Paradise is a Walled Garden? Towards a Sherman Act Section 2.0 for Online Monopoly

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ABSTRACT:

In the worlds of technology and cyberlaw, the term "walled garden" has become an epithet to epitomize a proprietary, and likely sterile, community – as opposed to an open community with a vibrant creative life. The dystopian view of closed, proprietary communities is presented most clearly by Zittrain (2008), who casts the choice facing society as one between sterile but safe information appliances, with his examples of the iPhone and the Xbox, and "networks of control" such as Facebook on the one hand, and vulnerable but malleable personal computers (PCs) and a "generative" Internet on the other – information technology that fosters greater creativity among users. In essence, this is a cyberspace version of the age-old choice between security and freedom.

But is this choice really so stark? Can a walled garden in fact be a kind of creative paradise? This Article attempts to explain how a purportedly sterile appliance, like the iPhone, can become quite generative, as through its App Store. In particular, both examples illustrate the importance of proprietors making credible commitments to fostering generativity. Reliable commitments can stem fears that in the future, the platform "proprietor" will "lock down" users; this reliability allows creativity to flourish. Additionally, while there may well be some degree of tradeoff between security and freedom online, competitive pressure may encourage platform owners not only to keep commitments to generativity, but also to innovate so as to provide more security for a given level of freedom, and vice versa.

Critics have so far been unimpressed with antitrust law as a tool to deal with these issues. However, perhaps surprisingly, the Federal Trade Commission (FTC) may be ideally suited to play an important role. Reinvigoration of its existing authority under FTC Section 5 can help provide protection to the rights of user-creators where contract law would fail due to the diffuse and speculative harms that result from platform proprietors' unilateral post-hoc changes. In contrast to other antitrust tools, such an approach would move faster, carry less risk of chilling private litigation, benefit from the FTC's regulatory expertise and, importantly, create an inherent safe harbor for platform proprietors who explicitly warned prospective user-creators that they "make no promises" and who did not induce user reliance. In particular, this Article argues that because of the way this problem sits at the intersection of competitive efficiency and consumer protection, the dual goals of the FTC, platform dominance may be ideally suited to a kind of Sherman Act 2.0 based on the evolution of existing FTC authority. Instead, a kind of hybrid theory of platform dominance blending consumer protection and antitrust concerns can help protect user dynamism in a way that also enhances platform competition.

paradise (pæ'rădəis), *sb.* . . . used in Gr. (first by Xenophon) for a (Persian) walled park, orchard, or pleasure ground; by the LXX [the Septuagint, the 1st to 3rd century B.C. Greek translation of Hebrew scripture] for the garden of Eden; and in the New Testament and Christian writers for the abode of the blessed, which is the earliest sense recorded in Eng. . . .

–Oxford English Dictionary entry for "paradise"[1]

I. Introduction

In the worlds of technology and cyberlaw, the term "walled garden" has become an epithet to epitomize a proprietary, and likely sterile, community – as opposed to an open community with a vibrant creative life. The dystopian view of closed, proprietary communities is presented most clearly by Zittrain (2008), who casts the choice facing society as one between sterile but safe information appliances, with his examples of the iPhone and the Xbox, and "networks of control" such as Facebook on the one hand, and vulnerable but malleable personal computers (PCs) and a "generative" Internet on the other – information technology that fosters greater creativity among users. In essence, this is a cyberspace version of the age-old choice between security and freedom.

But is this choice really so stark? Can a walled garden in fact be a kind of creative paradise? This Article sets forth a theory of platform dominance to explain how antitrust can play a role in keeping proprietary systems free even after their owners have convinced users to adopt them. We have been fortunate to see purportedly sterile appliances,[2] like the iPhone, become quite generative, as through its App Store, and to

[1]The Compact Edition of the Oxford English Dictionary, p.440 (Oxford, 1988)

[2]*See* Zittrain, *The Future of the Internet* (2008) (prior to the App Store, contrasting the iPhone with PCs and Apple personal computers as an example of a tethered, sterile information appliance). *See also A Killer Product: Will Closed Devices Like Apple's*

see the launch of Google's Android wireless phone platform based on promises of open architecture.[3] The owners of these platforms for user innovation and user creativity are making commitments that, if credible, can succeed in fostering creativity despite countervailing pressures for creeping propertization and control of technology and intellectual property. Such commitments can keep the platform "owner" from "locking down" users, enabling creativity to flourish. Additionally, while there may be some degree of tradeoff between security and freedom online, competitive pressure may encourage platform owners not only to keep commitments to generativity, but also to innovate so as to provide more security for a given level of freedom, and vice versa.

With examples, this Article shows how antitrust can play an important role with respect to dominant platforms – even where these platforms may not rise to the level of monopoly power or the possession of an essential facilities. Some may argue that while after-the-fact rule changes in the world of Web 2.0 can pull the rug out from under users, these changes are more properly the domain of private contract law – if any law is applicable at all. However, such analyses dismiss the difficulties inherent in relying on such law where the injured are diffuse and the harms yet-unrealized. If users come to believe that existing platforms are untrustworthy, one of the greatest harms may well be to the future of user creativity and innovation – for short, user dynamism. Because we do

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iPhone Murder the Web? Newsweek, May 2, 2008, *available at* http://www.newsweek.com/id/135150.

[3]Android, announced in late 2007, launched in late 2008, and made commercially available to consumers in cellular phones in 2009, is a software stack created by Google for mobile devices that includes an operating system, middleware and key applications running on the Linux kernel (the central component of the operating system bridging applications and data processing at the hardware level).

not yet fully comprehend how important a phenomenon user dynamism is, we cannot yet know how much damage unsettling user expectations does.

As a result, I propose a solution that straddles antitrust and consumer protection, and values of fairness as well as economic efficiency. In particular, this proposal would encourage the Federal Trade Commission (FTC) under its Section 5 "cease and desist" power to enforce platform operators' commitments in the name of user dynamism. In doing so, I work through existing theories of sharing across networks, network neutrality and infrastructure theory to explain how this approach to platform dominance can help protect user innovation and user creativity and do so in a way that combines effectiveness with practicality. First, it arguably could be implemented under the FTC's existing authority and fits with the FTC's existing core competencies. Second, it is congruent with recent antitrust doctrine favoring regulatory over judicial approaches. Third, it accords with judicial and academic opposition to private rights of action in antitrust – only the FTC can sue under Section 5; indeed, the relative speed and weak precedential value of the Fourth, it is in harmony with judicial and academic skepticism about the essential facilities doctrine. Fifth, and finally, it creates a simple guideline for platform owners who wish to avoid the proposal's application – make no promises, express or implied, that user-creators can be said to have relied on.

The Article suggests how this proposal might apply to possible post-hoc changes to three popular platforms: the iPhone/iPod Touch App Store, Wikipedia, and a hypothetical post hoc change to Google Books.[4] In all three examples, a hybrid of consumer protection and antitrust enforcement can promote the ex post value of users'

[4][Note to NYU conference friends: I am still working on this section. Sorry. –Salil]

creations and innovations as well as the ex ante value of maintaining users' trust in adopting platforms and participating in user dynamism as a process. As a result, with by holding the proprietors of dominant platforms to their word, the proposal sketched out here can help maintain the paradisiacal elements of walled gardens.

II. The Antitrust Law Background

The online world has become one characterized by dominant devices, networks and websites – that is, platforms – of various purpose, scope and duration. Antitrust law might at first seem a strange tool with which to work on this problem. Even platforms that may appear dominant in their niches will often not rise to the level of possessing monopoly power, so that traditional antitrust concerns under Section 2 will seem inappropriate.[5] Other theories that could apply at lower levels of market power, such as tying law, are greatly contested at the general level,[6] and arouse even more concern in connection with developing technologies.[7]

As a result, I propose a framework for addressing this dilemma. Increasingly, consumers find themselves locked-in to Internet platforms that may reduce their choices and the freedoms that consumers are allowed. The reduction in choice and freedom often occurs after an installed-base of consumers has already made some level of commitment to the Internet platform. Such opportunistic changes may take the form of contractual changes in "terms of service" or as technological alterations to the existing platform with

[5][cite David Evans, *Antitrust Issues Raised by the Emerging Global Internet Economy*, Nw. L. Rev. 2008]

[6][cite Chicago school concerns]

[7][cite DC Cir in MSFT]

negative consumer impact. The considerations involved include aspects of both competition law and consumer protection law.

This is not simply consumer protection; it also implicates concerns about producer conduct and dynamic gains that are important to antitrust policy. Increasingly, dominant platforms provide a locus for user innovation and user creation, supplying incipient dynamic gains of yet uncertain magnitude. Thus, the design of such competition regulation should involve an appreciation of the creative power of users as more than passive consumers but also as producers in their own right – and a realization of these consumers' ability to create real economic value. As a result, a regime addressed at online platforms and their user/consumers should encourage competition in credible commitments.

A. Antitrust Law and Network Effects

As a starting point, it is helpful to understand how existing antitrust law deals with network effects as a background to understanding platform dominance. To address the problem of platform dominance requires a legal solution that is well-tailored to existing doctrine and institutions. Fortunately, several fairly recent, major cases yield helpful analysis for dealing with the potential consumer harms involved.

Kodak v. *Image Technical Services*

The Supreme Court's first addressed issues critical to platform dominance over a decade ago in *Kodak* v. *Image Technical Services*. In that case, the Court considered the impact on consumers of information costs and lock-in. Although the case itself did not involve a network industry or computer or Internet technology, the merits of the case forced the Court to examine issues relevant to these fields.

The *Kodak* case involved an antitrust claim against Eastman Kodak for changing its policies in supplying parts for expensive, high-capacity photocopiers. In particular, in a departure from pre-existing policies, owners of such photocopiers – primarily businesses – were required to purchase repair and maintenance services only from Kodak in order to get access to replacement parts. And Kodak was the only source of such parts. Kodak argued in response to this claim that its "bundling" of parts and service could not actually harm consumers because the market for the photocopiers themselves was a competitive one. Kodak contended that, as a result, it could not raise the price of aftermarket parts and service by bundling them without facing a corresponding penalty in the "primary" market for photocopiers.

The Court rejected the proposition that Kodak's argument was strong enough to avoid a trial on the merits based on information and switching costs. First, the Court recognized that real-world consumers, whether businesses or others, do not possess the perfect information that classical economics predicts. Their failure to be informed does not show a lazy irrationality. On the contrary, the Court observed that information is costly, and that it might be difficult for consumers to get the kind of information they would need to make the kind of rational decision that Kodak claimed. Furthermore, even if some consumers *could* inform themselves and accurately predict Kodak's conduct, that would not prevent Kodak from selectively exploiting that segment of consumers who could not cost-effectively get that information.

Additionally, the Court also focused on the lock-in that characterizes network industries. While Kodak photocopiers were not a communications device or computer software, they did represent a substantial investment that effectively "locked in"

consumers to the Kodak network of parts and services. Because consumers were effectively "trapped" behind a proprietary Kodak wall, the Court observed that Kodak's view of consumer power to penalize it in the primary market was limited to *new* customers only. Existing customers would be stuck with the harmful effects of Kodak's bundling.

The Court's analysis in Kodak provides a doctrinal hook to doubt claims that post-adoption changes to Internet platforms merely represents the natural evolution of a product or service, as opposed to opportunistic exploitation relevant to competition law. In particular, Kodak's discussion of information costs is quite relevant to arguments that consumers contract into such exploitation by agreeing at the time of adoption to revisable terms of service with the Internet platform provider. Platforms that create bargains with consumers that they later revise to the platform's benefit may simply be exploiting information costs to effectively impose contractual terms that consumers rationally will not fully inform themselves about. This is not the same thing as being wilfully lazy; in fact it simply a form of rational consumer behaviour. Indeed, where the platform provider's post-adoption changes are unforeseeable – or worse yet, opportunistically hidden – consumers will not be able to protect themselves. And as *Kodak* suggests, the fact that some sophisticated consumers may understand the bargain does not prevent the exploitation of others.

Additionally, where the impact of adoption plus one-sided post-adoption changes is to take advantage of information costs to lock in large numbers of consumers to a proprietary standard, the logic of Kodak is also very important. To the extent that groups of consumers become "invested" in a proprietary standard, they may lose their future

ability to check exploitive practices by exiting from the standard.[8] If large enough numbers of consumers wind up in a captive proprietary network, there may be industry-wide inefficiencies. The cost of leaving the network due to lock-in might trap consumers on an inefficient path.

U.S. v. *Microsoft*

The possibility of being trapped on an inefficient path by network effects provided the subtext for much of the D.C. Circuit court's opinion in *United States* v. *Microsoft*. In that highly-publicized case, the Microsoft Corporation faced the claim (among others) that, to maintain the dominant position of its Windows operating system franchise, it had improperly bundled-in the web browser Internet Explorer.

In its defense, Microsoft tried to inject the economic concept of serial monopoly. In particular, Microsoft tried to argue that the nature of operating systems was such that the industry faced a series of competitions "for the field" of operating systems, rather than "in the field" of operating systems. According to this argument, users and producers of software were both better off if there were a single standard universal operating system. Thus, there was an economic value to having consumers tied to a single network.

The D.C. Circuit rejected this argument for a couple of reasons. First, the Court noted that innovation is both helped and hurt by a "serial monopoly." As Microsoft contended, competitors face strong incentives to innovate in order to leapfrog each other and capture the "next" monopoly in the series. But, the Court pointed out, economists

[8]Indeed, the European Union has voiced such concerns with respect to Apple's iTunes music sales platform and its related FairPlay digital rights management (DRM) technology.

had observed strong negative effects on ongoing innovation within the scope of the current monopoly. The net effect of this situation was unclear.

Additionally, the Court pointed to the facts of the case itself. The substance of the monopolization – or "monopoly maintenance" – claim was that Microsoft had bundled in Internet Explorer in order to *foreclose* the competition for the next monopoly in a series. Thus, the possibility of serial monopolies was no longer exogenous to the overall market structure; in fact, one market participant, Microsoft, could change the rules of the serial monopoly game while the ball was in play.

The logic of the D.C. Circuit in *Microsoft* has serious implications for platform dominance as well. To the extent that an Internet platform is subject to ongoing "upgrades," the platform operator may actually be able to delay or even prevent "competition for the field." To the degree that substantial consumer lock-in exists, the result may be an entrenched dominant platform. That is, the contest to be the next dominant platform may not occur if the incumbent can effectively control the market's evolution with post-adoption alterations.

Verizon v. *Trinko*

Despite these doctrinal hooks on which a theory of platform dominance could hang, potential obstacles remain in the path of any monopolization theory that would impose affirmative duties on the monopolist. The U.S. Supreme Court in *Verizon* v. *Trinko* (2004) made it very hard for a plaintiff to use monopolization law to punish a

defendant who unilaterally refuses to deal with a rival. And this past year's decision in *Pacific Bell* v. *Linkline* (2009) reinforces this point.[9]

While these decisions, both involving attempts to gain access to telecommunications networks, stand on their own facts, they have particular relevance to Internet platforms, which tend to be characterized by strong network effects among users. In particular, the decisions in *Trinko* and *Linkline* make it unlikely that private plaintiffs at least will be able to use Section 2 to "open up" a network. Accordingly, this makes locked-in users more vulnerable to exploitation through after-the-fact changes to the platform, whether contractual or technological.

Additionally, *Trinko* is particularly important in its reconception of the relationship between monopolization and innovation. In the past, the retarding of innovation has been seen as a cardinal harm of monopolization.[10] But in *Trinko,* Justice Antonin Scalia recast the relationship between monopolization and innovation from antagonistic to cozy, writing that

> [t]he mere possession of monopoly power, and the concomitant charging of monopoly prices, is not only not unlawful; it is an important element of the free-market system. The opportunity to charge monopoly prices–at least for a short period–is what attracts "business acumen" in the first place; it induces risk taking that produces innovation and economic growth. To safeguard the incentive to innovate, the possession of

[9] *Linkline,* 172 L. Ed. 2d 836 (2009).

[10] *See Alcoa* (2d. Cir. 1945).

> monopoly power will not be found unlawful unless it is accompanied by an element of anticompetitive *conduct*.

Thus, Scalia casts monopoly as an incentive that drives entrepreneurs to innovate in the first place – in his view, a reward for the bright, hard-working and creative.

B. Special Considerations of Platform Dominance

In light of these decisions, the use of competition law to address platform dominance might seem difficult. After all, while cases like *Kodak* and *Microsoft* recognize the special issues involved in an industry with network effects, *Trinko* might be seen to foreclose the straightforward application of monopolization law to deal with harm to consumers in such industries.

That would be unfortunate given the special nature of Internet platforms in the creation of user-generated content with real value. Yochai Benkler has famously argued that social production may occur online even absent economic markets or state coercion.[11] Using examples ranging from collaborative online science research to Wikipedia, he posits that with technologically-empowered cooperation through sharing over networks, production may occur "outside the proprietary marketplace altogether." That is, networks make possible mass cooperation without the inducements provided by money or force.

Additionally, networks also make allow even user-creators to produce and reach markets that they otherwise might not, even where such user-creators are not entirely motivated by altruism. It is difficult to put a value on the content created on Wikipedia,

[11] *See* Yochai Benkler, THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM, pp. 96-97 (Yale, 2006).

or on the innovation embedded in "apps" that users and small-time software producers create and sometimes sell for use on Internet-capable cellular telephones such as the iPhone.[12] But such examples suggest that real creativity can occur *within* the bounds of a particular Internet platform. However, users/creators on that platform do face the prospect of becoming locked in and exploited if the platform owner achieves a critical mass of users.

III. Problems and Approaches: Towards Dealing with "Platform Dominance"

A. Existing Theories for Action

1. Benkler and Sharing Theories

Cyberlaw theorists have identified network effects and lower transaction costs as factors that provide for increased production online. Economic and legal commentators have appreciated the salient features of network effects, such as demand-side economies of scale, the tendency to foster complimentary investments that may generate lock-in, and the resulting first mover advantages, for decades.[13] However, the account that emerges out of cyberlaw emphasizes not only complimentary investment or increased value due to increased participation, but an increased scope for the demand side to create content and generate innovation.[14]

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[12] *See* http://www.nytimes.com/2009/11/05/technology/personaltech/05pogue.html?emc=eta1. *See also* http://www.nytimes.com/2009/09/26/technology/26games.html?_r=1&emc=eta1.

[13] *See, e.g.,* Joseph Kattan, *Market Power in the Presence of an Installed Base,* 62 Antitrust L J. 1, 11 (1993); Mark Lemley and David McGowan, *Legal Implications of Network Economic Effects,* 86 Cal. L. Rev. 479 (1998).

[14] *See* Benkler.

While many have contributed to our understanding of this phenomenon,[15] the leading exponent of this view is Yochai Benkler, who in *The Wealth of Networks* explains how inherent human impulses towards altruism and creativity become more important in the networked environment. Specifically, these "exceptions" to rational actor theory can play a larger role due to decreases in barriers to action. While the same kinds of human motivations exist online and offline, but "the material conditions of production in the networked information economy have changed in ways that increase the[ir] relative salience."[16] Citing a number of examples, the lower transaction costs and lower costs of production made possible by cheap computing power and free networks create a larger sphere of influence for user-based production based on sharing rather than exchange or coercion. Much of this production involves creation and innovation – the kinds of dynamic effects that are difficult to measure, but quite important to antitrust policy.[17] While Benkler does not produce specific doctrinal policy prescriptions – and

[15]Others building on and critiquing Benkler's work make similar points. *See* LESSIG, FREE CULTURE: HOW BIG MEDIA USES TECHNOLOGY AND THE LAW TO LOCK DOWN CULTURE AND CONTROL CREATIVITY 143-44 (Penguin Press 2004) (describing how he offended a teenager on a cross-country flight by offering to pay to borrow one of the teenager's DVDs). *But see* Lior J. Strahilevitz, Review, *Wealth Without Markets?*, 116 YALE L.J. 1472, 1480 (2007) (observing that Benkler's reliance on Titmuss' theories about blood donations may be misplaced due to later evidence suggesting that "the question of whether an optimal blood provision regime relies on paid or charitable contributions is once again debatable"). *See also* John Quiggin & Dan Hunter, *Money Ruins Everything*, 30 HASTINGS COMM. & ENT. L. J. 203 (2008) (arguing that economic assumptions of commercials providers of content are called into question by amateur creators who produce content for non-commercial motives).

[16]Benkler, *supra* note 13, at 92.

[17][cite Hovenkamp re dynamic effects likely more important than static effects; Schumpeter v Arrow literature on static effects' relationship with dynamic effects; Lemley, Carrier, etc.]

that is not his intent – he emphasizes the need to allow such forces room to thrive in the networked environment.

Without necessarily endorsing the view that the sharing economy will significantly displace traditional production, this account provides a direct challenge to the view that innovation and creation exclusive resides on the producer-monopolist side of the market, at least in the online space Instead, the recognition that user innovators create content and produce dynamic improvement raises doubts about extending a view such as Justice Scalia's in *Trinko* – based on a simpler paradigm where dynamic effects remain the province of the network operator or platform owner. Viewing network monopoly as a just reward for innovation may quash the user-side innovation and content creation without an appreciation of the potential magnitude for such forces.

2. Wu and Network Neutrality Theories

The past decade has also seen impassioned arguments for the imposition of "net neutrality" rules that would seek to bar, in particular, broadband Internet access providers from discriminating against unaffiliated providers of Internet content and applications.[18] Proponents of these rules argue that they are necessary to prevent a fragmentation of the

[18]*See* Timothy Wu, *Network Neutrality, Broadband Discrimination,* 2 J. Telecomm. & High Tech. 141 (2003) (comparing different approaches to the regulation of broadband providers and arguing for policies that preserve "neutral" network design, defined as the situations in which "useful public information network[s] aspires[]to treat all content, sites, and platforms equally"); Ex parte letter from Timothy Wu and Lawrence Lessig, 12-15 (Aug. 22, 2003), *available at* http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6514683884. *But see* Christopher S. Yoo, *Network Neutrality and the Economics of Congestion,* 94 Geo. L. J. 1847 (2006) (pointing out economic and technical problems with the arguments for network neutrality).

Internet that would tend to harm users.[19] Indeed, such balkanization might also harm providers themselves, who might collectively benefit from interconnection but might face powerful individual incentives to go their own way, undermining their own well-being in the process.[20]

While the goal of network neutrality rules is to keep barriers to new entrants low and to try to approximate a competitive market, there are reasons why net neutrality proposals may not address all problems with platform dominance. First, the proposals usually hinge on intervention by the Federal Communication Commission (FCC), and so face the common objections to regulation that seeks to alter market structure. Imposition of network neutrality on existing networks may result in de facto appropriation of gains that motivated investment in creation of the network. Additionally, Christopher Yoo has also argued that network neutrality will tend to ossify existing networks and chill the emergence of valuable network diversity.[21] Second, net neutrality primarily focuses on non-discrimination with respect to different network traffic, and so does not extend to other issues involving changes in pricing schedules or alterations in services, so long as they are not non-discriminatory. Finally, platforms that do not fall under the regulatory ambit of the FCC would potentially escape such regulation and provide an opportunity for arbitrage – although this concern could be alleviated by broadening the regulatory reach.

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[19] *Id.*

[20] *See* Kevin Werbach, *Only Connect,* 23 Berkeley Tech. L. J. 1234 (2008).

[21] Christopher Yoo, *Network Neutrality and the Economics of Congestion,* 94 Geo. L. J. 1847 (2006).

Despite these concerns, advocates of network neutrality have highlighted a primary concern about the network environment. The network operator may face a powerful incentive to favour some traffic over others – especially traffic that generates it additional reward versus traffic that might tend to compete with it. Where network users have become locked-in due to switching costs or other effects or where the network is a durable monopoly, the welfare gains to the network provider may outweigh the losses to the network user, and yet such discrimination may persist. This concern anticipates the potential harm that the owner of a dominant platform may impose opportunistic controls that increase its welfare but diminish the welfare of users, potentially with large but difficult to quantify costs to user dynamism.

3. Frischmann and Infrastructure Theories

Perhaps the most useful theory for understanding how antitrust can play a role in the online environment has been the infrastructure theory set forth by Brett Frischmann, alone and together with coauthors including Michael Madison, Katherine Strandburg and Spencer Waller.[22] The theory identifies a class of goods and services that is often nonrivalrous, whose "social demand" is "driven primarily by downstream productive activity," and which serves as an "input into a wide range" of uses, "including private goods, public goods and nonmarket goods."[23] Fundamentally, the theory provides an

[22]*See* Brett Frischmann, *An Economic Theory of Infrastructure and Commons Management,* 89 Minnesota L. Rev. 1031 (2005); Spencer Weber Waller and Brett M. Frischmann, *Revitalizing Essential Facilities,* 75 Antitrust L. J. __ (2008); Michael J. Madison, Brett M. Frischmann, Katherine J. Strandburg, __ Cornell L. Rev. __ (20__).

[23]Frischmann, Minn. L. Rev. at 956.

economic rationale for managing infrastructure resources to provide open access.[24] In so doing, infrastructure theory has been deployed in arguments for reviving essential facilities in antitrust[25] and for reevaluating intellectual property doctrine.[26]

Infrastructure so defined should overlap with the networks that are the focus of sharing and net neutrality theories, and also with concerns about platform dominance described herein. However, there are important differences that make infrastructure a weaker fit for platform dominance. In particular, infrastructure theory emphasizes the variance in uses, especially involving public goods and nonmarket goods, due to the difficulty in measuring social value in such cases.[27] The measurement difficulty creates the possibility of inefficiency through an underproduction of these downstream public and nonmarket goods. Where differential value is more easily measured, price discrimination may well provide a more efficient result.[28]

However, dominant platforms may create harms that infrastructure theory is not designed to address. Dominant platforms may be used an inputs by user-creators and user-innovators without actually yielding a wide variance in the downstream products that makes value unmeasurable. First, they may yield widely varying products whose value can adequately be handled by market forces. Consider, for example, a platform

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[24]*Id.* at 959.

[25]Waller and Frischmann (2008) (arguing, pre-*Linkline*, for the resurrection of the essentially facilities despite *Trinko*).

[26]*See* Madison, Frischmann, Strandburg, *supra* n.__.

[27]*Id.*

[28]Frischmann readily admits that this consideration is important in favoring infrastructure theory-based management over price discrimination.

like the iTunes App Store. While the Apps produced and distributed through the platform may vary on several dimensions and may include both private, public and nonmarket goods, they can also be readily priced and valued. Sellers possess the ability to set and alter prices in response to sales signals. Second, some platforms may allow user-creators to produce products that do not vary greatly in the way infrastructure theory describes – consider Twitter, which only transforms private information, such as an individual's private perceptions or activities, into the public good of information. Such information can be quite valuable and difficult to replicate, such as first hand accounts of antigovernment protests in a society without a free press.[29] But as designed, it pretty much only produces the public good of information.[30]

More fundamentally, however, platform dominance primarily concerns the problem antitrust calls "aftermarkets," and what contract law might call the "hold-up problem" – only writ large-scale between the dominant platform and a potentially huge mass of user-creators and user-innovators. The concept of platform dominance is not only that pulling the rug out from under such user-creators and user-innovators is unfair. Rather, the concern is that such opportunistic exploitation could be fundamentally destructive of user-innovation and user-creation, and given the yet-unknown value of these dynamic effects, enforcing the commitments of platforms to their users may be both fair *and* efficient.

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[29] *See Iran's Protests: Why Twitter is the Medium of the Movement,* TIME, Jun. 17, 2009.

[30] At a second order downstream, one could argue that that public good of information can be transformed into variable outputs, including private, public and nonmarket goods. However, adopting such a loose connection between inputs and outputs could transform a vast percentage of inputs into infrastructure.

B. Towards a Theory of "Platform Dominance"

All three species of theory have their merits, although they are naturally best fits for the paradigmatic example that they seek to improve. However, an increasingly important set of devices, websites and online communities differs in important respects from the economic phenomena that the sharing, network neutrality and infrastructure theories address as their core focus. Through these "platforms," their owners host captive markets such as that of the iTunes App Store, Facebook's and LinkedIn's fora for exchanging personal and professional information, and potentially, GoogleBooks' future licensed content. While these platforms and the activities that they host may not (yet) rise to the level of monopolies meriting antitrust scrutiny under traditional market power tests, they nonetheless can achieve a high level of dominance versus other players.

But beyond that static dominance, platform dominance can become a significant issue vis-à-vis the user-innovators for whom the platform is a vital input to the creative process. In this respect, platform dominance holds the potential for dynamic harm to the activity of the downstream user-innovators. Even where an antitrust-defined monopoly does not result, the potential for abused power in the aftermarket of a platform can deter investment in innovation by user-innovators. While existing evidence has left the question of which matters more, dynamic effects or static effects, somewhat indeterminate, the consensus is that dynamic harms are potentially much more destructive of consumer welfare.[31]

Admittedly, the overall empirical evidence is uncertain: before pursuing a course of action, it is difficult, if not impossible, to know how the loss to user-creation and user-

31

innovation would stack up against the loss in investment and innovation in platform creation. However, one way to take a step towards addressing the tradeoff is to hold platform operators to the representations they make when they are convincing users to adopt their platform. Such a policy has two-fold benefits. First, it forces platforms to put their money where their mouth is. If Google promises a "Droid" phone that is totally amenable to running open source software, then enforcing such a commitment prevents Google from reneging after users have adopted the platform. Enforcement of such commitments does not merely prevent Google from selling the razor cheap and the blades dear – which antitrust policy has long recognized may be efficient.[32] It also prevents the possibility of jettisoning user innovation or user-generated content that may have value to users but not to Google. Additionally, preventing such opportunism protects not only these user innovations and user creations, but also safeguards the *process* of user innovation and user creation; maintaining user trust in this regard could be very important. User dynamism will likely suffer if users cannot trust that the platform they adopt will remain valuable to them.

As a second benefit, enforcing platform operators' commitments will tend to foster a kind of qualitative competition involving the tradeoff between platform security and user freedom. Many platforms confront a dilemma, in which increased freedom for users also increases their security vulnerability.[33] At the launch of a platform, we could see competition concerning where to make this tradeoff. One platform provider might promise more freedom, but less security; its competitor might promise more security, but

[32]Cite commentary on metering justifications for tying practices.

[33]*See* Zittrain, *The Future of the Internet* (contrasting secure but sterile "network appliances" with generative but risky devices such as Internet-linked PCs).

less freedom. Ideally, we would see attempts to push the production possibility frontier outward, so that a third platform might offer as much freedom as the first and as much security as the second. By holding platforms to their commitments, we would foster competition based on the tradeoff between these, or other, dimensions.

Such a policy to deal with user freedom within the "walled gardens" that many platforms become might seem far-fetched. However, the FTC's recent string of standard-setting cases may present a helpful analogy. In these cases, the FTC has viewed anticompetitive conduct by a dominant firm through the lens of unfairness and deception. While private standard setting can promote consumer welfare by promoting the interoperability of products, standards that rely on or embody intellectual property may confer market power on the patentee or licensee. As a result, many standard setting organizations (SSOs) have instituted policies to govern the use of patented technologies in proposed industry standards. For example, some SSOs require members to disclose any relevant patents covering the proposed standards, while others condition the inclusion of patented technologies upon the patentees agreement to license them on a "reasonable and non-discriminatory" basis, while still others explicitly avoid adopting standards that rely on protected intellectual property.[34]

In a series of cases, the FTC has challenged IP rightsholders who were deceptive about the existence or scope of their intellectual property during the standard setting process and then later asserted their rights against manufacturers producing products in

[34] *See, e.g.,* JEDEC, *available at* http://www.jedec.org/join_jedec/benefits.cfm.

compliance with the standard.[35] While these cases have received some criticism,[36] they appear to be within the scope of the FTC's authority under Section 5 of the FTC Act.[37]

A clear analogy can be drawn between the theory behind the standard-setting cases and an approach to platform dominance that keys on holding platform operators to their initial commitments. Both examples seek to prevent opportunistic hold up from creating both ex post and ex ante disincentives to innovation. The ex post effect of hold up is to later exploit those who have chosen to adopt the standard – or the platform – after they have made investments that may make it difficult to avoid the exploitation. The ex ante effect is to deter others from adopting standards – or platforms – which lowers overall welfare.

In fact the case for a similar approach to platform dominance may be even stronger than the argument in support of the FTC's SSO cases. First, one of the chief objections to the SSO cases is that the other SSO participants are powerful, sophisticated players who could protect themselves *ex ante* through contract.[38] Even if that is to some degree correct in the SSO context the argument has less force in the online space, where users-creators and user-innovators may be much smaller, more diffuse players.

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[35]*See FTC* v. *Dell* (1996) (failure to disclose VL-bus standard); *FTC* v. *Unocal* (2005) (failure to disclose pending patents on emissions research for which it intended to seek royalties); *FTC* v. *Rambus* (2006) (FTC sought to impose mandatory licensing of patents that were not disclosed during the standard setting process); *FTC* v. *N-Data* (2008) (failure to honor predecessor's promise to license patents on a RAMD basis, resulting in consent not to enforce patents).

[36][cite commentary]; *See also FTC* v. *Rambus* (D.C. Cir. 2008).

[37]*See N-Data*; *Rambus* (D.C. Cir. 2008) (reversing the FTC under Section 2 of the Sherman Act but observing that the case might be valid under FTC Act Section 5).

[38][cite Majoras dissent]

Additionally, while the SSOs and their manufacturer licensees may be part of a relatively small number of industry players, in many cases the beneficiaries of user-innovation may not be present at the initial stages of platform adoption. While that may create some distortion of incentives, it also makes it difficult to argue that such beneficiaries can protect themselves adequately through contract. Finally, while SSOs, their participants and their licensees might be able to use contract and civil litigation to vindicate their rights, it seems a great deal less likely that thousands or millions of online user-creators or user-innovators will be able to adequately use state contract law to obtain similar relief. Indeed, these characteristics – difficult to identify beneficiaries, diffuse claims, and complex adjudication – all seem to tip the balance in favour of administrative action.

IV. A Framework of Considerations

The discussion above suggests that the application of competition law to platform dominance should address three different issues.

First, regulation for platform dominance should focus on the relationship between the interoperability issues and the traditional consumer protection issues. The interoperability problem is the idea that once users become committed to a particular platform, they may face real costs in migrating to another platform. The traditional consumer protection issue is that users may be exploited by a platform owner who seems to promise one thing at the start and deliver quite another later in the relationship. To the extent that regulation of platform dominance focuses on this link with consumer protection concerns, it provides a ready answer to those who oppose any forced access or affirmative duties on a network monopolist.

Second, regulation in this area should also focus on the value created by user/creators. The importance of this phenomenon is not yet completely understood. Competition law in this area would provide a regulatory space in which information about the value of user-generated content and user-innovation could be appraised. Understanding such value is important to more fully develop our understanding of the complex relationship between innovation, monopoly, and improper monopolization. Particularly to the extent that platform dominance is implemented through FTC Section 5, the focus on user dynamism should be important in considering arguments that harms based on consumer deception may nonetheless provide countervailing benefits to competition or be avoided by consumers themselves.[39] Even where such arguments could justify departures from prior commitments in specific cases, they nonetheless could have a chilling effect on user dynamism generally.

Finally, such regulation can promote credible commitments by platform owners that in turn can help user-generators make better decisions about the investment of their time, energy and money. To the extent that Internet platform owners make up-front commitments about issues such as freedom and security on their platform, and regulation enforces these commitments in ways that individual users cannot, such regulation will reduce the uncertainty that may deter some user-creators and -innovators from making socially optimal investments with particular Internet platforms. By the same token, restricting platform dominance to those commitments affirmatively made by the operators of dominant platforms both provides an implicit safe harbour and stimulates competition among several dimensions. The safe harbour is simple: you are only

[39] *See* 15 USC 45(n).

responsible for your commitments. And because your commitments become more credible, you can compete for the adoption of your platform based on what you are willing to promise along several dimensions: so much freedom, so much security – and perhaps even the preset duration of your commitments.

V. Considerations: How Can It Work?

An Analogy to Consumer Protection Online

To propose to protect consumers online raises the question: Could regulators really do this? There is reason to answer this question affirmatively. Specifically, for more than a decade, the FTC's consumer protection bureau has in fact been enforcing the commitments of web platforms to their customers. While another regulator besides the FTC, such as a *de novo* body,[40] might be better at dealing with platform dominance, the actual experience of the FTC with online privacy representations shows that it is more than theoretically possible for regulators to enforce online promises to consumers despite the passage of time and the changing of business models.

In a string of enforcement actions, the FTC has repeatedly brought complaints against companies for handling consumer information in ways that contravene the representations that they made initially in gathering the data.[41] The cases vary in their

[40] *See, e.g.,* Pasquale and Bracha, *Federal Search Commission*

[41] *See, e.g., FTC* v. *Toysmart* (2000), *available at* http://www.ftc.gov/opa/2000/07/toysmart2.shtm (last visited January 5, 2009) (announcing settlement of charges that bankrupt online seller was selling consumer data gathered online for purposes that violated privacy policy); *FTC* v. *Renner* (2000)*t, available at* http://www.ftc.gov/opa/2000/07/iog.shtm (announcing settlement involving misuse of online pharmacy customer data for purposes other than physician consultation, in violation of company policy); *FTC* v. *Geocities* (1998), *available at* http://www.ftc.gov/opa/1998/08/geocitie.shtm (last visited January 5, 2009) (settling

details. Some involve failing firms trying to sell consumer data they had gathered online years earlier, despite promises not to "share" the data with third parties.[42] Other cases involve sharing or selling consumer data more broadly than the firms' privacy policies stated at the time of data collection – often in a manner that can only be described as deceptive.[43] Still other cases involve perhaps less blatant conduct with respect to consumer data, such as promising, yet failing to deliver, state-of-the-art data protection; such conduct can still be seen as falling within the ambit of deception.[44]

While many of these cases seem like obvious targets for a consumer watchdog agency, others approach the possibility of preventing modification of the website's business practices over time.[45] This raises a serious question. If a platform owner makes

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charges that website with 2 million member virtual community was misrepresenting the purpose for which it gathered consumer data online).

[42]*See Toysmart,* supra n._..

[43]*See, e.g., Rennert; FTC* v. *National Research Center for College and University Admissions, available at* http://www.ftc.gov/opa/2002/10/student1r.shtm (settling charges that companies gathered "extensive personal information from millions of high school students," often online, "claiming that they would share the information only with" colleges and universities, then "sold the information to commercial marketers").

[44]*See, e.g., FTC* v. *Microsoft* (2003), *available at* http://www.ftc.gov/opa/2003/06/guess.shtm (settling charges that Microsoft falsely claimed to employ appropriate measures to safeguard consumer data and passwords entrusted to its "Passport" service which would "remember" consumer sign-in and other data across different retail websites); *FTC* v. *Guess* (2003), *available at* http://www.ftc.gov/opa/2003/06/guess.shtm (settling charges that apparel companies' website claimed that "your credit card information and sign-in password are stored in an unreadable, encrypted format" but instead were left vulnerable to theft by hackers); *FTC* v. *PETCO* (2005) (settling case alleging that PETCO.com falsely claimed to "strictly protect" "customer's dta" "against any unauthorized access," but instead left vulnerabilities "by failing to implement reasonable appropriate measures to secure and protect databases that support or connect to the website").

[45]*See., FTC v. Gateway, available at* http://www.ftc.gov/opa/2004/07/gateway.shtm (settling charges that "Hooked on Phonics" changed its policy to allow renting consumer

representations, but also represents that its representations are subject to change, at what point are such changes no longer, strictly speaking, deceptive? Similarly, if a platform owner does not actually makes any representation, but appears to be part of a separately-owned platform that does make representations, at what point does a violation of those representations amount to deception?[46]

The answer to such questions might emerge from the enforcement program itself, the results that consumers expect from it, and the legislation that may result in part from the publicity that such an enforcement program generates. For example, the FTC has tended to obtain remedies that effectively enforce the platforms' original privacy representations.[47] Such results will tend to bolster consumers willingness to rely on such representations, knowing that there is the possibility of enforcement against the platform owner's wishes. Ultimately, in these cases, the FTC is playing the role of a contractual enforcer where, for various reasons, private plaintiffs may be unlikely to bring the cases necessary to obtain such relief. While plaintiffs may have real reliance interests, the

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data to third parties – which it advised consumers might change – but without giving consumers the opt-out chance that it had promised should it change its policy).

[46]*See, e.g., FTC v. Vision I Properties* (2005) (settling charges that provider of "shopping cart" software that operated its own website that was linked to various retailers' websites with which it partnered could not sell customer data in contravention of retailers' stated policies, even though "shopping cart" software provider had not actually mane these representations itself).

[47]*See FTC* v. *Gateway* (settlement prohibiting "Hooked on Phonics" from renting out consumer data gathered under "no third party sharing policy" without an opt-out); *FTC* v. *Microsoft* (settlement requiring an independent verifier to pass judgment on Microsoft Passport's security methods once every two years); *FTC* v. *Life is good, Inc.* (2008) (requiring online apparel retailer to submit to independent third-party security auditor biennially after online apparel retailer "unnecessarily risked [customer] credit card information by storing it indefinitely in clear, readable text on its network," in contrast to its representation to its customers that "[w]e are committed to maintaining our customers' privacy").

diffuse and difficult-to-measure nature of harm makes an individual or aggregated claim unlikely. Additionally, like chilling effects on user dynamism, threats to privacy, once made, lead to a generalized mistrust leading to potential inefficiency in online markets.

Additionally, the FTC role in these cases sheds light on the unethical business practices involved, perhaps contributing to legislation aimed at addressing them. Some of these enforcement actions implicate specific anti-spam[48] and online child-protective legislation,[49] but by and large the FTC has relied on its authority under the "deceptive practices" language of Section 5 of the FTC Act.[50] In doing so, it often has transformed rather mundane statements of intent to "safeguard customer privacy" or "take reasonable and appropriate steps to protect customer data" into the equivalent of enforceable warranties. Similarly, it has benchmarked such representations against evolving industry custom.

Of course, there are important differences between competition and consumer protection – and between privacy and openness as substantive goals. It may be easier to make clear representations about customer data than it is, for example, about rights to user dynamism. However, the example of the FTC Section 5 online privacy cases shows how regulation can make commitments in an evolving area credible. While one might

[48]*See, e.g., FTC* v. *Valueclick* (2008) ($2.9 million settlement in case implicating FTC Act and CAN-SPAM Act, in which customer data was not encrypted per websites' stated privacy policy and firms deceptively used consumer information to spam customers).

[49]*See, e.g., Toysmart* (2000) (settlement of first FTC complaint under Chilrdren's Online Privacy Protection Act requiring bankrupt toy seller to destroy its database rather than sell it to others who would use the data in violation of the stated policies under which it was gathered).

[50]15 USC s 45. *See, e.g., FTC* v. *Gateway*; *FTC* v. *Vision I Properties*; *FTC* v. *Premier* (2008) (settling charges that failure to live up to website security representation amounted to a violation of Section 5 of the FTC Act).

worry about overly zealous enforcement scaring off potential platform providers, one could equally worry that underly zealous enforcement might lead potential consumers to shy away from platforms whose policies they might conclude could never be enforced – were it not for a consumer protection watchdog.

VI. Conclusion

The deployment of FTC Section 5 to deal with platform dominance is not the only way to handle these issues. However, the considerations sketched here should be relevant to any attempt to protect user dynamism from deception and opportunism. Traditional antitrust law will likely not reach these concerns. However, given the traditionally high value placed on dynamic effects, and the incipient stage of user dynamism, we should proceed with such attempts. This is particularly true where it is possible to do so with limiting principles, such as holding platform operators to their own commitments. A regulatory plan tailored to making commitments credible can help make up for the weakness diffuse and anonymous user/creators might have in dealing with a single platform owner. A regulatory body that understands its role in counterbalancing that weakness and in protecting network-based creativity and production may yield as yet unknowable returns.