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The Law of Friction

William McGeeveran[†]

INTRODUCTION

To physicists and mechanical engineers, friction is a fundamental force of nature that resists motion between two surfaces where they touch.¹ The laws of friction describe the behavior of this force. To many in Silicon Valley, however, the word “friction” has another meaning: it describes the forces that impede individuals from disclosing personal information when they use online services, particularly social networks such as Facebook. As more businesses turn to social media as a source of promotion and eventually revenue, this kind of friction represents lost opportunity. As a result, “frictionless sharing” became an extremely trendy idea in 2011, heralded by many as the wave of the future.² The law has little to say about online friction, but it represents an important force governing flows of personal information.

A platform based on frictionless sharing discloses individuals’ activities automatically, rather than waiting for them to authorize a particular disclosure. For example,

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¹ See Herbert S. Cheng, *Friction*, in Rita G. Lerner and George L. Trigg, eds, 1 *Encyclopedia of Physics* 352 (Wiley-VCH 3d ed 2005); Kimberly A. McGrath, *Friction*, in Kimberly A. McGrath, ed, *World of Physics* 265 (Gale 2001).

² See, for example, Matthew Ingram, *Why Facebook’s Frictionless Sharing is the Future*, Bloomberg Businessweek Technology (Bloomberg Oct 3, 2011), online at <http://www.businessweek.com/technology/why-facebooks-frictionless-sharing-is-the-future-10032011.html> (visited Sept 15, 2013); Alicia Eler, *Top Trends of 2011: Frictionless Sharing*, (Readwrite Dec 14, 2011), online at http://readwrite.com/2011/12/14/top_trends_of_2011_frictionless_sharing (visited Sept 15, 2013).

mainstream news websites, including the *Washington Post*, offer “social reading” applications (“apps”) in Facebook.³ After a one-time authorization, these apps send routine messages through Facebook to users’ friends identifying articles the users view.⁴ Everyone in Facebook has seen such notifications in the news feed or ticker, sometimes aggregated and placed with extra prominence.⁵ Similarly, by default the music streaming service Spotify notifies Facebook friends of the songs a user hears,⁶ while Quora, a question-and-answer forum, has adopted several frictionless notification features that routinely publicize activity on the site.⁷

Netflix, increasingly a video streaming company rather than a DVD rental service, also wanted to adopt frictionless sharing. It introduced such a feature in several countries, but had refrained from doing so in the United States because it believed a rather obscure federal statute called the Video Privacy Protection Act (VPPA)⁸ might prohibit it from doing so.⁹

³ See *Washington Post Social Reader* (The Washington Post), online at http://www.washingtonpost.com/2010/07/08/gIQA2eKpnK_page.html (visited Sept 15, 2013). Newer participants include the popular online magazines *Slate* and *The Huffington Post*. See *Introducing Social Reading* (Slate Aug 21, 2012), online at http://www.slate.com/articles/briefing/slate_fare/2012/08/social_reading_on_slate_a_great_new_way_for_you_and_your_facebook_friends_to_share_your_favorite_articles.html (visited Sept 15, 2013) (providing a social reading application similar to *The Washington Post*’s Social Reader); Elena Haliczler, Arianna Huffington, and Sam Napolitano, *Huff Post Launches Social Reader App for Facebook Timeline*, *The Huffington Post Technology Blog* (Huffington Post Feb 16, 2012), online at http://www.huffingtonpost.com/elena-haliczler/huffpost-launches-social_b_1282524.html (visited Sept 15, 2013) (same).

⁴ In February 2012, Facebook announced that another dozen media outlets were unveiling similar social reading apps. See Justin Osofsky, *The Latest Wave of Media Apps to Add to Timeline*, *Facebook + Media* (Facebook Feb 16, 2012), online at <https://www.facebook.com/notes/facebook-media/the-latest-wave-of-media-apps-to-add-to-timeline/328535253848637> (visited Sept 15, 2013).

⁵ See Lauren Indvik, *Facebook Tests Smaller Version of “Trending Articles” in Newsfeed* (Mashable Apr 26, 2012), online at <http://mashable.com/2012/04/26/facebook-trending-articles-test/> (visited Sept 15, 2013) (describing experimental changes in Facebook’s display of such stories on its site).

⁶ See Spotify, *Spotify Privacy Policy* *4.2 (Feb 19, 2013), online at <http://www.spotify.com/us/legal/privacy-policy/#share-information> (visited Sept 15, 2013).

⁷ See Edmond Lau, *Add Quora to Your Facebook Timeline*, *The Quora Blog* (Quora May 10, 2012) online at <http://www.quora.com/blog/Add-Quora-to-Your-Facebook-Timeline> (visited Sept 15, 2013).

⁸ The Video Privacy Protection Act of 1988 (VPPA), Pub L No 100-618, 102 Stat 3195 (1988), codified at 18 USC § 2710.

⁹ See Michael Drobac, *Help Us Bring Facebook Sharing to Netflix USA*, *Netflix US & Canada Blog* (Netflix Sept 22, 2011), online at <http://blog.netflix.com/2011/09/help-us-bring-facebook-sharing-to.html> (visited Sept 15, 2013) (“[A] 1980’s law creates some

Eventually, as explained further below, Netflix persuaded Congress to amend the VPPA, allowing the company to emulate Spotify's embrace of frictionless sharing with a new "Netflix Social" feature, unveiled in the United States in March 2013.¹⁰ In fact, however, the original VPPA prohibited only one possible design (the most extreme one) for transmitting video viewing information from Netflix to social networks.¹¹ Nevertheless, because the original VPPA required separate customer approval for disclosure of each individual movie watched,¹² it interposed more friction in Netflix than in Spotify.

This Article carefully analyzes the benefits and drawbacks of frictionless sharing. Social media confers considerable advantages on individuals, their friends, and, of course, intermediaries like Spotify and Facebook. But many implementations of frictionless architecture have gone too far, potentially invading privacy and drowning useful information in a tide of meaningless spam. The Article also considers the role of regulation and asks: what should the law of friction be? Part I provides brief background on frictionless sharing and describes the VPPA and Netflix's successful campaign to alter it, which then serves as a case study for the remainder of the analysis. Part II documents significant benefits of social media for those who disclose information, those who receive it, and businesses that rely on it. Part III turns to concerns about frictionless sharing, focusing both on threats to individual privacy and the likely erosion of information quality and the recommendation ecosystem.

Part IV ties this together by dissecting the rhetoric of frictionless sharing and comparing it to reality. I have argued

confusion over our ability to let U.S. members automatically share the television shows and movies they watch with their friends on Facebook." *The Video Privacy Protection Act in the 21st Century, Hearings before the Subcommittee on Privacy, Technology, and the Law of the Senate Committee on the Judiciary* *3 (Senate Judiciary Committee Jan 31, 2012) (including written testimony of David Hyman, General Counsel of Netflix, Inc), online at <http://www.judiciary.senate.gov/pdf/12-1-31HymanTestimony.pdf> (visited Sept 15, 2013) ("Hyman Testimony").

¹⁰ Cameron Johnston, *Introducing Netflix Social*, Netflix US & Canada Blog (Netflix Mar 13, 2013), online at <http://blog.netflix.com/2013/03/introducing-netflix-social.html> (visited Sept 15, 2013).

¹¹ See Part I.

¹² See 18 USC § 2710(b)(2) (2012), prior to amendment by Pub L 112-258 (allowing a video tape service provider to disclose personally identifiable information "with the informed, written consent of the consumer *given at the time the disclosure is sought*") (emphasis added).

previously that endorsements or recommendations in social media should be the result of “genuine consent.”¹³ Similarly, because sharing is a volitional act, “frictionless sharing” is a contradiction in terms.¹⁴ In the physical world, too much friction can impede movement or even start fires, but too little would cause objects to slide off tables and cars off roads. The key to online disclosures also turns out to be the correct amount of friction, not its elimination.

Finally, Part V sums up the cost-benefit and rhetorical analyses and considers the appropriate response. This Part shows how a sharing system with too little individualized control quickly reduces the net benefit to each consumer and to society at large, but remains at least temporarily advantageous for intermediaries such as Facebook and Netflix. It then turns to determining the proper calibration. Mechanical engineers constantly rely on the laws of friction, which can be reduced to mathematical expression. We lawyers usually must make our laws less precise. But a consumer protection agency such as the Federal Trade Commission (FTC) could rely on a simple and pragmatic principle of interface design that emerges from this analysis and that balances the benefits and concerns about automatic disclosures in social media.

Part V proposes this general law of online friction to guide regulators: *it should not be easier to “share” an action online than to do it.* Netflix could comply with this law of friction (and, not coincidentally, with the original VPPA as well) through a small design change. In particular, Netflix could simply put a “PLAY AND SHARE” button next to the “PLAY” button that viewers already must click to stream any video. An interface would not satisfy this law of friction if it required more effort for customers to start viewing a movie than to inform all their Facebook friends what they are watching. Certain platforms, notably Facebook, have perceived the problems with frictionless

¹³ William McGeeveran, *Disclosure, Endorsement, and Identity in Social Marketing*, 2009 U Ill L Rev 1105, 1158–62.

¹⁴ See Neil M. Richards, *The Perils of Social Reading*, 101 Georgetown L J 689, 713–15 (2013). Despite these flaws, the terminology is unavoidable so I will use both “friction” and “sharing” in this paper, though at times I mock both terms. As discussed further below and especially in Part IV, frictionless sharing is not frictionless because it merely shifts the default—the friction—so that users must take action to *avoid* disclosing information. It is not sharing because true sharing is inherently active, not passive.

sharing and have begun to adhere more closely to this simple design principle.¹⁵ Despite these improvements, many interfaces – including the new Netflix Social – still fail to comply with the law of friction.¹⁶ By consistently promoting the law of friction to all social media purveyors—and threatening regulatory action if they do not conform to it—agencies like the FTC can protect consumers and maximize the benefits of authentic sharing based on genuine consent.

I. FRICTIONLESS SHARING, NETFLIX, AND THE VPPA

A. The Architecture of Frictionless Sharing

Spotify, the popular music streaming service, exemplifies the move toward frictionless sharing. People who download the Spotify app to their computers or smartphones can play, on demand, any of millions of tracks.¹⁷ But the company does not stop at individual enjoyment; by default, the platform publishes the songs people play and the playlists they create, both within the Spotify app and in Facebook.¹⁸ Beginning in September 2011, new members were required to integrate Spotify with a Facebook account.¹⁹ Notwithstanding some complaints about this change,²⁰ the company added as many as four million new

¹⁵ See, for example, Facebook, *Guidelines: Built-In Read*, Facebook Developers, online at <https://developers.facebook.com/docs/submission-process/opengraph/guidelines/built-in-read/> (visited Sept 15, 2013).

¹⁶ See Part I.B.

¹⁷ As Spotify's FAQ section explains, "[w]e aim to have all the world's music available at Spotify. We are still in the process of acquiring licenses to all music in the world (!), therefore it is possible that you won't be able to find some of your favourite artists or tracks right now. We are signing new labels and adding a great amount [sic] of new tracks every week." Spotify, *Spotify Music Catalogue*, Frequently Asked Questions, online at <http://www.spotify.com/us/help/faq/content/> (visited Sept 15, 2013).

¹⁸ See Spotify, *Spotify Privacy Policy* *4.2 (cited in note 6). See also Spotify, *Social and Sharing*, Frequently Asked Questions, online at <http://www.spotify.com/us/help/faq/social/#why-does-spotify-automatically-publish-my-playlists-on-my-profile-page> (visited Sept 15, 2013). Spotify's FAQ section cheerfully responds to the question, "[w]hy does Spotify automatically publish my playlists on my profile page?" by explaining, "[i]t saves you time. Otherwise you'd have to manually publish each new playlist you create." *Id.*

¹⁹ See Anthony Bruno, *Spotify Requires Facebook Accounts for New Users, Ends Invite-Only Beta* (Billboardbiz Sept 27, 2011), online at <http://www.billboard.com/biz/articles/news/1166440/spotify-requires-facebook-accounts-for-new-users-ends-invite-only-beta> (visited Sept 15, 2013).

²⁰ See Parmy Olson, *Spotify Tries to Soothe Angry Users Over Facebook Conditions* (Forbes Sept 28, 2011), online at <http://www.forbes.com/sites/parmyolson/2011/09/28/spotify-tries-to-soothe-angry-users-over-facebook-conditions/> (visited Sept 15, 2013). See

customers in the weeks immediately afterward.²¹ In its first year in the United States, Spotify members listened to over thirteen billion songs.²² Spotify now offers unprecedented access both to music and to friends' musical choices.

As we will see in greater detail below,²³ companies dearly wish to foster online word of mouth about their products, and frictionless sharing allows them to do so in ways never before possible. Before the advent of online social networks, logistical obstacles prevented firms like the *Washington Post*, Spotify, or Netflix from telling your friends about all of your interactions with them.²⁴ Companies instead had to persuade their customers to make recommendations to their friends and lacked reliable means to facilitate that contact, control its substance, or track it afterward. It was extremely difficult to promote such word of mouth at a large scale. This overwhelming friction against disclosure generally hid from public view all the movies you watched, the articles you read, the online purchases you made, and the plane tickets you booked, endowing them with what technologists call "practical obscurity."²⁵ These transactions occurred in separate spaces than the one inhabited by a person's social network. With frictionless sharing, people were nudged—sometimes, arguably, shoved—into transmitting word-of-mouth messages that sponsors craved.

Like many Silicon Valley boomlets, the passage of time revealed that much early hype about frictionless sharing was excessive. By May 2012, some technology journalists were

also Eliot Van Buskirk, *Updated: Spotify Defends Facebook Requirement as 'Simple and Seamless Experience'* (Billboardbiz Sept 27, 2011), online at <http://www.billboard.biz/bbbiz/industry/digital-and-mobile/spotify-defends-facebook-requirement-as-1005370802.story> (visited Sept 15, 2013).

²¹ See Matt Rosoff, *Spotify Has Snagged 4 Million New Users In Six Weeks* (Business Insider Nov 8, 2011), online at http://articles.businessinsider.com/2011-11-08/tech/30372471_1_spotify-facebook-integration-users (visited Sept 15, 2013).

²² See Emma Barnett, *Spotify US Members Listened to 13bn Songs in One Year*, Technology News (The Telegraph July 23, 2012), online at <http://www.telegraph.co.uk/technology/news/9420847/Spotify-US-members-listened-to-13bn-songs-in-one-year.html> (visited Sept 15, 2013) (reflecting the number of songs consumers listened to in the 2011–2012 year).

²³ See notes 102–106 and accompanying text.

²⁴ McGeeveran, 2009 U Ill L Rev at 1111–13 (cited in note 13).

²⁵ See Woodrow Hartzog and Fredric D. Stutzman, *The Case for Online Obscurity*, 101 Cal L Rev 1, 32–40 (2013) (defining online information as obscure if it lacks one or more of four key factors: (1) search visibility; (2) unprotected access; (3) identification; or (4) clarity).

reporting in equally dramatic tones that new statistics showed social reading apps were “crashing and burning” and users “fleeing in droves.”²⁶ This course correction in the narrative went too far in the other direction, however; more careful analysis showed anomalies in the usage numbers and attributed at least part of the sudden decline to some differences in Facebook’s data collection methods and the changes in the design of its interface mentioned earlier.²⁷ Nevertheless, the initial surge in frictionless sharing activity faded permanently, and at least part of the falloff probably resulted from consumer concern about the privacy and information quality problems discussed below in Part III.

Facebook had been the most ardent proponent of frictionless sharing and the related notion it calls the “open graph.”²⁸ At a major conference for developers in September 2011, the company unveiled its new architecture for frictionless sharing with great fanfare.²⁹ In fall 2012, Facebook continued to tweak its architecture in ways that sought to address some of the most serious concerns arising from frictionless sharing, particularly by limiting it to the platform’s defined “built-in actions” such as

²⁶ For some of many examples in this vein, see Daniel Terdiman, *Facebook social reader usage crashing and burning*, CNET Tech Culture (CNET May 7, 2012), online at http://news.cnet.com/8301-10797_3-57429594-235/facebook-social-reader-usage-crashing-and-burning/ (visited Sept 15, 2013); Sarah Jacobsson Purewall, *Facebook’s social readers are fleeing in droves* (PC World May 8, 2012), online at <http://www.pcworld.com/article/255210/facebook-social-reader-users-are-fleeing-in-droves.html> (visited Sept 15 2013).

²⁷ See, for example, Jeff Sonderman, *Facebook Explains Why Social Reading Apps Are Suffering*, Poynter.org (May 8, 2012), online at <http://www.poynter.org/latest-news/mediawire/173100/why-facebook-frictionless-sharing-apps-are-suffering-and-what-it-means/> (visited Sept 15, 2013). Different Facebook design changes are discussed in notes 5 and 15 and their accompanying text.

²⁸ See Facebook, *Open Graph Concepts*, Facebook Developers (Facebook Dec 2012), online at <http://developers.facebook.com/docs/opengraph/> (visited Sept 15, 2013). The “social graph” is an associated term for the representation of the links between an entire social network. *Id.* See also James Grimmelman, *Saving Facebook*, 94 Iowa L Rev 1137, 1143 (2009) (defining “social graph” as “the entire network of users and explicit contact links on a social network site” or “the idealized network of users and contact links that would exist if the same site stored all significant human relationships”).

²⁹ See, for example, Josh Halliday, *Facebook to Transform Into an Entertainment Hub* (The Guardian Sept 22, 2011), online at <http://www.guardian.co.uk/technology/2011/sep/22/facebook-transform-entertainment-hub?intcmp=239> (visited Sept 15, 2013) (reporting on Facebook’s unveiling of frictionless sharing at its F8 developers’ conference); Somini Sengupta and Ben Sisario, *Facebook as Tastemaker*, NY Times B1 (Sept 22, 2011) (“Facebook, in short, aims not to be a Web site you spend a lot of time on, but something that defines your online — and increasingly offline — life.”).

listening to music or reading a web page.³⁰ Facebook explained its motivation in part by noting negative reaction to some aspects of frictionless sharing.³¹ Observers have speculated that Facebook also might have wanted to avoid the risk of regulatory interventions.³² A coalition of privacy advocacy groups led by the Electronic Privacy Information Center (EPIC) had written to the FTC upon the introduction of frictionless sharing the previous year, urging the agency to investigate and restrict the practice.³³

The precise design of frictionless sharing remains a work in progress, subject to continuous experimentation by both Facebook and app developers. We have been down this road before, with related past innovations like Facebook Beacon and Facebook Connect, which were heralded as revolutionary and then quickly discarded as failures. Whatever the exact design, and whether implemented by Facebook or by other firms, the significant and consistent trend is an imperative for social networks and their business partners to encourage sharing, even at the cost of some errors or dissatisfaction.³⁴ Whatever frictionless sharing looks like next year or the year after, the costs and benefits outlined in this Article will hold true.

B. Netflix and the VPPA

During all the excitement about frictionless sharing in fall 2011, Netflix remained on the sidelines because of its concerns

³⁰ See Henry Zhang, *Growing Quality Apps with Open Graph*, Developer Blog (Facebook Oct 10, 2012), online at <http://developers.facebook.com/blog/post/2012/10/10/growing-quality-apps-with-open-graph/> (visited Sept 15, 2013). The changes were rolled out gradually between October 2012 and January 2013. *Id.*

³¹ *Id.* (“When apps automatically publish stories on a person’s behalf in a way that is unexpected, such as when they browse an online store, it can surprise and confuse people.”).

³² See Jenna Gavin, *Passive Sharing Is Passe: Why Protecting Privacy in the Social Sphere Preserves Value in the Channel* (VentureBeat Nov 18, 2012), online at <http://venturebeat.com/2012/11/18/passive-sharing-is-passe-why-protecting-privacy-in-the-social-sphere-preserves-value-in-the-channel/#jC0zZcWoyVUrehVV.99> (visited Sept 15, 2013) (“Unless social networks proactively move to develop protocols and technologies around privacy, the regulatory environment will mandate it and create a quagmire of restrictions that will stymie growth and innovation and opportunity in the channel.”).

³³ See *Letter from Marc Rotenberg, Executive Director, Electronic Privacy Information Center (EPIC), et al, to Jon Leibowitz, Chairman, Federal Trade Commission, et al*, *12–13 (Sept 29, 2011), online at http://epic.org/privacy/facebook/EPIC_Facebook_FTC_letter.pdf (visited Sept 15, 2013) (“EPIC Letter”).

³⁴ I made the same point in an earlier article discussing Facebook Beacon in particular and social marketing in general. See McGeveran, 2009 Ill L Rev at 113–22 (cited in note 13).

that the Video Privacy Protection Act (VPPA) limited its ability to participate. Congress passed the VPPA in 1988.³⁵ As often happens with legislation to protect privacy, the proponents of the bill acted in response to a particular attention-grabbing incident. During the fervor over the nomination of Judge Robert Bork to the Supreme Court, an enterprising reporter for an alternative weekly newspaper in Washington, DC obtained the judge's borrowing records from his neighborhood video rental store and published an article about them.³⁶ Members of Congress (perhaps afraid that reporters in their own hometowns would get similar ideas) responded quickly. Displaying much more unity than they had on the Bork nomination itself, both chambers passed the measure by voice vote.³⁷ The resulting statute uses legal rules to create friction against disclosures of the movies individuals watch.

The VPPA applies to businesses engaged in the "rental, sale, or delivery of prerecorded video cassette tapes or similar audio visual materials."³⁸ When first considered, the bill included similar protection for library borrower records, but this provision was dropped when senators disagreed about law enforcement access to the records.³⁹ Before the recent amendments, a service provider covered by the law could not disclose any personally identifiable information about video customers unless it secured "informed, written consent of the consumer given at the time the disclosure is sought" or the disclosure fell within one of several narrow exceptions.⁴⁰ In

³⁵ VPPA, 18 USC § 2710 (cited in note 8).

³⁶ See Michael Dolan, *The Bork Tapes Saga*, *The American Porch*, online at <http://www.theamericanporch.com/bork2.htm> (visited Sept 15, 2013). According to the reporter's later account, he used the same rental store and the assistant manager obligingly photocopied the handwritten records of the Bork family's rentals. *Id.* at 3.

³⁷ President Ronald Reagan signed the bill on November 5, 1988, three days before the election to choose his successor.

³⁸ 18 USC § 2710(a)(4). The statute also covers subsequent recipients' handling of personally identifiable information that is otherwise protected by the Act. See 18 USC § 2710(a)(4).

³⁹ See *The Video Privacy Protection Act of 1988*, S Rep No 100-599, 100th Cong, 2d Sess 1988, reprinted in 1988 USCCAN 4342-8. This same issue arose again, of course, in debate about the USA PATRIOT Act in the first decade of this century. See Michael Kelley, *Patriot Act Extended for Four Years With No Change to Library Records Provision*, (*Library Journal* May 27, 2011), online at http://www.libraryjournal.com/lj/home/890795-264/patriot_act_extended_for_four.html.csp (visited Sept 15, 2013) (describing the library records provision of the PATRIOT Act and the Act's extension in 2011).

⁴⁰ 18 USC § 2710(b)(2)(B). Richards thus characterizes the old VPPA as a

addition, the law always included such exceptions for disclosures incident to the ordinary course of business or in response to court orders or state or federal warrants.⁴¹ Provided the customer could opt out, another exception in the original law allowed covered businesses to disclose general information about a customer's rentals to third-party marketers, although not particular titles or descriptions.⁴² (So, for example, the original VPPA permitted Netflix to disclose that you enjoy foreign films, but not whether you've watched *The Lives Of Others*.⁴³) Both the old and new VPPA establish a private right of action and allow minimum liquidated damages of \$2,500 per violation, punitive damages, attorney's fees, and any preliminary and equitable relief the court deems appropriate.⁴⁴

After almost twenty-five years one might expect the statute to have become outdated, but its drafters took care to make the VPPA flexible and technology-neutral. Long after VCRs were displaced by DVDs and now by online streaming, the VPPA remained current because it included "similar audio-visual materials" in the definition of its scope.⁴⁵ Some observers have

"confidentiality" rule. See Richards, 101 Georgetown L J at 694–96 (cited in note 14).

⁴¹ 18 USC § 2710(b)(2)(C), (E), and (F). These exceptions are narrow. For example, even disclosures to law enforcement agencies pursuant to valid warrants require, in part, prior notice to the customer. 18 USC § 2710(b)(3).

⁴² 18 USC § 2710(b)(2)(D). However, covered businesses may disclose the subject matter of the customer's rentals if "the disclosure is for the exclusive use of marketing goods and services directly to the consumers." 18 USC § 2710(b)(2)(D)(ii).

⁴³ *The Lives of Others* (Sony Pictures Classics 2006). And, really, you *should* see it. It is a marvelous German film about privacy and surveillance that won the 2006 Academy Award for Best Foreign Language Film. That is my genuine recommendation, disclosed with my consent.

⁴⁴ 18 USC § 2710(c). Courts have been reluctant to apply the private right of action and damages provisions to other parts of the VPPA besides unauthorized disclosure, such as its data retention limitations. See, for example, *Sterk v Redbox Automated Retail, LLC*, 672 F3d 535, 538–39 (7th Cir 2012); *Daniel v Cantrell*, 375 F3d 377, 384–85 (6th Cir 2004). These courts still recognize that the private right of action and liquidated damages do apply to the VPPA's disclosure rules, which are the ones relevant to frictionless sharing. See *Daniel*, 375 F3d at 384. There is also a split among courts about the availability of a private right of action against third parties who receive information in violation of the VPPA's requirements, often law enforcement authorities. Compare *Amazon.com LLC v Lay*, 758 F Supp 2d 1154, 1167 (WD Wash 2010) (holding that a person may bring suit under the VPPA against third parties who impermissibly receive information); *Dirkes v Borough of Runnemede*, 936 F Supp 235, 240 (D NJ 1996) (same), with *Daniel*, 375 F3d at 381–82 ("[U]nder the plain language of the statute, only a 'video tape service provider' (VTSP) can be liable."). Again, however, this has little bearing on frictionless sharing. No matter what the VPPA says about recipients of information or other third parties, Netflix might still be liable for unauthorized disclosures.

⁴⁵ See, for example, S Rep No 100-599 at 5–6, 11–12 (cited in note 39) (discussing

suggested that the VPPA's "written consent" provision might require pen and paper rather than online authorization.⁴⁶ If that were so, it would marginalize numerous older statutes that require writings, but Congress addressed this concern comprehensively years ago with passage of the E-SIGN Act.⁴⁷ Cases interpreting that statute clearly and consistently find that digital equivalents substitute for statutory requirements of a writing.⁴⁸ Any other statutory construction would undermine every clickwrap notification and "I agree" button on the internet.

Thus, the shift to the internet for both viewing movies and manifesting consent did not undermine the original VPPA's fundamental operation. The statute did prevent Netflix from adopting precisely the same architecture as Spotify—but not because of any reliance on outdated technology. Rather, the underlying substantive provisions of the VPPA were incompatible with the Spotify model. The consumer gives Spotify one-time blanket consent to share all activity with Facebook friends. The VPPA specifically required consent for each disclosure.⁴⁹ However, the same networked digital technology that makes frictionless sharing possible also would make it much easier for Netflix to secure case-by-case consent today than it was for a video store in 1988 when the VPPA passed. As

the need to keep private the viewing habits of individuals and including then-new "laser discs" and "CDI technology" as examples of "similar audio visual materials"); *In re Hulu Privacy Litigation*, 2012 WL 3282960, *5 (ND Cal) ("[A] plain reading of a statute that covers videotapes and 'similar audio visual materials' is about the video content, not about how that content was delivered."). Based in part on its careful analysis of the Senate Report, the *Hulu* court concluded that "Congress used 'similar audio visual materials' to ensure that VPAA's protections would retain their force even as technologies evolve." *In re Hulu Privacy Litigation*, 2012 WL 3282960 at *5–6. See also *Mollett v Netflix, Inc.*, 2012 WL 3731542, *2 (ND Cal) (applying the VPPA to streaming video provided by Netflix).

⁴⁶ See, for example, Jules Polonetsky and Christopher Wolf, *Viewers Should Be Able to Share Their Playlists* *1 (Roll Call Nov 29, 2011), online at http://www.rollcall.com/issues/57_65/jules_polonetsky_christopher_wolf_viewers_able_share_movie_playlists-210572-1.html (visited Sept 15, 2013).

⁴⁷ Electronic Signatures in Global and National Commerce Act (E-SIGN Act), Pub L No 106-229, 114 Stat 467 (2000), codified at 5 USC §§ 7001–7031.

⁴⁸ See, for example, *Campbell v General Dynamics Government Systems Corp.*, 407 F3d 546, 556 (1st Cir 2005) (holding that the E-SIGN Act "likely precludes any flat rule that a contract to arbitrate is unenforceable under the [Americans with Disabilities Act] solely because its promulgator chose to use e-mail as the medium to effectuate the agreement"); *Berry v Webloyalty.com, Inc.*, 2011 WL 1375665, *7–8 (SD Cal) (granting a Rule 12(b)(6) motion to dismiss a claim because the E-SIGN Act means that clicking a "yes" button satisfied written consent requirement in another federal statute).

⁴⁹ See 18 USC § 2710(b)(2) (2012), prior to amendment by Pub L 112–258.

I testified at a January 2012 Senate hearing about the VPPA, Netflix could simply place a “PLAY AND SHARE” button directly next to every “PLAY” button and comply with this requirement.⁵⁰ I will have more to say about this in Part V below; for now, the key point is that the VPPA always allowed sharing in social networks, just not completely “frictionless” sharing.

Netflix showed no interest in the “PLAY AND SHARE” button or any other means of operating under the original VPPA. Instead, it lobbied Congress aggressively, and at significant expense, to weaken the consent requirements in the VPPA.⁵¹ The company used dismissive rhetoric suggesting that no musty, 25-year-old law could possibly address the problems of today’s fast-paced digital world.⁵² It similarly argued that the law was ambiguous, without spelling out any perceived confusion.⁵³ As just demonstrated, however, the statute was quite simple and easily applied to current technology. Netflix’s

⁵⁰ See *The Video Privacy Protection Act in the 21st Century, Hearings before the Subcommittee on Privacy, Technology, and the Law of the Senate Committee on the Judiciary *2–3* (Senate Judiciary Committee Jan 31, 2012) (written testimony of William McGeeveran, University of Minnesota Law School), online at <http://www.judiciary.senate.gov/hearings/hearing.cfm?id=f14e6e2889a80b6b53be6d4e412d460f> (visited Sept 15, 2013) (“McGeeveran Testimony”).

⁵¹ See Brendan Sasso and Rachel Leven, *Netflix hires more lobbyists for push on video rental law*, Hillicon Valley Blog (The Hill Apr 23, 2012), online at <http://thehill.com/blogs/hillicon-valley/technology/223027-netflix-hires-top-firm-to-lobby-on-video-privacy-law> (visited Sept 15, 2013) (reporting that Netflix had hired the law firm Greenberg Traurig to lobby for amendment of the VPPA).

⁵² See Eric Engleman, *Netflix-Facebook Link Stalls as Franken Favors Bork Law* (Bloomberg News Feb 20, 2012), online at <http://www.bloomberg.com/news/2012-02-21/netflix-facebook-link-stalls-as-senator-franken-backs-bork-video-law-tech.html> (visited Sept 15, 2013) (quoting Netflix CEO Reed Hastings, a Facebook board member, criticizing VPPA as “outdated”); Michael Drobac, *Help Us Bring Facebook Sharing to Netflix USA* (cited in note 9) (praising “forward-thinking members of Congress” who seek to amend a “1980s law”); Hyman Testimony at *3 (cited in note 9) (opposing “trying to graft specific notions about video privacy from almost 25 years ago into the dynamic information age of today”); Casey Johnston, *The Netflix lobby in Washington spent \$1 million in two years* (ARS Technica Dec 27, 2012), online at <http://arstechnica.com/tech-policy/2012/12/the-netflix-lobby-in-washington-spent-1-million-in-two-years/> (visited Sept 15, 2013).

⁵³ Michael Drobac, *Help Us Bring Facebook Sharing to Netflix USA* (cited in note 9) (apologizing that “a 1980’s law creates some confusion over our ability to let U.S. members automatically share the television shows and movies they watch with their friends on Facebook”); Julianne Pepitone, *Why Netflix’s Facebook App Would be Illegal*, CNN Money (Mar 27, 2012), online at <http://money.cnn.com/2012/03/27/technology/netflix-facebook/index.htm> (visited Sept 15, 2013) (quoting Netflix spokesman Steve Swasey saying, “[i]t’s ambiguous about whether it applies to us. We just don’t know, and we’d rather be in compliance than risk stepping over the line”).

general counsel made a stronger point at the Senate hearing when he argued that it was unfair that video should be subject to more stringent regulation than books or music.⁵⁴ I responded that, instead of diluting the VPPA, legislators should consider applying its video rules to all media (or better yet, to all sharing).⁵⁵

During the post-election lame-duck session in 2012, Congress passed legislation strongly supported by Netflix to amend the VPPA; President Obama signed the bill in January 2013.⁵⁶ The new law changes only the VPPA's consent provisions, leaving the rest of the statute intact.⁵⁷ From now on, Netflix and other video providers may secure a consumer's advance blanket approval for disclosures.⁵⁸ Successful amendments from several members of Congress did add a few limitations to this more permissive consent requirement: consumer approval expires after two years;⁵⁹ consent must be sought separately from other terms of service;⁶⁰ and providers

⁵⁴ Hyman Testimony at 3 (cited in note 9). See *The Video Privacy Protection Act in the 21st Century*, Hearings before the Subcommittee on Privacy, Technology, and the Law of the Senate Committee on the Judiciary *2–3 (Jan 31, 2012) (written testimony of Christopher Wolf, Hogan Lovells US LLP), online at <http://www.judiciary.senate.gov/pdf/12-1-31WolfTestimony.pdf> (visited Sept 15, 2013) (“Wolf Testimony”) (arguing that the more stringent internet sharing rules for movies under the VPPA “makes no sense”).

⁵⁵ McGeeveran Testimony at *2 (cited in note 50) (“If the committee revisits this statute, it should consider extending protection to reading and listening habits as well as viewing.”).

⁵⁶ Video Privacy Protection Act Amendments Act of 2012, Pub L No 112-258, 126 Stat 2414 (2013), codified at 18 USC § 2710(b)(2)(B).

⁵⁷ There are other flaws in the legislation ultimately enacted. Most importantly, while enacted with social media in mind, the statute dilutes consent requirements for *all* disclosures. See McGeeveran Testimony at *4 (cited in note 50). Now, by securing blanket consent, video providers can reveal your individual movie choices to anyone for any reason, including marketers, movie studios, or reporters for alternative weekly newspapers. Even if Netflix does not choose to do so, future services may. In addition, in response to the spurious concern that the original VPPA required consent in pen-and-paper written form, see note 46, the new statute specifically singles out the internet, a step away from principles of technology neutrality. See 18 USC § 2710(b)(2)(B) (requiring “informed, written consent, including through an electronic means using the Internet”). Not only is this language unnecessary because of the E-SIGN Act, it may actually make the situation worse by limiting consent to communications using internet protocols rather than alternative systems, including some used today by Netflix's competitors. See McGeeveran Testimony at *4–5 (cited in note 50) (noting that this internet-specific language might exclude mobile devices such as the Kindle, devices that receive signals via satellite, and cable television transmissions including on-demand or DVR services).

⁵⁸ See 18 USC § 2710(b)(2)(B)(ii)(II).

⁵⁹ 18 USC § 2710(b)(2)(B)(ii)(II).

⁶⁰ 18 USC § 2710(b)(2)(B)(i).

must offer, “in a clear and conspicuous manner,” an option for consumers to withdraw consent on a case-by-case basis or to cancel it altogether.⁶¹ Nevertheless, the VPPA now allows Spotify-style frictionless sharing through its new Netflix Social feature, which shows your Facebook friends all the movies you watch in the Netflix interface.⁶² To consider whether this is the best direction for the law to move, I turn next to the benefits and costs of easier sharing in social networks.

II. BENEFITS OF SOCIAL MEDIA DISCLOSURES

In my opinion, a properly designed social Netflix app would be great. It could make it easier for people to swap playlists and queues within their networks, to learn about movies from trusted friends, and to chat about them. Personally, I use Facebook and Twitter every day, and I listen to music on Spotify (although frequently in “private session” with sharing functionality disabled). I can imagine using Netflix socially as well.

This Part considers the benefits of authentic social sharing, using Netflix and movies as its example throughout. It divides the discussion somewhat artificially based on the beneficiaries: me, us, and them. First, it explains the main advantages to me as a speaker in social media (or to anyone who discloses personal choices such as movie selections). Then it discusses what we all gain, as individuals and as a society, by receiving these messages from friends. Finally, it turns to them—the intermediaries such as Netflix, Facebook, or content providers like movie studios—and the reasons they are so keen to promote these increased information flows. Any regulation of frictionless sharing should strive to preserve all these benefits for me, us, and them.

⁶¹ 18 USC § 2710(b)(2)(B)(iii).

⁶² See Johnston, *Introducing Netflix Social* (cited in note 10). Unlike Spotify, linking a Netflix account to Facebook automatically displays movie choices to friends within Netflix, but the user still must take another step to share that information in friends’ Facebook News Feeds as well. *Id.* Netflix Social does not share a user’s movie queue, only those titles actually viewed. *Id.* After users activate Netflix Social, a small “don’t share this” icon displays when the movie begins and the user can click it to turn off default sharing of that video. *Id.*

A. Me: Benefits Of Disclosing Information

I benefit, as an individual, from sharing personal information within my social network.⁶³ Facebook did not force me, or nearly a billion other people, to use its service. Consumer demand has driven the continued explosive growth of social media. These customers obviously recognize value when they purposefully share information with friends.

Individuals express themselves by announcing their tastes and preferences to the world.⁶⁴ This is the same drive that leads people to display radio station bumper stickers on their cars, wear t-shirts referring to beloved sports teams or movies, and compose long lists of favorites in online spaces like Facebook profiles or dating sites. One recent study found that disclosing personal information or opinions activates regions of the brain associated with reward.⁶⁵ Social media has become a key forum for personal speech and identity formation and, by far, the most significant for many ordinary people.⁶⁶ Individuals' commentary about films they have seen unquestionably represents valuable communication—indeed, constitutionally protected speech. And, as James Grimmelman points out, social network profiles, including things like shared movie recommendations, “aren't just expressive of identity; they're also constitutive of it.”⁶⁷ Facebook users are creating whole selves on that blue-bordered screen, and the resulting page becomes a persona of its own—reflecting the persona of the creator, of course, but also turning into its own unique avatar, like a brand for the individual. In this way, an individual's Facebook Self and Twitter Self join Workplace Self and Out-Drinking-With-Close-Friends Self among a person's intersecting identities.⁶⁸

⁶³ To avoid being presumptuous, I will use myself as the discloser here—but the chances are high that you could step into my shoes.

⁶⁴ See Sherry Turkle, *Life on the Screen: Identity in the Age of the Internet*, Aspects of the Self 178 (Simon & Schuster 1995); Grimmelman, 94 Iowa L Rev at 1152–53 (cited in note 28).

⁶⁵ Diana Tamir and Jason P. Mitchell, *Disclosing Information About the Self is Intrinsically Rewarding*, 109 Proceedings of the National Academy of Sciences 8038, 8041 n 21 (2012).

⁶⁶ See, for example, danah boyd, *Social Network Sites as Networked Publics: Affordances, Dynamics, and Implications*, in Zizi Papacharissi, ed, *A Networked Self: Identity, Community, and Culture on Social Network Sites* 39, 39–55 (Routledge 2011).

⁶⁷ Grimmelman, 94 Iowa L Rev at 1153 (cited in note 28).

⁶⁸ Consider Erving Goffman, *The Presentation of the Self in Everyday Life*

Another expressive benefit of disclosures comes from promoting the work of others. For a devoted fan of a particular restaurant, political cause, band, or movie, social media provides a wonderful way to spread the word about it. Individuals accrue several kinds of personal rewards from making these sincere recommendations.⁶⁹ I can help both my friends and the artists or activists whose work I admire. Like other altruistic acts, matchmaking between my favorites and my friends makes me feel good. These recommendations can also advance my personal agenda if social disclosures get others interested in my favorites and help ensure their success: more diners in that little restaurant will help keep it open, and gathering more donors or voters for that cause may add support for my personal political views. The internet amplifies my recommendations to an unprecedented degree, circulating them among all my friends in a socially appropriate manner, allowing my friends to forward them further, and allowing intermediaries to aggregate my opinions with others.⁷⁰ By serving as a tastemaker among friends and even strangers, I get to feel like part of the cognoscenti—knowledgeable, hip, or artistically sensitive.

B. Us: Benefits Of Receiving Information

We all benefit from listening in social networks as well as from talking. Purposeful sharing of information is fundamental to intimacy.⁷¹ Facebook is not the full equivalent of in-person exchanges, but virtual sharing enhances real-world relationships. For instance, the opportunity for friends to discuss movies they have seen enhances their enjoyment of both the friendship and the movie. When acquaintances discover that they like the same things, it can intensify their bond, as anyone who has ever compared favorite books and films on a first date can attest. Properly designed social networking platforms

(Doubleday Anchor 1959).

⁶⁹ See McGeeveran, 2009 Ill L Rev at 1130 (cited in note 13) (“Many motivations inspire individuals to engage in word-of-mouth interactions, including desires to feel smart, to be helpful, to express themselves, or to affiliate themselves with groups that share their opinions.”). Of course, many businesses also offer more concrete incentives like discounts to customers who refer their friends.

⁷⁰ See Eric Goldman, *Online Word of Mouth and Its Implications for Trademark Law*, in Graeme B. Dinwoodie and Mark D. Janis, eds, *Trademark Law and Theory: A Handbook of Contemporary Research* 404, 411–12 (Edward Elgar 2008).

⁷¹ See Charles Fried, *Privacy*, 77 Yale L J 475, 484–86 (1968).

facilitate these connections. It is easy to imagine a Netflix app that allowed friends in different places to watch videos “together” and discuss them in real time during viewing.⁷² This could become the high-tech version of a scene in *When Harry Met Sally*, where two friends watch *Casablanca* on television while commenting to each other over the telephone.⁷³

Virtual sharing can enable real-world connections directly as well. This may be particularly true with geolocation apps that allow people to publicize their location, find out if friends are nearby, and get recommendations from others within their social network who have been to the same place.⁷⁴ In an enthusiastic video promoting the new Google Latitude service, which adds participating friends’ locations to Google Maps, the narrator determines that her parents made it home from the airport and her friends are playing tennis nearby.⁷⁵ Google, Foursquare, and many other companies anticipate that people will find pervasive passive disclosures about the whereabouts of their family and friends very useful in daily life.⁷⁶ These interfaces embed different amounts of friction now, but in general, they tend to use always-on disclosure. A bill recently proposed in the Senate would require permission for geolocation disclosures but would

⁷² According to a recent study by the Pew Center for the Internet and American Life, an estimated 23 percent of mobile phone users have exchanged text messages with friends while watching the same television program. See Aaron Smith and Jan Lauren Boyles, *The Rise of the “Connected Viewer”*, Pew Internet (Pew Research Center July 17, 2012), online at <http://www.pewinternet.org/Reports/2012/Connected-viewers/Findings.aspx?view=all> (visited Sept 15, 2013). Google has integrated YouTube into Google+ Hangouts to allow this type of social viewing. See Angela Moscaritolo, *Watch YouTube Videos in Google+ Hangouts With New App* (PC Mag.com June 15, 2012), online at <http://www.pcmag.com/article2/0,2817,2405863,00.asp> (visited Sept 15, 2013).

⁷³ *When Harry Met Sally* (MGM 1989). See also *Argo* (Warner Bros 2012) (featuring a similar scene, set in 1979, where Ben Affleck’s character talks to his son on the phone and tunes his television to the same channel).

⁷⁴ See, for example, Foursquare, *About Foursquare* (Jan 2013), online at <https://foursquare.com/about/> (visited Sept 15, 2013); Footprints, *Footprints Features* (Sollico Software 2012), online at <http://www.footprints.net/> (visited Sept 15, 2013); Sarah Perez, *Location-Sharing App Glympse Adds Calendar Integration to Eliminate All Those “I’m Running Late” Messages*, Tech Crunch Apps (Tech Crunch Oct 16, 2012), online at <http://techcrunch.com/2012/10/16/location-sharing-app-glympse-adds-groups-calendar-integration-to-eliminate-all-those-im-running-late-messages/> (visited Sept 15, 2013).

⁷⁵ Google, *Google Latitude*, Google Mobile (2011), online at <http://www.google.com/mobile/latitude/> (visited Sept 15, 2013).

⁷⁶ According to Forrester Research, however, only about 5 percent of adults use such apps at present. Geoff Duncan, *Forrester: Only 5 pct of adults use geo-social apps*, Digital Trends Mobile (Digital Trends Dec 6, 2011), online at <http://www.digitaltrends.com/mobile/forrester-only-5-pct-of-adults-use-geo-social-apps/> (visited Sept 15, 2013).

allow one-time blanket authorization,⁷⁷ similar to the amended VPPA.⁷⁸

Increased information from friends about the things they love helps each of us to find new things we will love too. Netflix, Amazon, and many online retailers commonly recommend products purchased by an aggregate of other patrons with similar browsing patterns. Referrals within social networks are even better because recipients know the actual person whose lead they are following, rather than trusting the wisdom of a vendor's algorithm. We rely on our friends to direct us to things we will like because we value their opinions and often share their preferences. Moreover, we can better assess their reliability; if I like my brother-in-law's clothes but not his taste in movies, I know which of his recommendations to follow.

I find an increasing portion of my internet browsing is shaped by following others' links in Facebook and Twitter. A recent survey and report by Oxford University's Reuters Institute dramatically demonstrated the power of social media in driving news readership.⁷⁹ The survey found that 41 percent of respondents in the United States said they had used social media as a source for locating news stories that they read within the previous week.⁸⁰ Links to web content are only one type of useful recommendations conveyed through social sharing. Spotify emphasizes this discovery as an integral aspect of its service, declaring on its web site, "[m]usic is social."⁸¹ In a broader 2006 study by Harris Interactive, a whopping 89 percent of respondents agreed that they "seek or use information and advice from other people" about restaurants (25 percent doing so to a "great extent"), and 76 percent sought such help

⁷⁷ See Eric Engleman, *Location-Tracking Apps Would Need Permission in U.S. Bill*, Bloomberg Politics (Bloomberg Dec 4, 2012), online at <http://www.bloomberg.com/news/2012-12-04/location-tracking-apps-would-need-permission-in-u-s-bill.html> (visited Sept 15, 2013).

⁷⁸ See Part I.B.

⁷⁹ Nic Newman, ed, *Reuters Institute Digital News Report 2012: Tracking the Future of News*, Reuters Institute for the Study of Journalism *15 (University of Oxford July 2012), online at https://reutersinstitute.politics.ox.ac.uk/fileadmin/documents/Publications/Other_publications/Reuters_Institute_Digital_Report.pdf (visited Sept 15, 2013) ("Reuters Institute Report").

⁸⁰ Reuters Institute Report at *27 (cited in note 79). This figure was significantly higher than in four European nations surveyed, which probably results from lower adoption of social media in those countries. Id.

⁸¹ Spotify, *About us* (2013), online at <https://www.spotify.com/us/#features> (visited Sept 15, 2013) ("Music brings people together. That's why Spotify is so social.").

about movies (15 percent did “to a great extent”).⁸² Social networks make that trustworthy advice more accessible.

Reliable information about our friends’ preferences also plays an integral role in the internet’s well-known “long tail” phenomenon, a concept popularized by Chris Anderson.⁸³ The basic idea is that the demand for many products falls in a power-law distribution so that, when plotted on a graph, a huge spike on the left depicts a few items purchased by many people and then a long tail trails off to the right where a large number of offerings each attracts many fewer customers.⁸⁴ Distribution of first-run feature films tends to follow this model: studios produce a few blockbusters and then many other releases are Hollywood bombs, niche offerings, independent or documentary films, and older films. For the studios, the hits cross-subsidize the misses. Distributors of many other cultural products like books, popular music, and television programs traditionally follow a similar pattern where a few big successes support the entire enterprise, including many other offerings that make little profit or lose money.⁸⁵

Anderson explained how the internet changes this dynamic. In movie rentals, the online service Netflix had a crucial advantage over bricks-and-mortar Blockbuster Video. The latter confronted fixed overhead costs, finite shelf space, and a limited geographic area from which to draw customers. As a result, it concentrated on offering a restricted number of broadly popular titles that were sure to earn their keep in a limited inventory. Concentrating on movies most likely to draw a sizable audience tends to encourage appealing to the lowest common denominator. Netflix, in contrast, can stock an effectively infinite selection (and, as it shifts to streaming, it can even shed additional costs such as warehouse facilities and shipping). Crucially, online vendors like Netflix, Amazon, or iTunes can make as much money on each customer selection from the long tail as they do on each mega-hit. Setting licensing fees to one

⁸² Dee T. Allsop, et al, *Word-of-Mouth Research: Principles and Applications*, 2007 J Advertising Rsrch 398, 400. Comparatively, only 37 percent relied on “information and advice from other people” about athletic shoes, and only 5 percent did so “to a great extent.” Id.

⁸³ Chris Anderson, *The Long Tail: Why the Future of Business is Selling Less of More* 19–25 (Hyperion 2006).

⁸⁴ Id at 15–26.

⁸⁵ Id at 35–40.

side, a foreign art-house film like *The Lives of Others* can earn the same profit margin per customer as a superhero sequel.⁸⁶

With this increased choice, however, comes increased confusion and difficulty locating what we want. For this reason, Anderson sees a critical role for recommendation systems and other tools that allow the “wisdom of crowds” to help us identify the best choices, such as ratings and reviews through services like Amazon, Angie’s List, Trip Advisor, and Yelp.⁸⁷ As we saw above, recommendations from people with whom we have particularly strong affinity, trust, and understanding are among the most valuable. Crucially, sociology research demonstrates that we profit significantly not only from the advice of very close friends but also from the recommendations of our “weak ties”—acquaintances beyond our innermost social circle.⁸⁸ In this way, social networks help us steer a path through the clutter of the long tail toward the things we will enjoy.

The long tail also works beyond the realm of books, music, and movies. Smaller-scale competitors of all types can use the same techniques to gain access to the market against dominant incumbents. Recommendations, “likes,” and sharing in social networks help these efforts tremendously. Earlier in 2012, a start-up firm called Dollar Shave Club launched from beta with a hilarious advertising video that mocked overpriced razors from Gillette and Schick and promoted its monthly razor blade subscription plans.⁸⁹ The ad rapidly went viral, largely through social networks, and although the company does not release sales figures, one business journalist estimated it may now be earning \$200,000 a month in revenue.⁹⁰ Online word of mouth allowed this low-cost competitor to enter a market previously

⁸⁶ Id at 88–97.

⁸⁷ Anderson, *The Long Tail* at 106–08 (cited in note 83). See also Goldman, *Online word of mouth and its implications for trademark law* at 411–12 (cited in note 70); Frank Pasquale, *Copyright in an Era of Information Overload: Toward the Privileging of Categorizers*, 60 Vand L Rev 133, 178–81 (2007).

⁸⁸ See Christophe Van den Bulte and Stefan Wuyts, *Social Networks and Marketing* 34–36 (Marketing Science Institute 2007) (summarizing the network theory research by Mark Granovetter and others analyzing the importance of weak ties); Lior Jacob Strahilevitz, *A Social Networks Theory of Privacy*, 72 U Chi L Rev 919, 953–58 (2005) (same).

⁸⁹ See Dollar Shave Club, *Dollar Shave Club* (2012), online at <http://www.dollarshaveclub.com/> (visited Sept 15, 2013).

⁹⁰ See J.J. Colao, *Dollar Shave Club: Breaking The Razor Blade Monopoly*, *2 (Forbes Apr 3, 2012), online at <http://www.forbes.com/sites/jjcolao/2012/04/03/dollar-shave-club-breaking-the-razor-blade-monopoly/> (visited Sept 15, 2013).

controlled by two enormous corporate entities and helped thousands of individuals locate a convenient, low-cost service.

Beyond the benefits to individuals who receive helpful tips about long tail offerings from their friends, increased availability of personal recommendations confers significant benefits on society in the aggregate. Sharing rewards quality by driving people towards the best stuff. Whether ordinary products like razor blades or cultural ones like films, the enhanced information from social networks fosters competition, supports small businesses, and increases consumer choice. This is even true for those individuals who don't themselves elect to participate directly—the conversation initiated and enabled by social media brings previously obscure options to the forefront where they then garner the attention of traditional tastemakers and a wider public. In the case of artistic works like books or movies, this process can improve both the quality and diversity of our shared culture as well.

Ideally, a recommendation ecosystem animated by social networks and accessible communication may help revolutionize commerce and culture—even though we always must be cautious not to overstate the current or potential payoff.⁹¹ Instead of a creative economy obsessed only with developing the next blockbuster, digital distribution and digital recommendation could allow people to find and support high-quality offerings that previously lacked realistic access to the marketplace.⁹² For example, a technologically enabled long tail could reduce barriers for musicians and costs for their fans.⁹³ The maturation of user-generated content platforms such as YouTube may advance this goal.⁹⁴ There remain significant obstacles to attracting an audience independently, of course.⁹⁵

⁹¹ See Van den Bulte and Wuyts, *Social Networking and Marketing* at 39–49 (cited in note 88) (examining potential of social marketing and cautioning against exaggerated or unsupported claims of opinion leaders' effects on marketing).

⁹² See Anderson, *The Long Tail* at 180–89 (cited in 83).

⁹³ See William W. Fisher III, *Promises to Keep: Technology, Law, and the Future of Entertainment* 13–31 (Stanford 2004).

⁹⁴ See, for example, Jean Burgess, *YouTube and the Formalization of Amateur Media*, in Dan Hunter, et al, eds, *Amateur Media: Social, Cultural, and Legal Perspectives* 53, 53–57 (Routledge 2013).

⁹⁵ Brad Abruzzi, a fellow at the Berkman Center for Internet and Society at Harvard University, has described his real-world experience self-publishing his novel through Amazon in ambivalent terms. See Brad Abruzzi, *Amazons, Witches, and Critics – A Liberated Novelist Asks, "Now What?"*, Berkman Center for Internet & Society

But any shift toward such increased and disintermediated choices would require social recommendations to augment traditional gatekeepers such as critics, record labels, radio stations, television networks, and librarians.⁹⁶

In sum, we gain at least three types of benefits from social sharing: first, we find new ways to interact and strengthen relationships; second, we learn of previously unknown options from our friends; and finally, a thriving recommendation ecosystem can improve the quality and diversity of all kinds of products for everyone, particularly cultural offerings like movies.

C. Them: Benefits To Intermediaries

Finally, of course, intermediaries such as Facebook, Netflix, and moviemakers benefit from frictionless sharing because it constitutes free publicity for their respective businesses.

Facebook founder Mark Zuckerberg talks about the rise of frictionless sharing in grandiose terms modeled on Moore's Law; each year for the foreseeable future, he predicts, the amount of data disclosed about individuals online will double.⁹⁷ While the stakes may be especially high for Facebook, numerous other players also promote frictionless sharing. Every social networking platform—and every publisher and record label and app developer and web site hungry for traffic—wants to shift as many aspects of our daily lives as possible from presumptively solitary experiences to social ones.⁹⁸ They know that all of us are

(Harvard July 31, 2012), video and audio recordings online at <http://cyber.law.harvard.edu/events/luncheon/2012/07/Abruzzi> (visited Sept 15, 2013). See also Brad Abruzzi, *New Jersey's Famous Turnpike Witch* (Amazon 2012), online at <http://www.amazon.com/Jerseys-Famous-Turnpike-Witch-ebook/dp/B007YXJHWI> (visited Sept 15, 2013).

⁹⁶ See generally Angela Watercutter, *Music Bloggers Hack Record Industry by Launching Indie Labels*, Underwire—music (Wired.com July 13, 2011), online at <http://www.wired.com/underwire/2011/07/blog-record-labels/> (visited Sept 15, 2013).

⁹⁷ See Paul Boutin, *The Law of Online Sharing* (MIT Technology Review Jan/Feb 2012), online at <http://www.technologyreview.com/web/39321/> (visited Sept 15, 2013). Moore's Law is the principle, familiar to everyone in Silicon Valley, that a chip will be capable of holding twice as many transistors every two years (or, by some reckonings, eighteen months), resulting in exponentially increased computer power and decreased cost since the 1960s. See Michael Kanellos, *Moore's Law to roll on for another decade*, CNET Business Tech (CNET Feb 10, 2003), online at <http://news.cnet.com/2100-1001-984051.html> (visited Sept 15, 2013).

⁹⁸ See, for example, Shayndi Raice, *The End of Channel Surfing?*, Wall St J B5 (Aug 7, 2012) (describing development of "social TV" applications that will transmit information within social networks about the television programs viewed by friends).

more likely to click a link or download a song if we see a friend doing so. If “Zuckerberg’s Law” is just halfway right, frictionless sharing will remake the boundaries between public and private.

More mentions in social media draw more eyeballs to the underlying content. A digital media executive at *The Guardian*, which participates in Facebook’s frictionless sharing program, stated that the site subsequently received more inbound visits from Facebook than from Google searches.⁹⁹ Social media reportedly accounts for almost 10 percent of traffic to the web site of *The Economist*.¹⁰⁰ An intermediary that facilitates frictionless sharing also benefits from this free advertising every time somebody sends messages through its services. Spotify added millions of members when it shifted to a frictionless sharing model integrated with Facebook. In Spotify’s “freemium” business model, each of these new customers either increases the audience for advertising in the app or becomes a potential recruit to upgrade to the premium paid service.¹⁰¹ These are the compelling business arguments that made Netflix so eager to introduce frictionless sharing throughout its services.

Marketers believe “word of mouth” is among the most powerful forms of promotion for a product or service, from household goods to books. Consumers find information from a disinterested person who is similar to themselves to be “immediate, personal, credible, and relevant.”¹⁰² For movies, in particular, word of mouth is more influential than almost any other source of information.¹⁰³ Recall the study indicating that over three-quarters of people seek out advice from friends when deciding whether to see a movie.¹⁰⁴ A social Netflix would allow individuals to send and receive precisely that most valuable type of information.

⁹⁹ Reuters Institute Report at *15 (cited in note 79).

¹⁰⁰ Id.

¹⁰¹ See Glenn Peoples, *Business Matters: Spotify UK Shows That the Freemium Model Is Not ‘Unsustainable’* (Billboardbiz Oct 9, 2012), online at <http://www.billboard.biz/bbbiz/industry/digital-and-mobile/business-matters-spotify-uk-shows-that-the-1007975522.story> (visited Sept 15, 2013).

¹⁰² Maria Flores Letelier, Charles Spinosa, and Bobby J. Calder, *Strategies for Viral Marketing*, in Dawn Iacobucci and Bobby Calder, eds, *Kellogg on Integrated Marketing* 90, 90 (Wiley 2003).

¹⁰³ See Yong Liu, *Word of Mouth for Movies: Its Dynamics and Impact on Box Office Revenue*, 70 *J Marketing* No 3, 74, 74–87 (2006).

¹⁰⁴ See note 82 and accompanying text.

The internet, and social networking in particular, allows word of mouth to travel further and faster than ever before.¹⁰⁵ Facebook has staked its future profitability in large part on the notion that buzz from friends about a product or service will be especially powerful publicity that the company can eventually monetize with marketers. Zuckerberg calls these “trusted referrals” the “Holy Grail” for advertisers.¹⁰⁶ Increasingly, monetizing word of mouth will become part of the financial structure of all network-connected services, from Facebook and Twitter to Netflix and razor companies.

Most of us largely accept the notion that tracking and monetizing personal information, particularly through targeted marketing, allows websites such as Facebook, Google, and many newspapers to remain free of (monetary) charge.¹⁰⁷ Likewise, maintaining an open flow of shared information about movies and similar tastes can help support the popular online services that bring us information, content, and social connection. Compared to targeted advertising or data mining, the promotion of sharing may provide a less invasive way for businesses like Facebook or Netflix to earn more revenue. After all, designed correctly, the platforms are helping us do exactly what we already want.

Needless to say, these benefits to me, to us, and to them must be balanced against costs. The next Part considers the most serious of these.

¹⁰⁵ See Goldman, *Online Word of Mouth and Its Implications for Trademark Law* at 411–13 (cited in note 70); McGeeveran, 2009 U Ill L Rev at 1109–13 (cited in note 13).

¹⁰⁶ See Dan Farber, *Facebook Beacon Update: No Activities Published Without User Proactively Consenting* (ZDNet Nov 29, 2007), online at <http://blogs.zdnet.com/BTL/?p=7188> (visited Sept 15, 2013). See also Louise Story, *Facebook is marketing your brand preferences (with your permission)*, NY Times Technology (NY Times Nov 7, 2007), online at <http://www.nytimes.com/2007/11/07/technology/07iht-07adco.8230630.html> (visited Sept 15, 2013) (quoting Zuckerberg as saying “[n]othing influences a person more than a recommendation from a trusted friend”); Facebook, *Facebook Unveils Facebook Ads*, Facebook Newsroom (Nov 6, 2007), online at <http://newsroom.fb.com/News/235/Facebook-Unveils-Facebook-Ads> (visited Sept 15, 2013) (quoting Zuckerberg as saying “[s]ocial actions are powerful because they act as trusted referrals and reinforce the fact that people influence people”).

¹⁰⁷ Consider Jan Whittington and Chris Jay Hoofnagle, *Unpacking Privacy’s Price*, 90 NC L Rev 1327 (2012).

III. CONCERNS ABOUT FRICTIONLESS SHARING

People who are dimly aware that frictionless platforms might “share” their activities passively are not engaging in the type of authentic sharing that maximizes the benefits discussed in Part II. Resulting disclosures can invade privacy. The potential negative consequences for privacy extend beyond momentary embarrassment, impinging on social identity and intellectual privacy. In addition to privacy issues, extensive passive sharing gluts information channels with half-hearted messages about our friends’ choices in place of their intentional and enthusiastic recommendations. The resulting overload could degrade the online recommendation culture permanently. This Part reviews these major concerns about frictionless sharing that must be weighed against the potential benefits discussed above.

A. Misclosures And Privacy

The most obvious concerns about frictionless sharing are privacy-related. Social apps are designed to make it as likely as possible that people automatically inform their social networks about their activities. *The Washington Post* Social Reader app within Facebook, for example, is quite easy to install by mistake and not at all easy to deactivate. Suppose you have not authorized the Social Reader yourself and you receive a message from the app in your Facebook News Feed indicating that a friend has read a particular article. If you click on the link, the next screen presents two buttons, “Okay, Read Article” (which is the default choice, highlighted in blue) or “Cancel” (a gray button half the size of the first).¹⁰⁸ Only the much smaller print below explains that clicking the “Okay, Read Article” button also activates social reading functionality so that subsequently the *Post* may disclose any article you read to all your Facebook friends. Once turned on, it takes some effort to *avoid* sharing articles from the *Post*, and you do not receive notice each time the app sends out a notification to your social network.¹⁰⁹ While

¹⁰⁸ Screenshot on file with author. See also Molly Wood, *How Facebook is ruining sharing*, CNET News (CNET Nov 18, 2011), online at http://news.cnet.com/8301-31322_3-57324406-256/how-facebook-is-ruining-sharing/ (visited Sept 15, 2013) (describing some of Facebook’s problematic sharing features).

¹⁰⁹ See Nickolay Lamm, *How To Keep Social Readers From Spamming All Your*

Facebook's recent changes in requirements for frictionless sharing design improve transparency, the guidelines still allow this design.¹¹⁰

Social media architecture designed to eliminate friction inevitably will cause more errors. I know this is so because I have spoken to multiple friends who were quite sheepish to discover that they had unintentionally broadcast on Facebook that they read certain news articles or watched certain videos.¹¹¹ Even when an individual knowingly activates a frictionless sharing app, it is difficult to remember that one's actions are broadcast. Spotify prompts me rather insistently to log on as soon as I power up my computer, and I sometimes do so and start playing music before I recall that I did not activate its "private session" feature as I intended.

These are the sorts of mistakes that human-computer interaction scholar Kelly Caine calls by the catchy name of "misclosures."¹¹² Frictionless sharing makes misclosures more likely because it removes practical obscurity on which people have implicitly relied when assessing the likely audience that

Facebook Friends (AllFacebook Jan 19, 2012), online at http://allfacebook.com/facebook-readers_b74261 (visited Sept 15, 2013) (describing how to change the sharing settings on the *Post's* app).

¹¹⁰ See Facebook, *Guidelines*, Facebook Developers (cited in note 15). See also note 30 and accompanying text (describing Facebook's changes to sharing programs). The new rules rely on an amorphous boundary between situations where users "perform actions in [an] app" and those where they merely "browse, view, discover or otherwise look at content." Facebook, *Understanding the Open Graph Submission Process*, Facebook Developers, online at <https://developers.facebook.com/docs/opengraph/submission-process/> (visited Sept 15, 2013). While users can choose to restrict sharing, the app developer still sets the default level. See Facebook, *Open Graph Overview, How Open Graph Works*, Facebook Developers, online at <https://developers.facebook.com/docs/opengraph/overview/> (visited Sept 15, 2013). In response, some frictionless sharing, including the *Post Social Reader*, has moved to standalone apps rather than apps housed within Facebook. See Lauren Indvik, *Washington Post Moves Social Reader Off Facebook*, Mashable (Mashable Dec 14, 2012), online at <http://mashable.com/2012/12/14/washington-post-social-reader-off-facebook/> (visited Sept 15, 2013). The new *Washington Post* platform can function independently from Facebook, but the app discourages this. See *Washington Post, Social Reader, Frequently Asked Questions* (*Washington Post*), online at <http://help.socialreader.com/faqs/> (visited Sept 15, 2013) ("You don't have to log in through Facebook to experience Social Reader, but doing so helps us deliver a better news experience based on your interests and what your friends are recommending. It also makes it easier to share what you're reading and comment on articles.").

¹¹¹ Richards has had similar conversations with his acquaintances. See Richards, 101 *Georgetown L J* at 713-14 (cited in note 14).

¹¹² Kelly E. Caine, *Supporting Privacy by Preventing Misclosure*, in CHI '09 Extended Abstracts on Human Factors in Computing Systems 3145, *3147 (ACM Digital Library 2009), online at <http://doi.acm.org/10.1145/1520340.1520448> (visited Sept 15, 2013).

would find out about their activities.¹¹³ In other words, frictionless sharing can wrench individuals' actions from one context to another, undermining their privacy expectations in the process.¹¹⁴ As the privacy advocates' letter to the FTC explained:

Under the previous privacy framework, sharing content on Facebook was an active experience: a user had to "like" or comment or otherwise take some action in order for Facebook to publish a connection between the user and the item with which she was interacting. Now, under the frictionless sharing model, content sharing is a passive experience in which a social app prompts the user once, at the outset, to decide the level of privacy for the app (with "public" being a common default) and then proceeds to share every bit of information obtained thereafter.¹¹⁵

Why do disclosures create privacy problems? To start with the simplest case, certain facts are just plain embarrassing. Media choices and other purchases often reveal medical, sexual, or otherwise personal matters. During the VPPA hearing, Senator Al Franken (D-MN) offered the hypothetical example of someone who watched *Yoga for Health: Depression and Gastrointestinal Problems* and accidentally broadcast the fact on Facebook.¹¹⁶ Enough individuals view sexually explicit material to represent an important, albeit declining, profit source for television providers.¹¹⁷ Even beyond such inherently private matters, people may not want to admit that they rock out to Justin Bieber hits at home on a Saturday night. Or they may prefer not to disclose how many hours of bad reality television

¹¹³ See Hartzog and Stutzman, 101 Cal L Rev at 21–26 (cited in note 25).

¹¹⁴ See Helen Nissenbaum, *Privacy in Context: Technology, Policy, and the Integrity of Social Life* 236–37 (Stanford 2010) (discussing concept of "contextual integrity" as a keystone to privacy).

¹¹⁵ EPIC Letter at *9 (cited in note 33).

¹¹⁶ See Engleman, *Netflix-Facebook Link Stalls as Franken Favors Bork Law* (cited in note 52) (describing how Franken and privacy advocates are skeptical of allowing blanket permission and arguing that consent should be handled on a case-by-case basis).

¹¹⁷ See Sam Schechner and Jessica E. Vascellaro, *TV Porn Doesn't Sell Like It Used To*, Wall St J Technology (Wall St J Aug 5, 2011), online at <http://online.wsj.com/article/SB10001424053111903885604576488540447354036.html> (visited Sept 15, 2013) (reporting statistics from SNL Kagan showing "\$899 million in revenue from adult video-on-demand and pay-per-view in 2010, down from a peak of \$1 billion in 2008").

they really watch. A dribble of disclosures about our tastes over time adds up.¹¹⁸ In the aggregate, they expose us to broader judgments or misjudgments that can harm our dignity, autonomy, and serenity.¹¹⁹ And they represent a loss of individual control that offends those same core personal interests.¹²⁰

Misclosures through frictionless sharing can be considerably more invasive because they go directly to people with whom we have relationships. Most of us realize at some level that credit bureaus, data brokers, search engines, and web sites assemble massive dossiers about each of us.¹²¹ Yet in response most Americans sigh wistfully and click “I agree”; almost no one seems to object to the fact that Netflix as a corporation collects data showing all the movie choices of over twenty-four million people. Even the stringent original VPPA included an exception, which remains in the amended statute, allowing disclosures of general personal data to third-party marketers.¹²² Richard Posner has reasoned that many people find disclosures to data processors acceptable because they do not anticipate any impact on their personal interests—as would occur if the same information filtered back to their social circle.¹²³ Consumers suffer harm when personal information unexpectedly crosses boundaries, such as the one between faceless Netflix and our

¹¹⁸ For a discussion of the aggregate privacy harm issue, see A. Michael Froomkin, *The Death of Privacy?*, 52 *Stan L Rev* 1461, 1502–05 (2000) (discussing cumulative effect of information transfers and resulting “privacy myopia” that interferes with judgments about individual disclosures).

¹¹⁹ See, for example, Julie E. Cohen, *Configuring the Networked Self: Law, Code, and the Play of Everyday Practice* 107–27 (Yale 2012); Daniel J. Solove, *The Future of Reputation* 63–75 (Yale 2007); Paul M. Schwartz, *Property, Privacy, and Personal Data*, 117 *Harv L Rev* 2055, 2069–72 (2004) (discussing the “commodification” of private data).

¹²⁰ The Electronic Frontier Foundation has promulgated three principles for consumer protection in social networks, and two of them—the rights to informed decision-making and control—tie directly to these privacy issues. See Kurt Opsahl, *A Bill of Privacy Rights for Social Network Users* (Electronic Frontier Foundation May 19, 2010), online at <https://www.eff.org/deeplinks/2010/05/bill-privacy-rights-social-network-users> (visited Sept 15, 2013).

¹²¹ See Daniel J. Solove, *The Digital Person: Technology and Privacy in the Information Age* 22–26 (New York University 2006).

¹²² 18 USC § 2710(b)(2)(D). For additional discussion of this exception, see notes 42–43 and accompanying text.

¹²³ Richard Posner, *Privacy, Surveillance, and Law*, 75 *U Chi L Rev* 245, 251 (2005) (“[A]s long as people do not expect that the details of their health, love life, finances, and so forth, will be used to harm them in their interactions with other people, they are content to reveal those details to strangers when they derive benefits from the revelation.”).

friends on Facebook, without sufficient warning or explanation.¹²⁴

Frictionless sharing reveals the information to exactly the most significant audience: our family, friends, and acquaintances. In short, we care most keenly about our reputation among those we know. As I said in my congressional testimony, “Ask yourself whether you would be more uncomfortable showing your entire movie-watching history to your mother or to a faceless advertising company.”¹²⁵ Much significant philosophical and theoretical work on privacy emphasizes its close link to interpersonal relationships.¹²⁶ In a particularly precise examination of this connection, Julie Inness explains privacy as respect for individual choices—including choices to reveal information—that embody a person’s “love, liking, and care” for others.¹²⁷ Courts acknowledge the significance of relationships to privacy when they find the publicity requirement for the disclosure tort satisfied by release of information to a “particular public” with special connection to the plaintiff rather than to the entire world.¹²⁸ We have seen how we pay more attention to recommendations from people we know precisely because we have a stake in their opinion. Conversely, that very same mutual regard makes inaccurate or

¹²⁴ See John Palfrey and Urs Gasser, *Interop: The Promise and Perils of Highly Interconnected Systems* 81–86 (Basic Books 2012) (discussing case studies where companies created “interoperability” by transferring data between distinct systems and violated privacy expectations as a result). See also Nissenbaum, *Privacy in Context* at 236–37 (cited in note 114).

¹²⁵ McGeveran Testimony at *4 (cited in note 50).

¹²⁶ For important examples of this substantial literature, see generally Julie Inness, *Privacy, Intimacy, and Isolation* (Oxford 1992) (evaluating critically the connections between privacy and close relationships while advancing a control and intimacy based definition of privacy); Ferdinand D. Schoeman, *Privacy and Intimate Information*, in Ferdinand D. Schoeman, ed, *Philosophical Dimensions of Privacy: An Anthology* 403, 403–16 (Cambridge 1984); Fried, 77 Yale L J at 477–83 (cited in note 71).

¹²⁷ Inness, *Privacy, Intimacy, and Isolation* at 106 (cited in note 126).

¹²⁸ See, for example, *Miller v Motorola, Inc*, 560 NE2d 900, 903 (Ill App 1990); *Beaumont v Brown*, 257 NW 2d 522, 531–32 (Mich 1977), overruled on different grounds by *Bradley v Board of Education of Saranac Community Schools*, 565 NW2d 650, 657–58 (Mich 1997). Lior Strahilevitz criticizes this approach in tort law because he believes it could “render some casual gossip by unsophisticated parties tortious.” See Strahilevitz, 72 U Chi L Rev at 945 n 88 (cited in note 88). Putting aside whether this might be so in tort law, frictionless sharing is not the same sort of communication, and any legal restriction would not apply to the same sort of ordinary person. Moreover, at bottom the proposals in Part V are more an architectural response than a legal response. See Part V. These distinctions make his critique inapplicable here.

embarrassing information about us more damaging when our friends hear it.

Perhaps most importantly, the risk of misclosures about our reading, viewing, and listening habits can lead to especially negative additional repercussions for both the individual and society. The brand of toothpaste I buy tells you much less about my inner self than do the books I download, the web pages I browse, or the music and movies I stream. Yet the most enthusiastic embrace of frictionless sharing comes from precisely these quarters—*The Washington Post*, Spotify, and, of course, Netflix. As we will see in Part V, good design can address these problems, especially if supported by legal and market forces. But we have seen already how some badly designed frictionless sharing interfaces do not give users clear notice that their activities are shared and others force them to be on constant guard against misclosures. Accepting this architecture could endanger some of our most cherished values.

Neil Richards coined the term “intellectual privacy” to describe our compelling interest in keeping our reading, viewing, and listening activities to ourselves—and the complementary danger that exposure of these individual choices will constrain the freedom to explore and experiment with ideas and art.¹²⁹ His theory builds on varied sources, from other legal scholars such as Marc Blitz and Julie Cohen,¹³⁰ to sociological literature in surveillance studies, and the classic examples of Bentham’s Panopticon and Orwell’s telescreen.¹³¹ In short, the possibility that we might be monitored leads us to censor ourselves.¹³²

Traditionally, the greatest threat to individual private space for contemplation came from the state, and constitutional

¹²⁹ See Neil M. Richards, *Intellectual Privacy*, 87 Tex L Rev 387, 389 (2008).

¹³⁰ See generally Marc Jonathan Blitz, *Constitutional Safeguards for Silent Experiments in Living: Libraries, the Right to Read, and a First Amendment Theory for an Unaccompanied Right to Receive Information*, 74 UMKC L Rev 799 (2006) (discussing the First Amendment right to receive information); Julie E. Cohen, *A Right to Read Anonymously: A Closer Look at “Copyright Management” in Cyberspace*, 28 Conn L Rev 981 (1996) (evaluating the interaction between copyright protections and the right to anonymously read online information).

¹³¹ See Richards, 101 Georgetown L J at 704–05 (cited in note 14).

¹³² As Jonathan Zittrain explains the dangers of eroded private spaces: “Today we are all becoming politicians. . . . Ubiquitous sensors threaten to push everyone toward treating each public encounter as if it were a press conference, creating fewer spaces in which citizens can express their private selves.” Jonathan Zittrain, *The Future of the Internet—And How to Stop It* 212 (Yale 2008).

doctrine sought to shield individuals from intrusions into their reading, writing, and thought processes under both the First Amendment¹³³ and the Fourth Amendment.¹³⁴ Richards argues that the private sector, through its promotion of frictionless sharing, now poses a similar threat to the solitary acts of reading and thinking.¹³⁵ If pervasive disclosure becomes the norm, individuals might hesitate before downloading, browsing, or streaming, effectively chilling their engagement in intellectual or artistic activity.

Not only could unwanted disclosures inhibit individuals from engaging with certain books, websites, or films, it could actually begin to distort their thought processes. Paul Schwartz has explained this aspect of privacy by referring to the concept of preference falsification in social norm theory.¹³⁶ Everyday social pressures and the human desire to please others constantly influence individuals' presentation of themselves. Eventually preference falsification can *alter* a person's views and tastes, driving him or her toward conformity with peers. And when individuals don't have enough control over the disclosure of information about those preferences, the falsification can spread throughout their media diet, increasing their conformity.¹³⁷ That, after all, is how the Panopticon and the telescreen work: the subjects do not know whether they are being watched, so they always act as if they are.

Many people experience crude versions of preference falsification in junior high school; they start to say they like the same bands or TV shows as their friends, and over time, their tastes evolve to the point that they actually do like them. To be sure, learning from certain friends' wise recommendations

¹³³ See, for example, *Stanley v Georgia*, 394 US 557, 564–65 (1969) (invoking First Amendment); *Tattered Cover, Inc v City of Thornton*, 44 P3d 1044, 1053–54 (Colo 2002) (invoking state constitutional law); Richards, 87 Tex L Rev at 393–407 (cited in note 129). See generally Daniel J. Solove, *The First Amendment as Criminal Procedure*, 82 NYU L Rev 112 (2007).

¹³⁴ See, for example, *Olmstead v United States*, 277 US 438, 478 (1928) (Brandeis dissenting) (arguing that the Constitution “sought to protect Americans in their beliefs, their thoughts, their emotions and their sensations”), overruled in part by *Katz v United States*, 389 US 347, 353 (1967).

¹³⁵ See Richards, 101 Georgetown L J at 712–18 (cited in note 14).

¹³⁶ See Paul M. Schwartz, *Internet Privacy and the State*, 32 Conn L Rev 815, 840–43 (2000).

¹³⁷ See Seth Kreimer, *Sunlight, Secrets, and Scarlet Letters: The Tension Between Privacy and Disclosure in Constitutional Law*, 140 U Pa L Rev 1, 97 (1991); Schwartz, 32 Conn L Rev at 840–43 (cited in note 136).

drives some of this transformation in tastes, but at least some of it is a pernicious hollowing out of individuality. The wisdom of the crowd can turn into groupthink instead. (Plus, it saddles us with a lot of vapid boy bands.)

These harms most obviously affect the individual subjects of unwanted frictionless-sharing disclosures. Yet resulting problems of a chilling effect, the distortion of individuals' views, and interference with honest discourse would hurt all of us, both speakers and listeners. If frictionless sharing becomes pervasive, we risk the creation of a fishbowl society where a norm of disclosure forces all of us to act as if we are being watched at all times. The central importance of intellectual privacy for our polity and culture gives rise to an especially compelling *collective* public interest in maintaining boundaries.¹³⁸ For this reason, legal rules ought to protect personal information more comprehensively when it implicates intellectual privacy, perhaps similar to the way the European Union ("EU") Privacy Directive applies more stringent regulation to certain categories of "sensitive data."¹³⁹ As Richards puts it, "If we value a pluralistic society or the cognitive processes that produce new ideas, then some measure of intellectual privacy, some respite from cognitive surveillance, is essential."¹⁴⁰

B. Spammification and Information Quality

Have your eyes begun to skim past the Spotify items in your news feed? Mine have. This speaks to a crucial concern about frictionless sharing that is distinct from privacy. Unintentional or half-hearted disclosures could destroy the recommendation ecosystem. This Part will begin by discussing a reduction in information quality and then look at the corresponding increase in quantity.

First, frictionless sharing degrades information quality. Automated disclosures of page views, downloads, or playlists do not always match up with intentional recommendations. Apps

¹³⁸ See Anita Allen, *Coercing Privacy*, 40 *Wm & Mary L Rev* 723, 740–41 (1999).

¹³⁹ Directive 95/46/EC of the European Parliament and of the Council, Art 8 of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data (EurLex), online at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31995L0046:en:HTML> (visited Sept 15, 2013).

¹⁴⁰ Richards, 87 *Tex L Rev* at 404 (cited in note 129).

that look over a user's shoulder during web browsing misrepresent casual clicking as conscious choices to recommend particular links. The fact that your friend watched or read or listened to something does not mean that your friend liked it or recommends it.

Thus, removing "friction" also removes the very choice that gives my browsing or my playlist any value to my friends. I previously made this argument about social marketing messages, such as those transmitted by Facebook's disastrous Beacon program, which allowed web sites to disclose an individual's activity on partner web sites in the news feeds of that person's Facebook friends. What I said there is equally true of other forms of frictionless sharing:

An in-person recommendation to a friend, or even a general review written on a blog, requires the endorser's thought and volition. Recipients of these trusted referrals rely on them in part precisely because of their voluntariness. Routinized social marketing messages, however, require no such effort or choice, which diminishes their value from heartfelt true endorsements to mechanized impersonal advertisement.¹⁴¹

In short, friction often comes to mean the same thing as intent or choice, and those mental states are the ones that make the shared information valuable. People pay attention to these messages precisely because their friend made the effort to send them. When instead they are sent frictionlessly or passively, they lack that value.¹⁴²

Frictionless sharing also lacks context.¹⁴³ I help my nine-year-old daughter make playlists, and I assure you I do not like every song they contain. A friend who took one of these playlists as my recommendation of music to try had better enjoy a certain type of top 40 dance pop, because I don't. Sometimes while

¹⁴¹ McGeeveran, 2009 U Ill L Rev at 1129 (cited in note 13).

¹⁴² See Molly Wood, *How Facebook Is Ruining Sharing* (cited in note 108) ("Sharing and recommendation *shouldn't* be passive. It should be conscious, thoughtful, and amusing—we are tickled by a story, picture, or video and we choose to share it . . . We *choose* these gems from the noise. Open Graph will fill our feeds with noise, burying the gems.").

¹⁴³ See Solove, *The Future of Reputation* at 66–71 (cited in note 119) (discussing reputation interests against the judgments of others who do not know the context of information).

surfing the web I click idly because a clever headline or an arresting photo catches my eye, but the page that loads turns out not to be worthwhile. The nature of the web encourages this sort of exploratory browsing because the back button restores you after any wrong turn. But again, friends who choose to look at an article because I glanced at it for 15 seconds probably do not discover hidden gems as a result. Caine's misclosures are not recommendations.

These inaccurate indicators of individuals' preferences also interfere with their ability to tell their own story. As noted above, people engage in *authentic* sharing as a means of self-expression, identity formation, connection with friends, and promotion of artists they admire.¹⁴⁴ A clutter of unintended passive sharing interferes with all of these goals. Increasingly we all cultivate our own online reputation.¹⁴⁵ It could be as simple as limiting the sorts of things we post on Twitter or crafting a perfect home page. Adding noise to that signal threatens the reputation and influence each person has established.

Second, an increase in quantity exacerbates this quality problem. As discussed above, businesses support frictionless sharing because it results in more messages, and thus drives more traffic and raises more revenue.¹⁴⁶ But this only works in the short term. Consumer attention is finite and efforts to attract it are a new competitive necessity.¹⁴⁷ As everyone sees

¹⁴⁴ See notes 64–68 and accompanying text.

¹⁴⁵ See generally Daniel J. Lair, et al, *Marketization and the Recasting of the Professional Self: The Rhetoric and Ethics of Personal Branding*, 18 *Mgmt Comm Q* 307 (2005), online at <http://mcq.sagepub.com/content/18/3/307.abstract> (visited Sept 15, 2013) (discussing broadly personal branding); Megan Marrs, *The First Step to Building Your Personal Brand*, *Forbeswoman* (Forbes Feb 2, 2012), online at <http://www.forbes.com/sites/dailymuse/2012/02/14/the-first-step-to-building-your-personal-brand/> (visited Sept 15, 2013) (providing a guide to develop one's personal brand); Laura Perez, *Finding Your Inner Personal Brand* (Social Media Today Aug 17, 2012), online at <http://socialmediatoday.com/lauraaprez/695316/starting-facebook-small-business> (visited Sept 15, 2013) (same).

¹⁴⁶ See notes 99–106 and accompanying text.

¹⁴⁷ See Richard A. Lanham, *The Economics of Attention: Style and Substance in the Age of Information* 7 (Chicago 2006) ("What then is the new scarcity that economics seeks to describe? It can only be the human attention needed to make sense of information."); Deven R. Desai, *Property, Persona, and Preservation*, 81 *Temple L Rev* 67, 82–84 (2008) (discussing efforts of artists and creators to seize attention in the new economy); Pasquale, 60 *Vand L Rev* at 173–74 (cited in note 87) ("In an era of information overload, attention, not information, is the more pressingly scarce commodity.").

more and more messages about friends' purchasing choices or media consumption—and especially as the relevance and accuracy of those messages declines—they lose their utility. If frictionless sharing unleashes too many meaningless messages, it will end in “spammification.”¹⁴⁸ Some intellectual property and privacy scholars have used environmental metaphors to describe the information landscape, and frictionless sharing fits that frame nicely.¹⁴⁹ Consumer attention is a finite and fragile resource, and excessive exploitation will deplete it. By increasing search costs rather than reducing them, an overload of unhelpful social messages will pollute the recommendation ecosystem that represents one of the important broad societal benefits of sharing.¹⁵⁰

To sum up, frictionless sharing threatens to kill the goose that laid the golden egg. If greed drives platforms to maximize potential gains by promoting social information flows to the maximum possible extent, they will destroy what is special and effective about them. If these types of messages from friends become just another form of advertising clutter, they will no longer deliver most of the benefits catalogued in Part II. Importantly, however, existing companies have very little incentive to be judicious and conserve the valuable resource of consumer attention for the future. As explained in Part V, this may justify regulatory intervention.

Before turning to this analysis, however, Part IV considers the rhetoric of frictionless sharing against the backdrop of the potential benefits and costs we have seen. The terminology profoundly shapes thinking about interface design and legal rules in ways that do not necessarily match the pros and cons discussed thus far.

IV. THE RHETORIC OF FRICTIONLESS SHARING

The metaphor of “frictionless sharing” represents an ingenious rhetorical move. It is no surprise that intermediaries

¹⁴⁸ See McGeeveran, 2009 U Ill L Rev at 1129–30 (cited in note 13).

¹⁴⁹ See, for example, James Boyle, *A Politics of Intellectual Property: Environmentalism for the Net?*, 47 Duke L J 87, 108–12 (1997); Dennis D. Hirsch, *Protecting the Inner Environment: What Privacy Regulation Can Learn from Environmental Law*, 41 Ga L Rev 1, 23–30 (2006); Pasquale, 60 Vand L Rev 133 at 163–71 (cited in note 87).

¹⁵⁰ See notes 79–96 and accompanying text.

eager for more disclosures have chosen a catch phrase that valorizes their position. These days, supporters of frictionless sharing rarely use its older name of “passive sharing.”¹⁵¹ I believe the shift is quite intentional. Of course, “sharing” sounds desirable. By depicting anything that impedes this sharing as “friction,” the new catchphrase implicitly frames the natural status quo as one in which individuals reveal abundant information unless some malevolent outside force interferes. At first glance, a “frictionless” process sounds wonderful. It eliminates a nuisance. It frees everyone to share.

This techno-libertarian posture appears constantly in debates about privacy. As Julie Cohen summarizes it, the narrative assumes that disclosure and analysis of ever more information inevitably leads to various benefits, and particularly to greater truth.¹⁵² The corollary, which Cohen calls the “Luddism Proviso,” stipulates that “pre-determined limits on information processing are a manifestation of irrationality, and those who endorse them are fundamentally antiprogress.”¹⁵³ Proponents of amending the VPPA relied upon this playbook when they argued that the original statute inhibited “choice.”¹⁵⁴ Individuals are not passive in this construct—they are free.

This Part grapples with the rhetoric of frictionless sharing. At one level, this might seem like a mere semantic exercise, since arguably everyone understands what people at Facebook or Netflix mean by the term. I think that the examination is worthwhile nonetheless. The language and the attitude it embodies are pervasive but invisible. Although the metaphors embedded in “frictionless sharing” initially seem powerful, they collapse into incoherence on close examination. Once analyzed,

¹⁵¹ For early uses of the “passive sharing” language by its supporters, see, for example, Ylan Q. Mui, *In Shoppers’ Web Networks, Privacy Has No Price Tag*, Washington Post Technology (Washington Post May 22, 2010), online at <http://www.washingtonpost.com/wp-dyn/content/article/2010/05/21/AR2010052104951.html> (visited Sept 15, 2013) (quoting Blippy cofounder using term); Michael Arrington, *Google’s Joe Kraus Discusses the Social Web At Supernova Conference* (Techcrunch June 16, 2008), online at <http://techcrunch.com/2008/06/16/googles-joe-kraus-speaks-at-supernova-conference/> (visited Sept 15, 2013) (quoting Google executive using the term).

¹⁵² Cohen, *Configuring the Networked Self* at 248–52 (cited in note 119).

¹⁵³ *Id.* at 249.

¹⁵⁴ See, for example, Wolf Testimony at *2–3 (cited in note 54) (arguing that application of VPPA to online setting “can be read to frustrate the choice of consumers who want to authorize the disclosure on an ongoing basis of the streaming movies they watch online”).

“frictionless sharing” reveals itself as a comically inapt pairing. In several important respects, the phenomenon is neither frictionless nor sharing.

A. Friction

The “frictionless sharing” metaphor misrepresents the character of friction. Even setting that error aside, the term inaccurately describes, in two fundamental respects, the sort of interface Netflix wanted to deploy.

A truly frictionless world would be a nightmarish place where cars would slide off roads and we would be unable even to pick up a laptop, much less watch a movie on one.¹⁵⁵ It’s easy to see how the word “friction” took on its pejorative flavor. In everyday applications, mechanics and engineers frequently want to make things move—perhaps to help gears to turn or wheels to roll down tracks. In these situations, they use techniques from leverage to lubrication to reduce friction.¹⁵⁶ Probably because they frequently fight against it, in ordinary language, friction took on a negative connotation. Friction became synonymous with strife or discord within relationships of all kinds.¹⁵⁷ Economists refer to many additional costs that encumber efficient transactions as friction.¹⁵⁸ The word also entered the slang of Silicon Valley, business management, and how-to books, where it can describe any sort of irritating obstacle.¹⁵⁹ In

¹⁵⁵ See Robert P. Bauman, *Friction*, in Robert P. Bauman, ed, 2 *Macmillan Encyclopedia of Physics* 631, 632 (Simon & Schuster Macmillan 1996) (“[W]e could not walk and a car or bicycle could not move without friction; but neither we nor the vehicles could stop without friction.”); McGrath, *Friction* at 265 (cited in note 1) (“Without friction we could not walk, play a violin, or pick up a glass of water.”).

¹⁵⁶ See Bauman, *Friction* at 632 (cited in note 155).

¹⁵⁷ See, for example, Greg Miller, *FBI Gets New Role in Domestic Intelligence*, Wash Post A4 (June 20, 2012) (explaining that a change in oversight of intelligence activities “is intended to improve collaboration, but some officials say it has created new friction between the FBI and CIA”); Nick Wingfield, *Microsoft Sharpens Its Aim*, NY Times B1 (June 25, 2012) (describing Microsoft’s introduction of a tablet computer as “the most striking evidence yet of the friction between Microsoft and its partners on the hardware side of the PC business”).

¹⁵⁸ For example, the 2010 Nobel Prize in Economics went to three economists who identified “frictions” that prevent buyers and sellers (or employers and job applicants) from locating one another. See The Royal Swedish Academy of Sciences, *Nobel Prizes*, Nobelprize.org Press Release (Nobelprize.org Oct 11, 2010), online at http://www.nobelprize.org/nobel_prizes/economics/laureates/2010/press.html (visited Sept 15, 2013).

¹⁵⁹ See, for example, Adam Pash and Gina Trapani, *Lifehacker: The Guide to Working Smarter, Faster, and Better* 174 (Wiley 3d ed 2011) (describing use of keyboard shortcuts and macros as ways to reduce friction in daily tasks); David Pogue,

everyday language, friction may sound bad and traction good, but both of them are similar forces in the science of tribology, inherently neither positive nor negative.¹⁶⁰

If we pretend it gets the physics right, “frictionless” is still misleading language for two reasons. First, even Mark Zuckerberg does not really contemplate zero friction; Facebook now routinely disavows its Beacon experiment, when it posted people’s activity from other sites in friends’ news feeds without any opt-in.¹⁶¹ Similarly, customers must first download the Spotify app and agree to terms of service before revealing any information about music choices. The design of Netflix Social goes further to create some degree of friction by design; for example, users must take an extra step to activate blanket consent for sharing in Facebook (as opposed to sharing only within the Netflix interface itself).¹⁶² In physics, engineers who want to reduce friction to make something work better rarely desire the complete elimination of all friction, which would cause a host of other problems. The optimal amount of friction in, say, a train track depends on how fast the train should go. Likewise, views about the correct amount of friction attached to sharing will vary with views about its underlying normative purposes. And if we limit the definition of “friction” in sharing to inherently negative obstacles, we only shift the question from determining how much friction to deciding what qualifies as friction—without moving any closer to an answer.

Technology does enable truly frictionless collection and disclosure of information in many situations, but that typically makes both consumers and policymakers uncomfortable. For example, when the media first reported that the iPhone retained location data in its cache, the backlash from consumers and

Technology’s Friction Problem, 306 *Sci Am* 28 (Apr 2012) (“Friction is a hassle. Steps. Process. And in this increasingly technified world, there is still a surprising amount of red tape.”); Scott Belsky, *Why We Should Declare War On Friction* (99U), online at <http://the99percent.com/articles/7015/Why-We-Should-Declare-War-On-Friction> (visited Sept 15, 2013) (“I call this stuff ‘friction’ – it’s the tax filings, paperwork, waiting time, protocols, forgotten passwords, spam clearing, bureaucratic nonsense, big egos, and the ever-increasing information overload that we try to digest every day. It kills us with a thousand tiny paper cuts.”).

¹⁶⁰ See Reizo Kaneko, Yuji Enomoto, and Shigeyuki Mori, *Tribology*, in George L. Trigg, et al, eds, 22 *Encyclopedia of Applied Physics* 283, 283 (Wiley 1998).

¹⁶¹ See, for example, Mark Zuckerberg, *Our Commitment to the Facebook Community*, The Facebook Blog (Facebook Nov 29, 2011), online at <http://blog.facebook.com/blog.php?post=10150378701937131> (visited Sept 15, 2013).

¹⁶² See note 62 and accompanying text.

politicians was fierce.¹⁶³ Most actors, including the industry, condemn spyware and other clandestine data-gathering techniques. These are the examples of real “frictionless” sharing. Often they are rightfully condemned as unwarranted intrusions on privacy.

One might respond that using the word “frictionless” instead of something more accurate like “reduced friction” amounts to harmless puffery. Undoubtedly “frictionless” is catchier. But it ignores the fact that zero friction would be intolerable to most observers. Frictionless sharing depends upon a simplistic and incorrect assumption that choices about friction are binary—that we can have either old-fashioned burdensome solitude or shiny new unencumbered sharing. The reality is more complex. By pretending that friction presents an all-or-nothing choice, this terminology glosses over the great flexibility that businesses and regulators have at their disposal. We can choose to calibrate the amount of friction at an infinite number of levels, responsive to the costs and benefits in each situation. While both Spotify and Netflix now engage in what they may call frictionless sharing, in truth, both interpose some small amount of friction and do it slightly differently from each other, all by design.

The second inaccuracy is also important. Frictionless sharing does not really reduce overall friction but only shifts it from some people to others.¹⁶⁴ For Netflix to comply with the original VPPA, users who wanted to disclose their Friday night movie pick in Facebook would have needed to push a button to do so. Now, with Netflix Social under the amended VPPA, those who wish to keep that choice to themselves need to push a button instead. The innovation of frictionless sharing inherently introduces friction-filled privacy as its replacement. Flipping the default also increases the total amount of information exchanged, greatly raising the risk of spammification. By eliding this trade-off, the rhetoric of “frictionless sharing” once again presents disclosure as the natural and beneficial activity, the one which should be lubricated as much as possible. In fact, the amount of friction is a complex design choice, which inherently helps some users and burdens others. We cannot avoid making

¹⁶³ See Nick Bilton, *Tracking File Found in iPhones*, NY Times B1 (Apr 21, 2011) (describing political, scholarly, and consumer response to discovery of location data).

¹⁶⁴ See Richards, 101 Georgetown L J at 713 (cited in note 14).

some choice, whether through code or law; there is no “natural” state of online friction.¹⁶⁵ As the next section explains, however, if we grease the skids for sharing too much, it ceases to be sharing at all.

B. Sharing

“Sharing” certainly sounds like a positive word. We tend to like people who share our tastes or values, and we may then share our belongings or our feelings with them in return. Characterizing social networking as sharing enhances its image as an authentic, intimate, and cooperative activity. Perhaps for this reason, the terminology of “sharing” has been a part of Facebook from the very beginning. It has become so ingrained in the language of the worldwide web that it is now invisible. The word seems like the most natural way to describe any transmission of information in social networks. Google recently bowed to the inevitable by abandoning its efforts to brand the “+1” button in its Google search results and renaming it a “share” button.¹⁶⁶

But crucially, the ordinary sharing activities that give the word its positive tone are based on active choice. I may decide to share my dessert with you. If you start taking bites of it without my permission, you are stealing or, at the very least, displaying poor manners. Normally you become entitled to some of my cake only because I voluntarily grant you permission. In the context of an intimate relationship imbued with history and mutual understanding that permission may become more implicit, but it develops only over time and with many opportunities for the parties to shape those boundaries. An agreement may evolve between sisters or roommates that they may each take a bite of the other’s cake, or borrow the other’s clothes, without asking. But corporate entities like Facebook and Netflix can hardly

¹⁶⁵ See Lawrence Lessig, *Code Version 2.0* 31–37 (Basic Books 2006).

¹⁶⁶ This mechanism allows users of the Google+ social network to distribute links from within search results to the feeds of Google+ friends. It is not frictionless sharing, however—users are presented with a dialog box where they must authorize the publication of the link and can add comments and control recipients. See Mike Flacy, *Google replaces the +1 button with a Google+ share link in search listings* (Digital Trends July 19, 2012), online at <http://www.digitaltrends.com/social-media/google-replaces-the-1-button-with-a-google-share-link-in-search-listings/> (visited Sept 15, 2013).

presume enough intimacy with their users to function in this way.¹⁶⁷

We “share” our ideas and opinions, like we share a piece of cake, on purpose. I have argued in the past that such disclosures within social networks should require “genuine consent”—an intentional rather than an accidental approval by the individual.¹⁶⁸ Anything less cannot be described as “sharing” in any meaningful sense. It does not enjoy the purposefulness granted either by explicit permission or by the evolution of implicit understanding between intimates.

For that reason, as noted earlier, “frictionless sharing” is an oxymoron. By conceiving of personal control as mere friction to be worked around, the phrase removes an essential ingredient of the sharing recipe. It perverts the core meaning of the word. It turns a volitional and even noble act into an accidental byproduct of going about our business.

More subtly, “sharing” buttresses the position noted before, that constant disclosure of information is the natural and desirable state of being. Who doesn’t want to share? Cranky toddlers and greedy misers. If the stream of information sent through social networks is sharing, then refusing to send that information is its opposite, and no one wants to oppose sharing. Those who do will be branded by Cohen’s Luddism Proviso. Once again, language frames the debate, and portrays friction—that is, privacy, choice, and control—as an obstruction to inherently virtuous activity.

To demonstrate how much work the “sharing” does in “frictionless sharing,” imagine substituting another word and note how it changes the rhetoric entirely. Frictionless *talking* does not call up the same positive associations. We have all been in committee meetings with people who have conquered the friction impeding their speech, and the result was rarely good. Similarly, digitally enabled frictionless *copying* results in intellectual property infringement. The publishers and movie studios who so support frictionless sharing prefer to call this other phenomenon “piracy” instead. In fact, when it comes to frictionless copying, these very same interests lobby to create legal obstacles in place of the practical and technical difficulties

¹⁶⁷ On the connection between privacy and intimate relationships, see for example, notes 126–128.

¹⁶⁸ McGeeveran, 2009 U Ill L Rev at 1158–61 (cited in note 13).

that used to make duplication impractical. In other words, they turned to law to recreate the erstwhile natural friction that technology removed¹⁶⁹—just what the original VPPA did with Netflix.

And this brings us back to where we started: friction is only good or bad in relation to the underlying force it acts against. When we want something to move, we should reduce friction. When we want to keep something still, we want more friction (indeed, we want traction). If Netflix tells a customer's friends what movies they watch, we have seen that the resulting information flow is neither entirely good nor bad, but rather a mixed bag. We want just the right amount of friction. The next Part considers how to determine this amount and how to develop rules that facilitate the proper calibration of friction.

V. THE LAW OF FRICTION

Leonardo Da Vinci originally conceptualized friction, but the French physicists Guillaume Amonton and Charles-Augustin de Coulomb later developed the ideas and expressed them as several “laws of friction” that remain fundamentally important today.¹⁷⁰ We most likely cannot match the empirical rigor or conceptual brilliance of their scientific experimentation, but now that we have cleared away the rhetorical haze of “frictionless sharing,” we can repeat the observations made in Parts II and III about the forces at work. Having done so, we will be prepared to articulate a law of friction for the world of social networks.

A. Recap of Costs and Benefits

Part II of this Article showed that flows of personal information through social networks, such as messages about the movies one views on Netflix, can confer significant benefits. A person making a disclosure engages in self-expression and self-definition and influences others. Individuals receiving a disclosure strengthen social bonds and gather useful advice and recommendations. As a whole, society benefits from this

¹⁶⁹ See, for example, The Digital Millennium Copyright Act, Pub L No 105-304, 112 Stat 2860 (1998), codified at 17 USC § 512.

¹⁷⁰ See Kaneko, Enomoto, and Mori, *Tribology* at 283–84 (cited in note 160). The two basic laws, expressed in words rather than mathematically, state that “frictional force is proportional to load and independent of the area of the sliding surfaces.” *Id* at 283.

exchange, not only because people have fun and foster relationships, but because it improves the information available about all kinds of goods and services. This increased knowledge enhances competition and improves the availability of many products, particularly cultural works. Finally, intermediaries promote themselves and draw customers through all of this peer-to-peer activity.

Part III of this Article identified potential negative consequences of poorly designed frictionless sharing. First, resulting information flows, particularly unanticipated misclosures, can invade privacy. At a minimum, they can be intensely embarrassing, especially given that they are directed within a person's social network where that harm will probably be more acute. When the messages concern someone's reading, viewing, and listening habits, they also undermine the intellectual privacy needed to explore new ideas. Second, inaccuracy and excess of information threaten to squander the benefits of social sharing, potentially destroying the recommendation ecosystem through spammification.

Returning to the three beneficiaries of authentic sharing identified in Part II—me (the discloser), us (the recipients, individually and in the aggregate), and them (intermediaries like Facebook)—to what extent is each harmed by the problems that frictionless sharing can cause? This chart very briefly summarizes the answer to that question:

Table 1: Costs of Frictionless Sharing

	Social Privacy	Intellectual Privacy	Information Quality
ME (The Discloser)	Yes	Yes	Somewhat, because it can undermine personal influence
US (Recipients and Society)	No	Somewhat, because of the resulting chilling effect	Yes
THEM (Intermediaries)	Not in short term	Not in short term	Not in short term

Individuals who unintentionally reveal information bear the brunt of the harm to social and intellectual privacy. As a society, we also suffer a cumulative effect of dissipated intellectual privacy. Information quality issues fall hardest on the society as a whole because they threaten the recommendation culture. Secondly, spammification also harms individuals who want their recommendations taken seriously.

Intermediaries who encourage frictionless sharing do not feel any strong or immediate impact from either privacy or information quality problems. Indirectly, over the long term, they may receive indications from users unhappy with a design that includes too little friction. But this will only occur if enough people gain enough understanding of the information flows, encounter enough disclosures, or detect enough decline in the quality of the messages so that they revolt. If so, the market might eventually discipline bad frictionless sharing design. In that event, the design principle discussed below in Part V.B would serve as a voluntary best practice adopted as a self-regulatory measure.

There may be shortcomings with a fully market-driven response that waits for companies to optimize friction voluntarily. First, how will users signal their unhappiness? It is not realistic to expect that they will leave social media in droves. As Facebook approaches a billion members and social networking functionality permeates even ordinary web sites, it is increasingly unrealistic to expect that individuals with modest privacy concerns can abstain from participation in a ubiquitous communications medium. Of course, they may defect from one platform to another, as they have done in the past,¹⁷¹ but network effects impose very high switching costs. A more targeted form of the market-adjustment argument acknowledges that social networks may be a requirement of modern life but suggests that individual platforms using frictionless sharing may not. Users may penalize low-friction implementations of social networking—joining Facebook, say, but not authorizing frictionless sharing apps like Netflix Social. To be sure, this degree of consumer choice (indeed, friction) at initial activation

¹⁷¹ After all, at one time MySpace seemed invincible. See Victor Keegan, *Will MySpace ever lose its monopoly?* (The Guardian Feb 7, 2007), online at <http://www.guardian.co.uk/technology/2007/feb/08/business.comment?CMP> (visited Sept 15, 2013).

reduces the problem. But it has at least three weaknesses. First, many of the apps are intimately tied to the operation of Facebook, and the large social network platforms themselves are all promoting frictionless sharing. As noted above when describing *The Washington Post* Social Reader, some consumers don't even realize they have initiated frictionless sharing.¹⁷² Second, many of the burdens of frictionless sharing, such as the pollution of the recommendation ecosystem, fall on society as a whole rather than on individuals who have theoretically chosen to participate.¹⁷³ Finally, because the market signals are delayed and diffuse and intermediaries get so many advantages from frictionless sharing, they may not be powerful enough to create incentives for better design. Firms would respond only if they became more concerned with preserving the long-term benefits of sharing than with maximizing the short-term jolt of increased traffic. Otherwise, a market failure may justify regulatory pressure to calibrate friction at a socially optimal level.

As the remainder of this Part explains, there are simple ways for intermediaries to internalize some of the costs now imposed on me and us. Whether adopted voluntarily as a best practice or in conjunction with regulatory requirements, the right law of friction addresses the costs without threatening the benefits. The next section first proposes a principle for designing friction into interfaces and then considers the role of the government in advancing that design.

B. Formulating The Law of Friction

As discussed earlier, the circumstances of ordinary life used to prevent information flows now allowed by frictionless sharing.¹⁷⁴ Larry Lessig has made this key point about a law of friction with typical clarity:

[A]s we've seen again and again, just because the law of privacy didn't protect you it doesn't follow that you weren't protected. Facts about you while you are in public, even if not legally protected, are effectively

¹⁷² See notes 108–111 and accompanying text.

¹⁷³ See Part III.B. Society as a whole also feels some of the harm from loss of intellectual privacy. See notes 138–140 and accompanying text.

¹⁷⁴ See notes 24–25 and accompanying text.

protected by the high cost of gathering or using those facts. Friction is thus privacy's best friend.¹⁷⁵

Before social media, your friends could not find out what movies you watched in your home, and Netflix lacked an efficient means to find out who your friends were or to tell them about your film choices. Granted, before the invention of the VCR, an acquaintance might spot you entering the cinema, ascertain that you went to see *Last Tango in Paris*, and perhaps even gossip to friends about it—but even then, that same acquaintance would not know about every other movie you saw, nor could she tell every single one of your friends from every part of your life. Moreover, the producers of the movie or the owners of the theater could not organize the disclosures systematically as a way to spread your presumed endorsement and attract your friends as customers.¹⁷⁶ Technology, and particularly social media, permits the elimination of all these obstacles—“friction” in the parlance of Facebook designers but, as Lessig says, also “privacy’s best friend.”

Where technological developments eliminate friction, we often have the power to replace it in other ways. Just as engineers manipulate the amount of friction in a gear, we can design systems to increase or reduce the impediments to sharing. Woodrow Hartzog and Fred Stutzman have suggested that providers can design social media interfaces to recreate some of the practical obscurity that effectively prevented most disclosures in the past.¹⁷⁷ They draw on a broader initiative among some important technologists and regulators to encourage “privacy by design.”¹⁷⁸ In the case of frictionless sharing, some platform designers have taken some similar steps;

¹⁷⁵ Lessig, *Code Version 2.0* at 202 (cited in note 165).

¹⁷⁶ McGeeveran, 2009 U Ill L Rev at 1110–11 (cited in note 13).

¹⁷⁷ See Fred Stutzman and Woodrow Hartzog, *Obscurity by Design: An Approach to Building Privacy into Social Media*, CSCW 2012 Workshop on Reconciling Privacy with Social Media *2–4 (Fred Stutzman 2012), online at http://fredstutzman.com/papers/CSCW2012W_Stutzman.pdf (visited Sept 15, 2013). See also Hartzog and Stutzman, 101 Cal L Rev at 42–51 (cited in note 25).

¹⁷⁸ See Stutzman and Hartzog, *Obscurity by Design* at 1–2 (cited in note 177). The “privacy by design” concept has been championed especially strongly by Ann Cavoukian, the Information and Privacy Commissioner of Ontario. See generally Ann Cavoukian, *Privacy by Design* (Best Practice Institute 2012), online at <http://privacybydesign.ca/> (visited Sept 15, 2013); Future of Privacy Forum, *Privacy By Design*, online at <http://www.futureofprivacy.org/privacy-by-design/> (visited Sept 15, 2013).

not only has Facebook adjusted its rules somewhat,¹⁷⁹ but when Google added the Google+ History function to its fledgling social network, the company explicitly boasted that its design preserved more friction than Facebook's.¹⁸⁰

The best amount of friction, as noted above, lies somewhere between too much and none.¹⁸¹ Our comparison of costs and benefits better explains where to direct how much friction. Just like engineers designing moving machinery can adjust angles, add lubricant, or change surface materials, humans can control the location and degree of friction in the architecture of social networks. With perfect information we could plot out curves that would pinpoint this ideal degree of friction. On such an imaginary flawless graph, we could determine the ideal policy with the mathematical precision of Amontons's first law of friction. Needless to say, this is not quite possible in the less determinate realms of human behavior. But we can establish some fairly clear parameters based on existing information, and the remaining gaps in our knowledge present questions for future research by experts in relevant fields such as human-computer interaction and for experimentation in the market by service providers.¹⁸² Companies routinely conduct empirical usability studies when developing other aspects of their software interfaces, and this type of inquiry also could be used to home in on the precise point at which friction exceeded the amount necessary for genuine consent.¹⁸³

Based on what we now know, I would predict that the decrease in people's willingness to share probably is not constant—that some additional increment of friction causes a large abrupt drop in propensity to share, even where a person

¹⁷⁹ See notes 30–31 and accompanying text.

¹⁸⁰ See Mike Elgan, *Google rolls out something like Facebook's 'frictionless sharing'—but with friction!*, Google Plus (Google June 30, 2012), online at <https://plus.google.com/+MikeElgan/posts/T9aM3gGcUR7> (visited Sept 15, 2013).

¹⁸¹ See Part IV.A.

¹⁸² The Digital Trust Initiative, a partnership of business, advocates, and experts, is one ongoing effort to gather such information. The group has begun conducting interesting empirical work to determine privacy by design best practices. See Create with Context, *Designing for Trust* (Create with Context Mar 2012), online at <http://createwithcontext.com/insights-digital-trust-and-privacy.php> (visited Sept 15, 2013).

¹⁸³ Andrea Matwyshyn has made a similar point about the prevalence of usability studies in the industry and the possibility of harnessing them for lawmaking purposes; she focused more particularly on the usability of clickwrap contracts. Andrea M. Matwyshyn, *Technoconsent(t)sus*, 85 Wash U L Rev 529, 560–64 (2007).

would otherwise choose to provide information to friends. Perhaps that tipping point comes when notifications seeking consent become a nuisance. For example, supporters of the VPPA amendment raised the specter of constant pop-up windows pestering people for authorization, perhaps recalling the failures of Microsoft Explorer's intrusive cookie notifications in the 1990s.¹⁸⁴ This is not an accurate view of the original VPPA's requirements, but it was a powerful argument because moving beyond this convenience tipping point would indeed interfere too much with the advantages of authentic sharing discussed in Part II. Once people have sufficient control to prevent problematic disclosures, any additional friction may prevent desirable disclosures and should be avoided.

At the other extreme, United States law now allows zero friction in most circumstances.¹⁸⁵ The only real impediment to Facebook Beacon under existing law was the original VPPA (in instances where Beacon partner Blockbuster disclosed information about customers' video choices).¹⁸⁶ But, as discussed in Part IV, mainstream companies like Facebook and Netflix expect some amount of opt-in for sharing—they just want it minimized.¹⁸⁷ The problems of disclosures and spammification

¹⁸⁴ See Leslie Meredith and TechNewsDaily, *Senators Consider Banning Automatic Media Sharing on Facebook*, Sci Am *1 (Feb 12, 2012), online at <http://www.scientificamerican.com/article.cfm?id=senators-consider-banning> (visited Sept 15, 2013) ("Nagging requests for permission could overwhelm Facebook if the Senate decides all media should be governed by the [VPPA]."); Wolf Testimony at *3 (cited in note 54) (making similar points about repeated requests for permission).

¹⁸⁵ In theory, the nature of the movie choices could be so private that revealing it could violate the public disclosure of private facts tort. It is difficult to imagine disclosures of media choices sufficiently "highly offensive" to trigger liability. See Restatement (Second) of Torts § 652D (1977) (making a person subject to liability for giving publicity to the private life of another if "the matter publicized is of a kind that (a) would be highly offensive to a reasonable person, and (b) is not of legitimate concern to the public"). Moreover, the publication requirement in the majority of jurisdictions may prevent the application of the tort to limited disclosures among Facebook friends. See, for example, *Bodah v Lakeville Motor Express, Inc*, 663 NW2d 550, 557 (Minn 2003) (adopting the Restatement's definition of publicity as "the matter is made public, by communicating it to the public at large, or to so many persons that the matter must be regarded as substantially certain to become one of public knowledge"). See also Strahilevitz, 72 U Chi L Rev at 945 n 88 (cited in note 88) (discussing publication requirement); Restatement (Second) of Torts § 652d cmt a (same). But see note 128 and accompanying text (arguing that the narrower understanding of the publication requirement embodied in the "particular public" doctrine responds to important interests in privacy within one's social circle).

¹⁸⁶ See McGeeveran, 2009 U Ill L Rev at 1139–40 (cited in note 13).

¹⁸⁷ See notes 161–163 and accompanying text.

outlined in Part III suggest the need for significant user control in sharing—in other words, few actors *want* truly frictionless sharing even though the law permits it. So where should the line be drawn?

The observations in this Article allow for the articulation of a simple law of friction: *It should not be easier to “share” an action online than to do it.* There will still be cases where this rule of thumb restricts some of the benefits in Part II or fails to resolve some of the problems found in Part III. But the frequency of both errors, and especially the first one, should be extremely low.

This proposal takes its cue about the degree of friction from the architecture of systems themselves. The Netflix interface necessarily imposes some friction on the decision to *watch* a movie, not only the decision to share it. Consumers must log in to the Netflix site or app (although they can eliminate that friction by setting their device to remember the password or by staying logged in permanently). They must locate the video they want using the search box, their queue, or Netflix’s recommendations. Even someone who knows in advance that she wants to stream the next episode of *Mad Men* on her television needs at a minimum to push some buttons. If the future brings us motion-sensing or voice-activated systems, there will still be a moment when a viewer decides what to watch and takes action. On Netflix’s own terms, all of this is friction. And no matter how futuristic you want to be, it is hard to imagine the complete elimination of this friction, absent a mind-reading Netflix implant in our brains.¹⁸⁸

With that as the baseline amount of friction, now consider how much additional friction Netflix would have needed to comply with the original VPPA. Going back to the traditional interface on a computer or tablet, at a minimum every viewer clicks a “PLAY” button to start the movie. The original VPPA required explicit consent for any disclosure of that movie selection, but under the E-SIGN Act any digital equivalent sufficed.¹⁸⁹ As I suggested when testifying against the

¹⁸⁸ Though it is worth noting that resident Google futurist Ray Kurzweil expects such a scenario within several decades. See Kai Ryssdal, Interview, *Google’s Ray Kurzweil on the computers that will live in our brains*, Marketplace (American Public Media May 3, 2013), online at <http://www.marketplace.org/topics/tech/googles-ray-kurzweil-computers-will-live-our-brains> (visited Sept 15, 2013).

¹⁸⁹ See notes 46–48 and accompanying text.

amendment, Netflix could simply have placed a “PLAY AND SHARE” button next to every “PLAY” button.¹⁹⁰ This architecture would make it just as easy to share a movie choice as to watch a movie—but not easier. That would comply with the old VPPA and with the proposed law of friction.

Consumers would experience infinitesimal additional friction in this architecture. The only added obstacle would be the instant of extra thought to decide whether to push the alternative button and publicize a particular movie choice. It is difficult to imagine a design that placed less additional burden on the benefits of sharing described in Part II. By comparison, remember that the authors of the original VPPA lived in a world where watching a movie involved a visit to a bricks-and-mortar rental location and a wait in line to rent a physical videotape—not to mention limitations on the video store’s opening hours and available selection.¹⁹¹ That’s a lot of friction. (And, as I recall, we still considered the advent of the VCR a marvelous convenience at the time.) Even against that much higher baseline amount of friction, however, the original VPPA added a written consent procedure for sharing that represented a considerable further increase—much more than a “PLAY AND SHARE” button.

Fittingly, the very small extra increment of friction imposed by a “PLAY AND SHARE” button is precisely the additional amount necessary to secure genuine consent.¹⁹² Thus it addresses the concerns in Part III as narrowly as possible. These problems all arise when disclosures occur without sufficient individual control. Another beauty of the solution is its close connection to the technology that enables frictionless sharing in the first place. The very same technology that makes it easier to watch movies and to share movie choices with friends also makes genuine consent significantly easier to obtain than it was before.

And crucially, as technology advances, the proposed law of friction moves along with it because it is keyed to the actions necessary to use the system, not to any external standard of consent. Thus, the law of friction is a technology-neutral principle that leaves ample room for innovation.

¹⁹⁰ See McGeveran Testimony at *3 (cited in note 50).

¹⁹¹ See *id.* at *2–3.

¹⁹² See note 168 and accompanying text.

(Notwithstanding Netflix's objections, the original VPPA was a technology-neutral principle as well, but this proposal is more obviously so.) If Facebook or Netflix figure out ways to reduce friction of use, they can benefit from a commensurate reduction of friction in sharing. A comparison of both kinds of friction in 1988 and today demonstrates the difference: as online delivery made watching movies so much easier, social networks and instantaneous online consent made sharing easier as well. Ultimately, however, Netflix never will figure out how to play the right movie without asking you. It shouldn't be allowed to tell your friends what movie you chose without asking you.

The "PLAY AND SHARE" concept would work just as well in many other interfaces. Spotify, for example, operates in much the same way as Netflix: a person must press a button to play a song. Consumers could decide whether to broadcast each song selection in their social network. An extra wrinkle appears because Spotify and similar programs allow people to assemble and listen to playlists of multiple songs. In theory it is possible that someone might wish to share the first three songs in a playlist but not the fourth. However, the friction required to ask for permission before each song played would become a nuisance and intrude on the benefits of social sharing. The law of friction would not allow it to be easier to play songs than to share them, but it need not be more difficult. Instead, users should be asked whether to share the entire playlist at the same time they choose to play the whole thing. That is, the request for consent to share ought to be tied closely to the user input necessary for ordinary functioning.

The law of friction would not address every situation. Sometimes there is no user action comparable to pressing "PLAY," so the requirement would have little relevance. For example, a number of mobile apps now offer the possibility of passively transmitting location within a social network (or to a more limited group, such as family).¹⁹³ These apps certainly raise privacy concerns and may contribute to information quality problems, but they would need to be addressed with methods other than the law of friction described here.¹⁹⁴ A principle of architecture linking *sharing* to *doing* simply

¹⁹³ See notes 74–77 and accompanying text.

¹⁹⁴ As noted above, there are proposals in Congress to regulate location sharing. See note 77 and accompanying text.

provides one clear measure of an acceptable reduction of friction that balances benefits and concerns in many typical settings.

The final issue, then, is whether this law of friction should become a law enforced by government rather than remaining a voluntary design guideline. As noted throughout the article, intermediaries like Facebook and Netflix have reasons to reduce friction as much as possible.¹⁹⁵ They externalize the costs of frictionlessness onto their customers and society at large. Even if the market ultimately penalizes the activity it takes quite a while. By subsuming the decision to share a movie selection within the decision to watch the movie, Netflix will dramatically increase the amount of information users disclose and thus increase its own benefit.

Legal rules can impose friction, or encourage its creation, to establish the architecture that best serves social purposes.¹⁹⁶ In this way, law works through design to achieve its goals.¹⁹⁷ Consumer protection regulation of this sort makes particular sense when innovations like frictionless sharing eliminate boundaries between previously distinct spaces.¹⁹⁸ The FTC has shown great interest in adopting privacy-by-design principles as benchmarks of acceptable practices.¹⁹⁹ The agency can do some of this under existing authority and could do more if Congress expands its power to regulate privacy, as some have proposed.²⁰⁰ In addition, the FTC today could incorporate such requirements into the long-term negotiated consent decrees that recently have become a new tool for the agency.²⁰¹

¹⁹⁵ In particular, see Part II.C.

¹⁹⁶ See Jay P. Kesan and Rajiv C. Shah, *Shaping Code*, 18 Harv J L & Tech 319, 325 (2005); Lawrence Lessig, *Law Regulating Code Regulating Law*, 35 Loyola U Chi L J 1, 14 (2003); Joel R. Reidenberg, *Lex Informatica: The Formulation of Information Policy Rules Through Technology*, 76 Tex L Rev 553, 570 (1998).

¹⁹⁷ See Lessig, *Code Version 2.0* at 230 (cited in note FIX) (“We use law . . . to encourage a certain kind of technology . . . so that that technology enables individuals to better achieve in cyberspace what they want. It is LAW helping CODE to perfect privacy POLICY.”).

¹⁹⁸ See Palfrey and Gasser, *Interop* at 87 (cited in note 124).

¹⁹⁹ See Federal Trade Commission, *Protecting Consumer Privacy in an Era of Rapid Change: A Proposed Framework for Businesses and Policymakers* *22–34 (Federal Trade Commission Mar 2012), online at <http://ftc.gov/os/2012/03/120326privacyreport.pdf> (visited Sept 15, 2013) (calling on companies to implement privacy-by-design principles).

²⁰⁰ See Ira S. Rubinstein, *Regulating Privacy by Design*, 26 Berkeley Tech L J 1409, 1446–53 (2012).

²⁰¹ See Andrew Hoffman, *Facebook Accedes to the FTC’s Poke, Settles FTC’s Charges*, Privacy Law Blog (Proskauer Dec 7, 2011), online at <http://privacylaw.proskauer.com/>

Some may object that smaller architectural adjustments already made by Facebook and Google prove that regulation, even just encouragement of best practices, would be heavy-handed and unnecessary. Just as in the larger frame of “frictionless sharing,” there is rhetoric at work here as well. First, if there had been no progress toward a better calibration of friction, surely those same people would protest that changes required by the law of friction must be too burdensome, pointing to the lack of action as the proof that it was bad for business. In addition, *The Washington Post* Social Reader and Spotify continue to present all the concerns outlined in Part III, even after Facebook’s modest adjustments. We should measure the right increment of friction against the optimal balance of costs and benefits, rather than comparing it to whatever balance Facebook chose to strike the month before. Relatedly, some may suggest that regulators should leave “choice” to individuals who can elect not to use a frictionless sharing platform. But this argument echoes some of the fallacies in the rhetoric of frictionless sharing. Placing the burden on individuals to opt out of social media based on their (implicitly unreasonable) preferences simply recasts Cohen’s Luddism Proviso.²⁰²

By requiring that it be no easier to share an action than to do it, the FTC would establish a flexible but firm baseline for consumer friction. This strategy taps into the popular idea of regulatory “nudges”; the FTC sets parameters but leaves the particular implementation to the companies themselves, and the resulting architecture channels consumers toward more affirmative decisionmaking without undoing the benefits of sharing.²⁰³ Best practices about the implementation of the law of friction would emerge as companies experimented, whether they adopted my example of a “PLAY AND SHARE” button or found other solutions.

To be sure, any FTC action envisioned here would be modest, cooperative, and flexible. It would nevertheless provide significant protection against disclosures and spammification.

2011/12/articles/ftc-enforcement/facebook-accedes-to-the-ftcs-poke-settles-ftcs-charges/ (visited Sept 15, 2013) (reporting the 2011 consent decree between Facebook and the FTC and comparing it to a similar agreement with Google earlier in the year).

²⁰² See notes 152–154 and accompanying text.

²⁰³ See generally Cass R. Sunstein and Richard H. Thaler, *Nudge: Improving Decisions About Health, Wealth, and Happiness* (Yale 2008) (describing the idea of using “nudges” to encourage optimal decisionmaking).

By tying the architecture of an online action to the architecture of transmitting it in social networks, the law of friction ensures authentic disclosures based on genuine consent. After we strip away the rhetoric, that is exactly the right amount of friction for true sharing.