came to be evaluated in terms of the viability of the justification of the structure of the world, a basic commitment to political liberalism would seem to demand that unless a rule against such individual choices could be justified, then they must be allowed under the core and widely shared libertarian principle that what is not forbidden is allowed.

The same normative logic of liberalism that justifies what are sometimes referred to as alternative lifestyles in the real world would justify coding imperatives that promote maximum freedom consistent with whatever justification for political restraint are in place, such as Mill’s Harm Principle.

What this means is that over time virtual worlds are likely to develop that are considered more threatening to the CCP, given the willingness to segregate its

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82 See LESSIG, supra note 12, at 110 (explaining how a restriction that prohibits Second Life pilots from flying below fifteen meters above one’s property is controlled by code).
83 See, e.g., Alter, supra note 32.
84 See J.L. HILL, THE FIVE FACES OF FREEDOM IN AMERICAN POLITICAL AND CONSTITUTIONAL THOUGHT, 45 B.C. L. REV. 499, 524–29 (explaining that libertarian or negative liberalism theory regarding personal freedom concerns the degree of constraint on the individual, whether it is physical (Hobbesian) or moral, political, or judicial (Lockean)).
85 JOHN STUART MILL, ON LIBERTY 9 (Elizabeth Rapaport ed., Hackett Publ’g Co. 1978) (1859). The object of this essay is to assert one very simple principle, as entitled to govern absolutely the dealings of society with the individual in the way of compulsion and control, whether the means used be physical force in the form of legal penalties or the moral coercion of public opinion. That principle is that the sole end for which mankind are warranted, individually or collectively, in interfering with the liberty of action of any of their number is self-protection. That the only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others.

Id.
citizens from democratic influences it has exhibited. Thus, the CCP’s choice between not allowing access to its citizens to virtual worlds or allowing access, but employing monitoring and censorship of activities there will become increasingly stark. On the one hand, over time, the benefits to allowing access will grow, but on the other hand, the dangers of allowing this access will grow as well. Thus, the technological advances that are likely to emerge in virtual worlds must be evaluated in this light. Let us now look at these possibilities in more detail.

The fundamental building blocks of virtual worlds will continue to dramatically drop in cost. This is a function of a number of factors including ones as basic as Moore’s Law. The amount of information that can be put on a chip will continue to expand. This holds the promise of dramatically enhancing the sorts of features that can be offered in virtual worlds. For instance, it seems but a matter of time before virtual worlds can be developed that are holographic. Currently, holography is developing but not yet at a stage to change the attractiveness of virtual worlds in a game-changing manner. While this is speculative, it seems reasonable to think that holography holds the promise of making virtual worlds dramatically more enticing and useful at the same time. One fundamental impact of holographic virtual worlds is that the degree of verisimilitude will be dramatically enhanced. This jump in verisimilitude is even larger than that between the text only world of LamdaMoo and the visual 3-D world of Second Life. Just as the jump from text to visual 3-D in games such as Second Life made them more realistic to a larger number of people, the same enhancement in realism will likely occur with the development of holographic 3-D virtual worlds.

One important feature shared by worlds from LamdaMoo to Second Life to a holographic virtual world is that the worlds are still virtual, not real—one enters these worlds from the real world and one’s body never leaves the real world. This means that no matter how immersive the experience and no matter how real it may seem to the person whose avatar is acting in the virtual world, one’s body is unavoidably in the real world. Thus, censors may always attempt to initiate monitoring and censorship on the user’s activities in this world. Not only is it one’s body, but one’s body and one’s computer. Thus, no matter how great of a disguise artist one is in some future holographic world, one will still have one’s body and the physical hardware of the real world to contend with when it comes to hiding one’s dissident activities from censors. At least under current circumstances, it may be very difficult to hide one’s real world activities. For example, in the U.S., legal authorities have power over Internet service providers and are generally able to determine who is accessing what content by enlisting their cooperation.

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ability is being consciously built into the U.S. Internet infrastructure, ostensibly for law enforcement purposes—catching child pornographers, terrorists, and the like. The tradeoff is that this high level of detection will be available to regimes that wish to use parallel functional abilities in order to instead detect dissident activities of the sort engaged in by activists for democracy, or members of persecuted religious sects. It would seem you cannot have the invasive Internet detection for crime prevention purposes without it being available for squelching prohibited democratic activities as well. However, dissidents may be more adept at avoiding the censor's eye given their greater incentives to do so. Thus, one should expect successes and failures on both sides in the cat and mouse game between censors and dissidents. Some dissidents will be monitored and detected while others will go undetected. The ability to go undetected will vary depending on factors such as where the virtual world is physically instantiated. If it is instantiated in the United States, the CCP may have more difficulty monitoring the activity of its citizens who interact in these worlds. It will still have the dissident's physical body and computer to exert panoptic dominion over, but it will not be able to use legal means to force cooperation from Internet service providers in the manner employed by the U.S. government.

What is predictable is an arms race between censors and dissidents as each seeks to take advantage of new technology to gain an advantage on the other side. This arms race is similar to that involving hackers and purveyors of Digital Rights Management ("DRMs"). Goldsmith and Wu argue that there are more control capabilities possessed by the Chinese regime than is commonly supposed. But such efforts are difficult to maintain and the regime would need to be ever vigilant if one assumes that there will be a growing supply of new dissidents with superior hacking abilities. The optimistic scenario is one in which dissidents will remain undetected and thus able to roam free in holographic worlds so as to be able to pursue their dissident activities. There may be a downside as well, however. The fact that the avatars are roaming about these virtual worlds also opens up another front in the CCP's effort to detect dissident activities. The CCP may be able to attempt to monitor dissident avatar activities by unleashing CCP censors as avatars into various holographic worlds in order to search out, monitor, and censor dissident avatars. Those with a desire to censor could attempt to hide microphones and cameras on every street corner in some virtual city—1984 a quarter-century late and in a world unimagined by Orwell—virtual and yet more real than the bleak landscape painted in the book. Once again, other things being equal, one would predict that some dissident activities will be detected and others will not be in this

articleID=199201924 ("Legal authorities are allowed to request call-identifying information and call content to and from particular targets. Warrants specify the types of data traffic sought, and service providers are required to provide it without the targets' knowledge.").
91 Robert Schmidt, U.S. Asks Internet Firms to Save Users' Web Data, ORLANDO SENTINEL, June 2, 2006, at A13 ("The agency has asked Internet companies to retain records such as lists of e-mails sent and received or information on Web searches.").
92 See Saul Hansell, Online Trail Can Lead to Court, N.Y. TIMES, Feb. 4, 2006, at C1.
95 GEORGE ORWELL, NINETEEN EIGHTY-FOUR (1949).
avatar versus avatar struggle. It will likely not be necessary that the regime achieve 100% success in its monitoring and censorship in order to be successful in some reasonable goals it might have set for itself. For instance, with regard to prohibited activity by Tibetan monks seeking greater political autonomy, even if the CCP is unable to achieve perfection in its efforts at censorship, just making the attempt may serve to keep this activity at a marginal level, such that over the next few decades, the regime is able to achieve its presumed goal of greater political control over the Tibetan people and the Tibetan geographical region. It is significant that this goal is possible even in a world in which some amount of dissident activity continues unabated. Thus, the likely emergence of virtual worlds embodying Western democratic values is not enough to necessarily cause the CCP to restrict access to these worlds, given that the harmful impact of such access may be marginalized to such an extent that the benefits of allowing its citizens access may outweigh the costs.

From a practical perspective, the issue is the inflection point at which the system is too porous—a point at which the deleterious effects the regime seeks to contain are too great such that it may be necessary to take more extreme measures. The CCP may then try to shut off access to certain virtual worlds, perhaps all virtual worlds. Another possibility is that the regime will develop its own virtual world for its people to live their virtual lives. If the CCP can seal off the borders, it may achieve its aim to close off its people to exposure to democratic ideas and institutions. This aim would be served by China’s current efforts to build a parallel Internet. The implication seems to be that China may need to develop its own virtual world to instantiate its putatively unique set of values. It could then enjoy many of the benefits of virtual worlds while also being able to control access to prohibited ideas and information. The question will then become whether dissidents are able to escape from this virtual China. A software solution seems possible, at least conceptually. What is needed is a wormhole that will allow dissidents to slip from one virtual world to another—to slip out of virtual China and into some other world in which greater personal freedoms are allowed. One can imagine a world in which such secret wormholes are already put in place by prior dissidents. Alternatively, one can imagine dissident avatars who carry widgets with them that allow them to put wormholes in place on the spur of the moment. Thus, the political freedom of avatars in virtual China will turn on who is better able to manipulate the code of this domain, individuals or the state.

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96 GOLDSMITH, supra note 94, at 184 (“[T]he brawny and self-confident People’s Republic is building a nationalist Internet within its borders. As China does this, it is creating a network that is moving away from the Internet in the West, not only in its language but also in its values and deep architecture.”).