

REVISITING “THE INFORMATION SEMICOMMONS”

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In 2003, I published “The Information Semicommons” in the *Berkeley Technology Law Review*.² The article’s core claim was based on Henry Smith’s “Semicommon Property Rights and Scattering in the Open Fields.”³ Smith developed the notion of a semicommons to explain why ownership—or at least control—of parcels of land in mediaeval England were often scattered across open

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² Robert A. Heverly, *The Information Semicommons*, 18 *BERKELEY TECH. L.J.* 1127 (2003).

³ Henry E. Smith, *Semicommon Property Rights and Scattering in the Open Fields*, 29 *J. LEGAL STUD.* 131 (2000).

fields.⁴ The scattering was, Smith determined, an attempt to limit strategic behavior on the part of private users while continuing to gain the advantages that came from mixing common and private use of the same resource.⁵ The overall positive interaction of private and common uses of property is the hallmark of the semicommons and is the element that led me to seek to apply it to information ownership in my 2003 article.

I accepted, for the sake of argument, the descriptive proposition that information can be owned in a property-like fashion without addressing the normative arguments in favor of or opposed to this view. Instead, I sought to determine the answer to the following question: *if* information can be owned as property, *what kind* of property was information? Up until the time of Smith’s article, the choices were generally reserved to two flavors of ownership: private ownership and common ownership (with public, or government, ownership being a species of private ownership, though often being treated as a separate category).⁶ In this limited context, information would either be privately owned or held in common. In some circumstances, individual authors, or their employers or subsequent purchasers, would own information as private property, with the rights granted by the ownership scheme

⁴ *Id.* at 132–133.

⁵ The strategic behavior was the rational attempt by users to maximize the externalization of their own private uses—to the detriment of the commons itself—while also trying to minimize the costs imposed by common uses on their own parcels—to the detriment of other private users. *Id.* at 133.

⁶ See Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621, 660 (1998) (“Property theory has long worked with categories such as private property, commons property, and state property”).

inuring primarily to those private owners.⁷ Information not yet captured would be held in common for all to use or attempt to capture.⁸

While this generalized descriptive account is often discussed in the literature,⁹ in my view it misses an important part of the story. The ownership of information is not a simple on/off or private/commons model. Instead, it is more accurately described as a semicommons: a form of ownership and management of property that exists when there are significant beneficial interactions between the common and private uses.¹⁰ A major role of law given this understanding is therefore to police strategic behavior – attempts by either common users or private owners to externalize their own costs or internalize common benefits of the semicommons – in the semicommons.¹¹

The article pointed out that semicommons effects could be found at both the content level and the distribution level.¹² It concluded with what was, in hindsight, most likely a mistake. In an attempt to answer the often inevitable “so what” question that followed from what was hopefully an insightful yet theoretical and descriptive account of intellectual property law, I focused on peer-to-peer file sharing. Courts at the time of the article were, and largely remain, relatively hostile to the idea that any increase in sales that might result from peer-to-peer file sharing should be

⁷ See, e.g., PETER DRAHOS & JOHN BRAITHWAITE, *INFORMATION FEUDALISM: WHO OWNS THE KNOWLEDGE ECONOMY?* 39 *et seq.* (The New Press 2007).

⁸ See, e.g., James Boyle, *The Second Enclosure Movement and the Construction of the Public Domain*, 66 *LAW & CONTEMP. PROBS.* 33 (2003).

⁹ Boyle, *supra* note 8; see Frank I. Michelman, *Ethics, Economics, and the Law of Property*, 39 *TULSA L. REV.* 663, 665–66 (2004) (noting the two forms but adding “regulatory regime” to the analysis).

¹⁰ Heverly, *supra* note 2, at 1161 *et seq.*

¹¹ *Id.* at 1172.

¹² *Id.* at 1166.

considered when conducting a fair use analysis.¹³ My argument was that such factors reflected the semicommons nature of copyright works, and that considering them was not only appropriate within that context, but necessary.¹⁴

In retrospect, the argument underplays the importance of the semicommons by using it to justify what was, and what likely remains, strategic behavior on the part of commons users. In other words, peer-to-peer file sharing participants had tried to find a way around the structures copyright law had erected to prevent free use of private information goods, internalizing the benefits of those goods in ways that did not significantly interact to provide benefits to the semicommons overall. This is a nearly textbook definition of strategic behavior of the kind the information semicommons should aim to prevent, and as such, makes an unconvincing case for how to take advantage of the information semicommons in relation to intellectual property law.

HOPES FOR THE INFORMATION SEMICOMMONS

In writing the article, I hoped that the framework I described would allow scholars, lawyers, judges and lawmakers to take a wider view of the purposes and implications of decision-making in the intellectual property law arena. Specifically, I intended to provide a structure to include in the resolution of intellectual property problems and disputes considerations beyond those that were, at that time, the focus of both the doctrine and the rhetoric of intellectual property law. “Pirates,” “thieves and theft,” and “stealing” were all pervasive rhetorical tools used by

¹³ See, e.g., *Sony BMG Music Entm’t v. Tenenbaum*, 672 F. Supp. 2d 217 (D. Mass. 2009); *Metro-Goldwyn-Mayer Studios Inc. v Grokster, Ltd.*, 545 U.S. 913 (2005).

¹⁴ Heverly, *supra* note 2, at 1183.

information owners at the time the article was written,¹⁵ and as such I hoped to inject a more balanced approach into the consideration of competing interests in intellectual property law. That approach followed from the understanding that information is neither excludable nor rival, and that any excludability in information goods that does exist arises primarily from law's protections.¹⁶ It is thus circular to argue that there is something inherently "wrong" with using privately owned information goods when those goods are privately owned primarily because the law says they are. Instead, I argued that the semicommons model provides a clearer path to maximizing the benefits and minimizing the burdens of intellectual property law across a wide range of factual scenarios.¹⁷

Take the modern example of memes. Most of the images that form the backdrop of a meme are likely protected by copyright law. Yet they are used by others who treat them as a commons to create new works that potentially enhance the reach and value of the original work, often without an explicit or even implicit license.¹⁸ The owner of the original image, where properly motivated, may then leverage those uses to benefit from commercialization of the images in forums including or beyond the meme itself. The

¹⁵ My use of the term "piracy" in the original article was lightly critiqued by Justin Hughes, who quoted it as an example of a scholar who apparently believed that the use of the term was a recent rhetorical development. Justin Hughes, *Copyright and Incomplete Historiographies: Of Piracy, Propertization, and Thomas Jefferson*, 79 S. CAL. L. REV. 993, 999 (2006). I did not intend to imply this meaning in my original article, nor do I intend it now. The piracy trope's continued rhetorical power across time, however, should not be underestimated.

¹⁶ Heverly, *supra* note 2, at 1157.

¹⁷ *Id.* at 1187.

¹⁸ See, e.g., Thomas F. Cotter, *Memes and Copyright*, 80 TUL. L. REV. 331 (2005); see also, Ronak Patel, *First World Problems: A Fair Use Analysis of Internet Memes*, 20 UCLA ENT. L. REV. 235 (2013).

owners of the original Grumpy Cat, for example, have made significant amounts of money by licensing Grumpy Cat’s image for product sales and advertising.¹⁹

A more traditional view of the semicommons from the pre-internet period can be found in the “buzz” that surrounds a film release. Where a film receives an enthusiastic response from viewing audiences, word of mouth and public reviews combine to ensure that more people will want to see the film and may even encourage the creation of another film. In this way, the creation of privately-owned information content provides fodder for discussion, engagement, and reworking in the commons, which then provides not only feedback but perhaps additional incentives for creation of new private works.

In summary, in publishing *The Information Semicommons*, I had hoped to capture the importance of a new theoretical approach to intellectual property law, an approach that would hopefully allow for greater benefits both for society and individual creators, inventors and perhaps even those in the marketplace. I hoped to do so by articulating a vision that would be understood and accepted by judges, lawyers, legislators, and my colleagues. My goal was, thus, to influence the legal doctrines that form the structure of intellectual property law to increase the benefits that society and its members receive from these institutions.

REACTION TO INTEREST IN THE INFORMATION SEMICOMMONS

There are a variety of ways to measure the impact of any particular piece of scholarship (or of any particular

¹⁹ See *Grumpy Cat Ltd. v. Grenade Beverage LLC*, No. SA CV 15–2063–DOC (DFMx), slip op. (C.D. Cal. May 31, 2018) (involving a licensing dispute between Grumpy Cat’s rightsholders and a beverage company).

scholar).²⁰ Asking the question of “what” scholarship aims to do in any particular case should be critical to that inquiry. Any discussion of importance or impact must take place within the context of perceptions of scholarship across the legal community and the intent of the scholars who are writing. Of the variety of purposes that exist for academic legal scholarship, providing guidance to the legal profession and the courts in the resolution of legal conflicts, providing arguments for and against policy and legal positions to be adopted or rejected by legislators, advancing our understanding of law as a science or an art, and, at perhaps the most basic level, advancing knowledge as relevant to the law and the legal process are all worthwhile goals. Some of those outside the legal academy have their doubts as to whether the academy is doing anything useful in its current form of scholarship. Then Supreme Court Justice Antonin Scalia is quoted as saying, “Pick up a copy of any law review that you see, . . . and the first article is likely to be . . . the influence of Immanuel Kant on evidentiary approaches in 18th-century Bulgaria, or something, which I’m sure was of great interest to the academic that wrote it, but isn’t of much help to the bar.”²¹

²⁰ See, e.g., Gary M. Lucas, Jr., *Measuring Scholarly Impact: A Guide for Law School Administrators and Legal Scholars*, 165 U. PA. L. REV. ONLINE 165 (2017), https://scholarship.law.upenn.edu/penn_law_review_online/vol165/iss1/15.

²¹ Brent Newton, *Scholar’s Highlight: Law Review Articles in the Eyes of the Justices*, SCOTUSBLOG (Apr. 30, 2012), <http://www.scotusblog.com/2012/04/scholar%E2%80%99s-highlight-law-review-articles-in-the-eyes-of-the-justices/> (noting as well that Justice Scalia said that law reviews are “not particularly helpful for practitioners and judges,” and that Justice Breyer said that there is evidence that law review articles have left terra firma to soar into outer space.”); see also Brent E. Newton, *Law Review Scholarship in the Eyes of the Twenty-First Century Supreme Court Justices: An Empirical Analysis*, 4 DREXEL L. REV. 399 (2012).

Judicial hostility to Kant’s influence on evidentiary questions notwithstanding, judicial citation to my article, along with evidence of citations within attorney briefs and papers, would be one way to judge whether I had achieved my goal in publishing it. Searching for discussion of or citation to the article in legislative materials would also help determine whether I had hit my intended mark. A third potential metric would be to examine scholarly engagement with the article through citation counts in scholarship,²² though these are the subject of significant debate within the legal academy, and some citations are particularly tricky to capture.²³ With these measures in mind, I turn now to reviewing *The Information Semicommons* once it was released into the wild.

I. THE SEMICOMMONS IN THE COURTS

Considering that one purpose in publishing the article was to influence legal decision-making, it makes sense to start by considering the number of citations courts made to the article in the context of information-ownership related disputes. There have been none. Neither Westlaw nor Lexis searches turn up any evidence that any judge has ever read the article, let alone considered how adopting the information semicommons framework might affect any particular legal dispute. In this respect, the article has not had any impact, and this is one of the things I hope to correct in revisiting this project now. Something is missing in the

²² These include citations within casebooks, which are generally not part of searchable electronic databases. For a citation to *The Information Semicommons* in a textbook, see THOMAS W. MERRILL & HENRY E. SMITH, *PROPERTY: PRINCIPLES AND POLICIES* 132 (3d ed. 2017).

²³ See Tamara R. Piety, *In Praise of Legal Scholarship*, 25 WM. & MARY BILL RTS. J. 801 (2017); Patrick Arthur Woods, *Stop Counting (Or At Least Count Better)*, JOTWELL (2014), <https://jotwell.com/wp-content/uploads/2014/07/Woods-Stop-Counting.pdf> [<https://perma.cc/776R-BDDK>].

story itself, in its telling, or in the way in which the concept's potential to have a positive effect on decision-making is viewed, and finding that missing piece will be critical to realizing the full potential of both the theory and the article.

II. THE SEMICOMMONS IN THE LEGISLATURE

The same paucity of use that I found in the courts pervades the legislative side of the equation as well. Westlaw shows one citation to the article in a legislative context, and while one might be excused for thinking such a citation would have occurred at the national level—given the overwhelming control exhibited by federal law in the intellectual property realm—this citation was instead an annotation to California's law regarding fixation in state protected works of authorship.²⁴ The article is not cited in any way I could locate in relation to enacted or proposed legislation, such as in a committee report or during a hearing, though these sources can also be difficult to find. There is no evidence that legislators or their staffs have ever considered or even been exposed to the concept behind Smith's semicommons or its application to information. As far as metrics go, I'm 0-2 so far.

III. THE SEMICOMMONS IN SCHOLARSHIP

In contrast to the near total lack of evidence of awareness of the notion of the information semicommons in the courts and the legislatures, *The Information Semicommons* has been relatively well received in the scholarly literature, and continues to be cited in recent scholarship, even though it was published over fifteen years ago this year.²⁵ Approaches to the article have obviously

²⁴ See Cal. Civ. Code § 980 (West 2018).

²⁵ A Westlaw search returns 38 citations in the literature for the search "Information Semicommons," with three of these being to other articles

that have used that term. A Google Scholar search returns 104 citations. The most recent verifiable citation is from 2017. See 2 HENRY E. SMITH, ECONOMICS OF PROPERTY LAW, THE OXFORD HANDBOOK OF LAW & ECONOMICS: PRIVATE AND COMMERCIAL LAW 171 (Francesco Parisi ed., 2017). What follows is an admittedly incomplete list of citations to *The Information Semicommons*: JEROME H. REICHMAN ET AL., GOVERNING DIGITALLY INTEGRATED GENETICS RESOURCES, DATA, AND LITERATURE 3 (2016); MARGHERITA COLANGELO, CREATING PROPERTY RIGHTS: LAW AND REGULATION OF SECONDARY TRADING IN THE EUROPEAN UNION 19, 20 (2012); BRETT FRISCHMANN, INFRASTRUCTURE: THE SOCIAL VALUE OF SHARED RESOURCES 301 (2012); JYH-AN LEE, NONPROFIT ORGANIZATIONS AND THE INTELLECTUAL COMMONS 18, 182 (2012); COMPETITION POLICY AND PATENT LAW UNDER UNCERTAINTY 385, 388 (Geoffrey A. Manne et al. eds., 2011); RESEARCH HANDBOOK ON THE ECONOMICS OF PROPERTY LAW 54, 123 (Kenneth Ayotte & Henry E. Smith eds., 2011); Anna B. Laakmann, *A Property Theory of Medical Innovation*, 56 JURIMETRICS J. 117, 127 (2016); David J. Jefferson, *Biosociality, Reimagined: A Global Distributive Justice Framework for Ownership of Human Genetic Material*, 14 CHI.-KENT J. INTELL. PROP. 357, 369–370 (2015); Anna B. Laakmann, *The New Genomic Semicommons*, 5 U.C. IRVINE L. REV. 1002, 1017, 1019 (2015); Jeanne C. Fromer, *An Information Theory of Copyright Law*, 61 EMORY L.J. 71, 89 (2014); Daniel B. Kelly, *The Right to Include*, 63 EMORY L.J. 857, 915 (2014); Yochai Benkler, *Review: Commons and Growth: The Essential Role of Open Commons in Market Economies, Infrastructure: The Social Value of Shared Resources*, 80 U. CHI. L. REV. 1499, 1522 (2013); Jon M. Garon, *Digital Hollywood 2.0: Reimagining Film, Music, Television, and Publishing Distribution as a Global Artist Collaborative*, 21 MICH. ST. J. INT’L L. 563, 569 (2013); Ken Gatter, *Biobanks as a Tissue and Information Semicommons: Balancing Interests for Personalized Medicine, Tissue Donors and the Public Health*, 15 J. HEALTH CARE L. & POL’Y 303, 307 (2012); Henry E. Smith, *The New Private Law: Property as the Law of Things*, 125 HARV. L. REV. 1691, 1711 (2012); Jonathan M. Barnett, *The Illusion of the Commons*, 25 BERKELEY TECH. L.J. 1751, 1761 (2010); Robert Cunningham, *The Separation of (Economic) Power: A Cultural Environmental Perspective of Social Production and the Networked Public Sphere*, 11 J. HIGH TECH. L. 1, 6–7, 13 (2010); Robert Cunningham, *The Tragedy of (Ignoring) the Information Semicommons: A Cultural Environmental Perspective*, 4 AKRON INTELL. PROP. J. 1, 9, 26–32 (2010); James Grimmelman, Note, *New World: The Future of the Internet: The Internet is a Semicommons*, 78 FORDHAM L. REV. 2799,

2819, 2842 (2010); Jyh-An Lee, *Organizing the Unorganized: The Role of Nonprofit Organizations in the Commons Communities*, 50 JURIMETRICS J. 275, 279, 298 (2010); Jonathan M. Barnett, *Property as Process: How Innovation Markets Select Innovation Regimes*, 119 YALE L.J. 384, 402 (2009); Enrico Bertacchini et al., *Never Two Without Three: Commons, Anticommons and Semicommons*, 5 REV. OF L. & ECON. 163 (2009); Peter Lee, *Toward a Distributive Commons in Patent Law*, 2009 WIS. L. REV. 917, 949 (2009); Henry E. Smith, *Governing Water: The Semicommons of Fluid Property Rights*, 50 ARIZ. L. REV. 445, 477 (2008); Severine Dusollier, *Sharing Access to Intellectual Property Through Private Ordering*, 82 CHI.-KENT L. REV. 1391, 1397 (2007); Lydia Pallas Loren, *Building a Reliable Semicommons of Creative Works: Enforcement of Creative Commons Licenses and Limited Abandonment of Copyright*, 14 GEO. MASON L. REV. 271, 296 (2007); Brett M. Frischmann, *Evaluating the Demsetzian Trend in Copyright Law*, 3 REV. L. & ECON. 649, 653, 659 (2007); F. Scott Kieff & Troy A. Paredes, *Engineering a Deal: Toward a Private Ordering Solution to the Anticommons Problem*, 47 B.C. L. REV. 111, 112 (2007); Mary L. Lyndon, *Secrecy and Access in an Innovation Intensive Economy: Reordering Information Privileges in Environmental, Health, and Safety Law*, 78 U. COLO. L. REV. 465, 489 (2007); Sabrina Safrin, *Chain Reaction: How Property Begets Property*, 82 NOTRE DAME L. REV. 1917, 1922 (2007); Jason Savich, *Monsanto v. Scruggs: The Negative Impact of Patent Exhaustion on Self-Replicating Technology*, 22 BERKELEY TECH. L.J. 115, 130 (2007); Henry E. Smith, *Intellectual Property as Property: Delineating Entitlements in Information*, 116 YALE L.J. 1742, 1765, 1794 (2007 & Supp. 2007); Deborah Tussey, *IPods and Prairie Fires: Designing Legal Regimes for Complex Intellectual Property Systems*, 24 SANTA CLARA COMPUTER & HIGH TECH. L.J. 105, 116 (2007); James Campbell, *Authorship, Incentives for Creation, and Copyright in the Digital 21st Century*, 43 PROC. AM. SOC'Y FOR INFO. SCI. AND TECH. 1, *5 (2006); Justin Hughes, *Copyright and Incomplete Historiographies: Of Piracy, Propertization, and Thomas Jefferson*, 79 S. CAL. L. REV. 993, 999 (2006); Seth Robert Belzley, *Grokster and Efficiency in Music*, 10 VA. J.L. & TECH. 10, 12 (2005); Brett M. Frischmann, *An Economic Theory of Infrastructure and Commons Management*, 89 MINN. L. REV. 917, 933-34, 934, 990, 1001 (2005); Assaf Hamdani et al., *The Class Defense*, 93 CALIF. L. REV. 685, 688 (2005); Mark A. Lemley, *Property, Intellectual Property, and Free Riding*, 83 TEX. L. REV. 1031, 1057 (2005); Henry E. Smith, *Governing the Tele-Semicommons*, 22 YALE J. ON REG. 289, 292 (2005); Peter K. Yu, *Intellectual Property and the Information Ecosystem*, 2005 MICH.

varied, but it is interesting to note that the article has spurred thinking across a host of areas, some directly related to the primary thesis of the article and others taking inspiration from it.

The literature has been generally accepting of the information semicommons concept.²⁶ Many articles have actively contributed to the continued development of the information semicommons concept and its application to new areas and resources.²⁷ Those few criticisms leveled at the article were primarily focused outside the core of my primary claims and far afield from semicommons theory.²⁸ Semicommons theory seems to have something behind it given this reaction.

Within the field, Henry Smith has both advanced semicommons theory more generally and gone into greater

ST. L. REV. 1, 11 (2005); Dan Hunter & F. Gregory Lastowka, *Amateur-to-Amateur*, 46 WM. & MARY L. REV. 951, 959, 1020 (2004); David W. Opderbeck, *The Penguin's Genome, or Coase and Open Source Biotechnology*, 18 HARV. J.L. & TECH. 167, 213–14 (2004); Henry E. Smith, *Semicommon Property Rights and Scattering in the Open Fields*, 29 J. LEGAL STUD. 131 (2000).

²⁶ See, e.g., Robert Cunningham, *The Tragedy of (Ignoring) the Information Semicommons: A Cultural Environmental Perspective*, 4 AKRON INTELL. PROP. J. 1, 9, 26–32 (2016); James Grimmelmann, *The Internet is a Semicommons*, 78 FORDHAM L. REV. 2799, 2819, 2842 (2010).

²⁷ See, e.g., BRETT FRISCHMANN, *INFRASTRUCTURE: THE SOCIAL VALUE OF SHARED RESOURCES* 301 (2012); Cunningham, *supra* note 26; Grimmelmann, *supra* note 26; Enrico Bertacchini et al., *Never Two Without Three: Commons, Anticommons and Semicommons*, 5 REV. OF L. & ECON. 163 (2009); Henry E. Smith, *Intellectual Property as Property: Delineating Entitlements in Information*, 116 YALE L.J. 1742 (2007 & Supp. 2007).

²⁸ See Hughes, *supra* note 15; see also David W. Opderbeck, *The Penguin's Genome, or Coase and Open Source Biotechnology*, 18 HARV. J.L. & TECH. 167, 213–14 (2004) (reviewing the article's definition of information before rejecting it, but in adopting a different definition, not considering the article's objections to this alternate definition).

depth in relation to the information semicommons, providing notable advancements in information semicommons theory and application to information ownership.²⁹ Smith, moreover, might likely be inclined to refer not to information ownership but to management of information resources, following on from his work on governance of resources across a host of property based scenarios.³⁰ Smith's 2016 article, *Semicommons in Fluid Resources*, uses the semicommons to try to solve difficulties in governing what he refers to as "fluid" resources, resources he defines as those that are both hard to set boundaries on, perhaps because of the difficulty of excluding others from their use, and difficult to separate out into discrete, separate, legal things.³¹ Where this is the case, the hybrid property form of the semicommons is, according to Smith, best suited to providing the tools for governing the resources themselves.³² These observations build on others Smith has carried forward from additional applications of semicommons theory, including earlier work on water,³³ his application of the theory to telecommunications,³⁴ and his argument that intellectual property rights, at least "around their edges," are likely to be semicommons.³⁵

Brett Frischmann has likewise put significant effort into developing arguments showing the interactive nature of private and common uses in relation to information and

²⁹ See, e.g., Smith, *supra* note 27.

³⁰ See Henry E. Smith, *Exclusion Versus Governance: Two Strategies for Delineating Property Rights*, 31 J. LEGAL STUD. S453 (2002).

³¹ Henry E. Smith, *Semicommons in Fluid Resources*, 20 MARQ. INTELL. PROP. L. REV. 195 (2016).

³² Henry E. Smith, *Semicommon Property Rights and Scattering in the Open Fields*, 29 J. LEGAL STUD. 131 (2000).

³³ Henry E. Smith, *Governing Water: The Semicommons of Fluid Property Rights*, 50 ARIZ. L. REV. 445 (2008).

³⁴ Henry E. Smith, *Governing the Tele-Semicommons*, 22 YALE J. ON REG. 289 (2005).

³⁵ Smith, *supra* note 27, at 1794.

information resources, and though Frischmann's efforts often expand beyond information itself,³⁶ his efforts have been consistent and rigorous, and together with Henry Smith, he has contributed significantly to advancing the usefulness of the semicommons theory in the literature.³⁷ That *The Information Semicommons* has added something to Henry Smith's original conception of the semicommons in real property is demonstrated by the extent to which works such as those by Smith, Frischmann, and others have continued to discuss, develop and refine the concept in relation to information goods and intellectual property.

Other scholars have made important contributions in applying the information semicommons to intellectual property theory, while still others have focused its explanatory power on specific areas of information ownership and governance, including genomics³⁸ and

³⁶ Frischmann's work on infrastructure focuses not simply on information ownership, though that is a notable part of his efforts, but on the manner in which information interacts with infrastructure and distribution across a variety of areas. See, e.g., FRISCHMANN, *supra* note 27; Brett M. Frischmann, *An Economic Theory of Infrastructure and Commons Management*, 89 Minn. L. Rev. 917 (2005).

³⁷ Frischmann has written so prolifically on this topic that at times citations back to the original information semicommons article are omitted. See Michael J. Madison, Brett M. Frischmann & Katherine J. Strandberg, *Constructing Commons in the Cultural Environment*, 95 CORNELL L. REV. 657 (2010); Mark A. Lemley & Brett M. Frischmann, *Spillovers*, 107 COLUM. L. REV. 257 (2007).

³⁸ Anna B. Laakmann, *The New Genomic Semicommons*, 5 U.C. IRVINE L. REV. 1001 (2015).

biobanks,³⁹ creative commons licenses,⁴⁰ and more generalized IP theory.⁴¹

A number of scholars have also published work in spaces adjacent to the application of semicommons theory directly to information itself. James Grimmelmann's 2010 piece, *The Internet is a Semicommons*,⁴² is an excellent example in which Grimmelmann adopts the path set out in *The Information Semicommons* to apply semicommons theory to the ubiquitous network known as the internet. He notes: "[T]he dynamic interplay between private and common isn't just responsible for the Internet's success; it also explains some enduring tensions in Internet law [and] reveals the critical importance of some of the Internet's design decisions . . ."⁴³

This additional expansion of *The Information Semicommons's* basic claim into new, information-related territories provides additional evidence of the value at the core of its claims: information ownership regimes are best described using Henry Smith's semicommons theory, focusing on the methods used within each area to contain the strategic behaviors engaged in by those involved in each system. Yet, even with all this scholarly interest, the term "information semicommons" is not found in either the

³⁹ Ken Gatter, *Biobanks as a Tissue and Information Semicommons: Balancing Interests for Personalized Medicine, Tissue Donors and the Public Health*, 15 J. HEALTH CARE L. & POL'Y 303 (2012).

⁴⁰ Lydia Pallas Loren, *Building a Reliable Semicommons of Creative Works: Enforcement of Creative Commons Licenses and Limited Abandonment of Copyright*, 14 GEO. MASON L. REV. 271, 296 (2007).

⁴¹ See, e.g., Jeanne C. Fromer, *An Information Theory of Copyright Law*, 64 EMORY L.J. 71, 89 (2014); Jonathan M. Barnett, *Property as Process: How Innovation Markets Select Innovation Regimes*, 119 YALE L.J. 384, 402 (2009); Deborah Tussey, *Ipods and Prairie Fires: Designing Legal Regimes for Complex Intellectual Property Systems*, 24 SANTA CLARA COMPUTER & HIGH TECH. L.J. 105 (2007).

⁴² Grimmelmann, *supra* note 26.

⁴³ *Id.*

judicial or the legislative realms. Something is missing from the presentation of the idea, in the telling of the story, that would entice judges, lawyers and legislators to take interest in it. What that “something” is, is the topic we turn to next.

WHAT’S MISSING IN AND WHAT’S LEFT FOR THE INFORMATION SEMICOMMONS?

What is it that further development of the theory of the information semicommons still has to offer in the face of considerable development by scholars such as Smith, Frischmann, and others? While the work that has been done so far, some of it based upon the original article and some of it simply encouraged by ideas that it spawned in the minds of readers, is impressive, as a loose group with generally similar interests, we still have not engaged with the machinery of law. What will it take to bring these ideas to the attention of those who walk daily with the law, rather than leaving it as a side conversation among academics?

The first thing to do is to avoid using examples such as the one I chose in my original article: arguing that strategic behavior on the part of users should somehow be justified by the application of the information semicommons doctrine through fair use does not provide a suitable example for those in law practice to adopt the information semicommons paradigm.⁴⁴ Though others have taken up both peer-to-peer file sharing and fair use from the information semicommons perspective,⁴⁵ even those more

⁴⁴ Interestingly, symposium attendees were essentially unanimous in their opinion that the article would have stood on its own without its “so what” example. Hopefully, my experience can provide a lesson for young scholars. Sometimes an observation alone is enough, at least where it is new and important enough, that the “so what” question may be usefully put off for the future.

⁴⁵ See, e.g., Seth Robert Belzley, *Grokster and Efficiency in Music*, 10 VA. J.L. & TECH. 1, 12 (2005).

focused attempts have not met with acceptance within the law itself. Something more must be done.

What is that more? The symposium that served as the basis for this article caused me to rethink what it means to write successful scholarship. My conclusions here should not be read to imply that I believe this is the only, the best, or even a preferred way, of measuring scholarly success. Instead of looking for some truth about success in scholarship, I look to my motivations. When I wrote *The Information Semicommons*, I wanted the insights that I built on Henry Smith's work to have a direct and measurable influence on intellectual property law. I cannot speak for others in this space; success for them may be something very different, and the failure of any court to even mention the phrase "information semicommons" may not – and need not – bother others. My goal was to make change in the law. This symposium gave me an opportunity to remember that and to, hopefully, move toward it.

What do I think is necessary to meet this goal? New, clear examples of the application of the theoretical construct to real-world situations in which that framework will make a difference to the outcome of decisions. Engagement with judicial opinions would be of further benefit to the effort in this regard and would provide clear examples of how the information semicommons can guide decision-making. Further engagement with the legislative process, considering the ways in which legislation is likely to progress through Congress and state legislative bodies, is likely required to have any legislative effect. The goal is to improve decision-making by implementing the information semicommons framework in ways that both private and common users see the benefits. Considering these goals, I have only preliminary thoughts on issues that the information semicommons might help solve, or at least, advance. There is much work to be done.

What seems to hold the most promise for moving the information semicommons from the tower to the turf? There are a variety of questions that seem to recur without real closure within the intellectual property and intangible property arenas and to the extent that the theory has usefulness, contributions in these areas would be welcome. One often discussed and litigated area of intellectual property law concerns the length of protection for the various forms of intellectual property.⁴⁶ Perhaps the information semicommons can shed additional light on optimal terms of protection and assist with conflicts within this realm. Terms are critical for understanding the interaction between common and private uses.⁴⁷ Terms of protection would appear to provide fertile ground for an information semicommons analysis.

Revisiting a topic that has been addressed in the literature but that has not yet leaked from the academic into the legal realm is fair use.⁴⁸ It is not that work has not been done in this area, it is simply that this work has not yet

⁴⁶ See, e.g., *Eldred v. Ashcroft*, 537 U.S. 186 (2003); Paul M. Schwartz & William Michael Treanor, *Eldred and Lochner: Copyright Term Extension and Intellectual Property as Constitutional Property*, 112 YALE L.J. 2331 (2003); Richard A. Epstein, *The Dubious Constitutionality of the Copyright Term Extension Act*, 36 LOY. L.A. L. REV. 123 (2002); Tyler T. Ochoa, *Patent and Copyright Term Extension and the Constitution: A Historical Perspective*, 49 J. COPYRIGHT SOC'Y U.S. 19 (2001); William F. Patry, *The Copyright Term Extension Act of 1995: Or How Publishers Managed to Steal the Bread from Authors*, 14 CARDOZO ARTS & ENT. L.J. 661 (1996).

⁴⁷ See, e.g., Jeanne C. Fromer, *Expressive Incentives in Intellectual Property*, 98 VA. L. REV. 1745 (2012); Lydia Pallas Loren, *Abandoning the Orphans: An Open Access Approach to Hostage Works*, 27 BERKELEY TECH. L.J. 1431 (2012); Michael A. Carrier, *Cabining Intellectual Property Through a Property Paradigm*, 54 DUKE L.J. 1 (2004); Devan Desai, *The Life and Death of Copyright*, 2011 WIS. L. REV. 219 (2011).

⁴⁸ See FRISCHMANN, *supra* note 27, at 304–05; Heverly, *supra* note 2, at 1130–31.

produced fruit. Here we would engage less with the legislature and more with the courts. A thorough examination of how outcomes in particular cases might have changed or been better supported through the application of the semicommons theory would hopefully help achieve this goal.

Boundaries in intellectual property law, not in terms of physical or geographical spaces, but in terms of definitional lines between the varying intellectual property rights, is another area ripe for future research and application. What could information semicommons theory contribute to the analysis done by courts of potential crossovers between the differing domains of intellectual property protection?

There are many additional areas to consider as well, such as patentable subject matter, originality in copyright law, and likelihood of confusion in trademark law. Fuller consideration of how our understanding of the information semicommons can inform our resolution of tensions in intellectual property law is what is called for at this point in its development.

Information semicommons theory has been relatively thoroughly theorized at this point.⁴⁹ While we need not always worry about the "so what" question as a matter of course, it does seem like it is the next logical step in developing information semicommons theory to its full potential. I have not published any information semicommons related work since publishing *The Information Semicommons* in 2003. I look forward to re-engaging with the wealth of work that has been published by other scholars since then and to hopefully contributing to this fascinating discussion again in the future.

⁴⁹ See, e.g., Cunningham, *supra* note 26, at 26–32; Grimmelmann, *supra* note 26.

