

**Do Copyright Professors Pay Attention To Economists?:  
How Empirical Evidence on Copyright Piracy Appears (or Not)  
in Law Literature**

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## INTRODUCTION

Does online copyright infringement cause harm? While there are different ways to conceptualize such possible harm—harm to the quantity of new music, harm to the *quality* of new music, harm to musicians’ livelihoods—the question has usually been understood as more limited and manageable: Does online copyright infringement cause harm *to authorized sales of copyrighted works*? So understood, this has been one of the, if not *the*, most empirically researched questions of intellectual property.

Conceptually, this question has been important because it bears on broader, more philosophical issues about the internet: Was the digital networked environment such a paradigm shift that the old rules for production and dissemination of expressive works no longer applied?<sup>1</sup> Were the old rules as wrong as Newtonian principles in an Einsteinian universe? Many—including many legal academics—hoped they were witnessing a dramatic change in society. In Mark Helprin’s observation, “[s]erious and enthralled, some people liken[ed] the internet to the divine, and neither I nor they are making a metaphor.”<sup>2</sup>

Practically, the stakes were arguably as high. If online copyright infringement did *not* meaningfully harm sales, then harsh legislative, judicial, and private responses were unneeded, wasteful, and undesirable. If online copyright infringement did *not* meaningfully harm sales, then it would be wrong to shut down Napster, Grokster, or Megaupload. There would be no need for endless takedown notices, and site-blocking judicial orders would be wrongheaded.

Beginning in 2003, economists and other social scientists turned their attention to how this question might be studied empirically. The last formal review of this literature was conducted in April 2020 in a Piracy Landscape Study commissioned by the United States Patent and Trademark Office.<sup>3</sup> That report reviewed the thirty-three such studies published in peer-reviewed journal articles on whether online copyright

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1. Of course, a classic statement of this vision was John Perry Barlow, *The Economy of Ideas*, WIRED (Mar. 1, 1994), <https://www.wired.com/1994/03/economy-ideas/> [<https://perma.cc/WNP6-VYFM>] [<https://web.archive.org/web/20231020234403/https://www.wired.com/1994/03/economy-ideas/>]. Legal minds have offered many alternative visions for what might happen. See, e.g., Lawrence Lessig, *The Law of the Horse: What Cyberlaw Might Teach*, 113 HARV. L. REV. 501 (1999); Joel R. Reidenberg, *Lex Informatica: The Formulation of Information Policy Rules Through Technology*, 76 TEX. L. REV. 553 (1998); Eric Schlachter, *The Intellectual Property Renaissance in Cyberspace: Why Copyright Law Could Be Unimportant on the Internet*, 12 BERKELEY TECH. L.J. 15 (1997); Margaret Chon, *New Wine Bursting from Old Bottles: Collaborative Internet Art, Joint Works, and Entrepreneurship*, 75 OR. L. REV. 257 (1996); Pamela Samuelson & Robert J. Glushko, *Intellectual Property Rights for Digital Library and Hypertext Publishing Systems*, 6 HARV. J.L. & TECH. 237 (1993).

2. MARK HELPRIN, *DIGITAL BARBARISM: A WRITER’S MANIFESTO* 185 (2010).

3. Brett Danaher et al., *Piracy Landscape Study: Analysis of Existing and Emerging Research Relevant To Intellectual Property Rights (IPR) Enforcement of Commercial-Scale Piracy* (U.S. Pat. & Trademark Off., Economic Working Paper No. 2020-02, 2020), <https://www.uspto.gov/sites/default/files/documents/USPTO-Piracy-Landscape.pdf> [<https://perma.cc/83JK-H9MG>] [<https://web.archive.org/web/20231020230249/https://www.uspto.gov/sites/default/files/documents/USPTO-Piracy-Landscape.pdf>].

infringement harms authorized distribution of copyrighted works.<sup>4</sup> We have added two new studies not included in that prior work to cover a total of thirty-five peer-reviewed studies on the impact of copyright infringement. These empirical studies have involved over fifty separate researchers, some having participated in more than one project. These empirical studies have sought to measure the effect of online infringement in relation to music, feature films, books, and television shows.

The first study, published in 2003, analyzed the impact of music piracy on legal sales using CD sales data from 1994 through 1998 and concluded that piracy caused about a 6.6% sales loss in CD sales.<sup>5</sup> The next seven peer-reviewed studies, published between 2004 and 2006, and conducted by ten different researchers, also concluded that online infringement caused a loss in authorized sales of copyrighted works. Between 2007 and 2012, there were twelve more peer-reviewed empirical studies, four of which found no negative impact on sales and eight finding a negative impact on legitimate sales. The next eight years (2013–2020) brought thirteen more peer-reviewed empirical studies on the general question of the impact of online piracy on legitimate sales of copyrighted works; of those studies, one found no adverse effect and twelve found that there was an adverse impact.<sup>6</sup>

In other words, from the inception of peer-reviewed empirical work on this question, the vast majority of empirical studies in the economics and social science literature indicated that online piracy adversely affects legitimate sales. All told, from 2003 to 2020 there were thirty-four empirical studies in peer-reviewed journals, five finding no negative impact from online piracy and twenty-nine finding negative impact. We will refer to these thirty-four peer-reviewed studies as the “empirical studies” or the “empirical piracy literature.”<sup>7</sup>

It is one thing for researchers to study a question—*empirically* and *repeatedly*. It is another thing for other communities, both professional and lay, to learn what the

4. When we say a study is peer-reviewed, we mean that the study was ultimately published in a peer-reviewed academic journal, and that the conclusions drawn in the peer-reviewed publication were largely the same as any conclusions drawn by the initial study.

5. Kai-Lung Hui & Ivan Png, *Piracy and the Legitimate Demand for Recorded Music*, CONTRIBUTIONS TO ECON. ANALYSIS & POL’Y, Sept. 18, 2003, at 1.

6. These studies—with the media type studied, the primary data, and a summary of each study’s result—are listed in Appendix A. Appendix A also includes a 2022 peer-reviewed study that found online piracy harmed viewership of authorized public performances of copyrighted works. Because of the natural lag in publication, citations, and publication of citations, we chose not to include this 2022 “harm” study in our overall citation analysis.

7. Some commentators have criticized using the term “piracy” for unauthorized reproduction and distribution of copyrighted works and/or have believed that the term is one recently promoted by copyright owners. See, e.g., Peter Jaszi, *A Garland of Reflections on Three International Copyright Topics*, 8 CARDOZO ARTS & ENT. L.J. 47, 63 (1989). However, this use of the term in Anglo-American copyright jurisprudence started as early as the mid-1600s. See ADRIAN JOHNS, DEATH OF A PIRATE: BRITISH RADIO AND THE MAKING OF THE INFORMATION AGE 16 (2011). For examples of the use of “piracy” to mean copyright infringement, see *Millar v. Taylor* (1769) 98 Eng. Rep. 201, 252; 4 Burr. 2303, 2397 (KB); *Cary v. Kearsley* (1803) 170 Eng. Rep. 679, 680; 4 Esp. 168, 170 (KB); *Gray v. Russell*, 10 F. Cas. 1035, 1038 (C.C.D. Mass. 1839) (No. 5,728); *Emerson v. Davies*, 8 F. Cas. 615, 619 (C.C.D. Mass. 1845) (No. 4,436); *Jollie v. Jaques*, 13 F. Cas. 910, 914 (C.C.S.D.N.Y. 1850) (No. 7,437); *Stowe v. Thomas*, 23 F. Cas. 201, 206–08 (C.C.E.D. Pa. 1853) (No. 13,514).

researchers have found, accept those conclusions, and integrate those conclusions into their own worldviews.

So, our initial question was simple: *Has the legal academic community—many of whom disagreed with strenuous copyright enforcement—embraced the conclusion of the empirical literature showing that online piracy generally has a negative impact on sales of copyrighted works?* Or has the legal academic community yet to accept the evidence? We look at this question by looking at citation rates to see how legal academics cite the peer-reviewed empirical studies finding a negative impact on sales (“harm” empirical studies) in comparison to how legal academics cite peer-reviewed empirical studies finding no adverse (or a positive) impact on sales (“no harm” empirical studies).

Measured purely by raw citation rates, the legal community (law professors, their students, and a few practicing lawyers) does not seem to accept the evidence yet. Reviewing all the available secondary legal literature on LEXIS and Westlaw from 2004 to 2023 shows that the legal literature has cited the minority (five) “no harm” empirical studies *more* than the vast majority (twenty-nine) “harm” empirical studies: 120 citations to 99 citations (using the LEXIS totals). In other words, although “no harm” empirical studies represent only 15% of the empirical piracy literature, “no harm” empirical studies represent 55% of the empirical piracy literature cited in law reviews.

Of course, it is possible that the “no harm” studies are more persuasive or of higher quality and therefore, while smaller in number, warrant a disproportionately large number of citations. To test this possibility, we compared the citations to these empirical studies in the law literature to citations of these same thirty-four empirical studies in the economics and social sciences literature as reported by the Web of Science citation database. The latter does not appear to be skewed in the same way. Specifically, according to Web of Science, a supermajority (78%) of all citations in the economics and social sciences were to the “harm” empirical studies.

These tests of citations are, of course, partial and imperfect for a variety of reasons. First, citation counts are a partial measure of the sense of the citing paper. Moreover, the question “does piracy harm sales?” does not have to yield a simple “yes” or “no” answer. It is possible that piracy might harm sales in some settings, but not harm sales in others. For example, one of the papers in the list of “no harm” papers found no evidence of harm from piracy that occurs during a movie’s broadcast television window, which typically occurs two years after the movie’s theatrical release.<sup>8</sup> That finding is not inconsistent with the findings in another “harm” paper which finds that piracy that occurs prior to a movie’s theatrical release causes significant harm to sales.

Nonetheless, given that citations typically refer to the general findings of the literature (and are used to support general statements), it seems notable to us that, over the same timeframe and for the same set of papers, only 22% of the citations in the social science literature were to “no harm” papers, while 55% of the citations in the legal literature were to the same “no harm” papers.

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8. MICHAEL D. SMITH & RAHUL TELANG, STREAMING SHARING STEALING: BIG DATA AND THE FUTURE OF ENTERTAINMENT 40–44 (2016).

At first blush, one might think this betrays some ideological bias. One might want to avoid the cognitive dissonance of—in Thomas Henry Huxley’s formulation—“the slaying of a beautiful hypothesis by an ugly fact.”<sup>9</sup> As Carrie Figdor notes in an essay on journalism, “information is risky in a lot of ways. It might conflict with prior beliefs, values, or goals one is loathe to give up.”<sup>10</sup> The easiest way to avoid that kind of cognitive dissonance is to avoid the empirical evidence. While we acknowledge that theoretical and ideological preferences might explain *some* of what is going on, we think there are other, more nuanced explanations for the skewing of law literature citations in favor of “no harm” empirical studies. We believe these alternative explanations are at least as powerful as attributing the skewing to ideological preferences; these alternative explanations also offer their own cautionary tales about the law literature.

Part I of this Article summarizes the peer-reviewed economic and social science literatures on what impact online copyright infringement has had on authorized sales of copyrighted works. Part I is also supplemented by an appendix (Appendix A) which quotes the key findings of each peer-reviewed empirical study.<sup>11</sup> We provide this Appendix to ensure that future legal commentators have ready access *within the enclosed garden of law literature*—to a complete and accurate summary of the peer-reviewed literature on this question. Part I then presents how legal academics have cited this body of empirical work, including how law academics have cited the empirical studies as compared to how the empirical studies are cited in the economics and social science literature.

Part II offers a series of possible explanations for how and why the law literature skews toward citation of “no harm” studies. In addition to the possibility of ideological bias, we discuss how citations beget citations in the legal literature, how the law literature cites a fair amount of *non*-peer reviewed papers on the empirical question of piracy’s effect on sales of copyrighted works, and how writers in the law literature may try to present disputed factual questions in a “balanced” manner. We also look at some evidence that hints at ideological predispositions in how the empirical studies are or are not acknowledged.

9. One of the authors was introduced to the phrase by Professor Jamie Boyle, whose preferred formulation is “another beautiful theory mugged by brutal facts.” James Boyle, *Thomas Hobbes and the Invented Tradition of Positivism: Reflections on Language, Power, and Essentialism*, 135 U. PA. L. REV. 383, 404 (1987). But the phrase traces as far back as 1870, when biologist Thomas Henry Huxley described “the slaying of a beautiful hypothesis by an ugly fact” in a speech in Liverpool, England. By 1922, it had become the “murder of a lovely theory by a gang of brutal facts.” See *The Great Tragedy of Science—The Slaying of a Beautiful Hypothesis by an Ugly Fact*, QUOTE INVESTIGATOR (Dec. 26, 2020), <https://quoteinvestigator.com/2020/12/26/ugly-fact/#r+438868+1+15> [<https://perma.cc/L2YW-RHGB>]; see also Joseph C. Hutcheson, Jr., *The Judgment Intuitive: The Function of the “Hunch” in Judicial Decision*, 14 CORNELL L.Q. 274 (1929) (“I believed that the great tragedy of the law was the slaying of a beautiful concept by an ugly fact.”).

10. Carrie Figdor, *Trust Me: News, Credibility Deficits, and Balance*, in MEDIA ETHICS, FREE SPEECH, AND THE REQUIREMENTS OF DEMOCRACY 69, 74 (Carl Fox & Joe Saunders eds., 2018).

11. This Appendix is taken from Danaher et al., *supra* note 3, but updated with two more recent studies not in that prior report.

**I. STUDIES ON THE EFFECTS OF ONLINE INFRINGEMENT AND HOW  
THEY ARE CITED IN THE LAW LITERATURE**

**A. THIRTY-FOUR PEER-REVIEWED EMPIRICAL STUDIES AND HOW THEY ARE CITED  
IN THE LAW LITERATURE**

Why have there been thirty-four different studies on the question of whether online copyright infringement harms legitimate sales of copyrighted works? As the paleontologist Stephen Jay Gould said, “[s]cience is a pluralistic enterprise, validly pursued in many modes.”<sup>12</sup> These studies and a summary of the main findings of each are presented in Appendix A.

To explore how this peer-reviewed empirical research and its conclusions have been recognized and integrated into legal scholarship, we searched the LEXIS and Westlaw databases for each of the thirty-four empirical studies individually and then narrowed the search in each database to law review publications. These searches produced the following total citations:

	Westlaw Total	Westlaw Law Review	LEXIS Total	LEXIS Law Review
Five no harm studies	124	120	125	123
Twenty-nine harm studies	119	117	105	105

Unfortunately, these numbers also captured Volume 49 of the peer-reviewed *Journal of Law and Economics*, as it published three of the harm studies (which themselves cited other empirical studies). We eliminated those from the count and arrived at raw, total citations as follows:

	Westlaw Total	Westlaw Law Review	LEXIS Total	LEXIS Law Review
Five no harm studies	124	117	122	120
Twenty-nine harm studies	113	111	99	99

12. Stephen Jay Gould, *Integrity and Mr. Rifkin*, DISCOVER MAG., Jan. 1985, reprinted in STEPHEN JAY GOULD, AN URCHIN IN THE STORM 229, 234 (1987).

These 219 citations in the law review literature (to use the LEXIS total)<sup>13</sup> appear in 163 published pieces in law reviews. The first citation to one of the thirty-four empirical studies occurred in 2004, so these totals cover the period 2004 until spring 2023 (that is, what secondary literature is available on LEXIS and Westlaw as of spring 2023). This data is presented in Table 1 on the following page.

The “law review” totals include student-written notes and comments as well as articles, a few of which appear to be authored by practicing lawyers. We reviewed each piece to determine whether it was written by a member of a law faculty, a full-time academic on a non-law faculty, a practicing lawyer, a law student, or a non-law PhD student. Approximately half of these articles were written by full-time academics while an almost equal number were written by students.<sup>14</sup> Our assumption is that the academic community would hold full-time academics to a higher standard for reporting the empirical evidence, but the nature of law literature means that student-written notes and comments are part of what seems to be a citations cascade, where an initial citation in the literature is more likely to be cited in subsequent papers than other, more recent findings.

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13. We use LEXIS citations as our starting point here because, although most online commentaries consider Westlaw and LEXIS basically equal, LEXIS gets slightly higher ratings. See *LexisNexis Review: Online Legal Research*, LAWYERIST, <https://lawyerist.com/reviews/online-legal-research/lexisnexis/> [<https://perma.cc/PDC9-FM7D>] [<https://web.archive.org/web/20240405235128/https://lawyerist.com/reviews/online-legal-research/lexisnexis/>] (last visited Apr. 5, 2024).

14. As used here, “articles” includes works labeled by law reviews as articles, notes, comments, essays, and book reviews.

**TABLE 1: LEXIS LAW LITERATURE CITATIONS OVER TIME**

Year	Authors	Title	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	TOTAL
2003	Fili, Pig	Price and the Legitimate Demand for Recorded Music		2										1								4
2004	Petit, W; Zetrevock	The Effect of Internet Prices on CD Sales: Cross-Section Evidence							1													0
2005	Stevens, Sessions	An Empirical Investigation into the Effect of Music Downloading ...			1																	0
2006	Zemmer	Piracy and International Sales of Copyrighted Music: An Empirical ...				1																0
2007	Bourreau, W; Zetrevock	Price and the Demand for Films ...																				0
2008	Mitchel	The Impact of Digital File Sharing on the Music Industry ...			6	1	2															6
2009	Roby, Waldfoegel	Measuring the Effect of File Sharing ...			2	1	2	3	4	3	1	3	4	1	2	1	2	1	1	1	1	17
2010	Zemmer	The Effect of File Sharing on Record Sales: An Empirical Analysis	6	20	10	11	4	7	11	7	6	5	7	7	4	1	3	1				110
2011	Bhattachajpte, Oppel, Lerwachara, Mhasen, Telang	The Effect of Digital Streaming Technologies ...																				0
2012	De Vany, Walls	Examining the Effects of Music Prices on Download Revenue																				1
2013	Hennig Thunau, Hennig Sattler	Consumer File Sharing of Newton Printer																				0
2014	Liesowitz	Price on the Silver Screen			1											1	1	1				4
2015	Bender, Wang	Examining the Impact of Examining Record Sales in China																				0
2016	Smith, Telang	The Impact of Digital Prices on Music Sales ...																				0
2017	McGenzie	Competing with Free: The Impact of Movie Broadcasters ...																				1
2018	Danaher, Dharmasubban, Smith, Telang	Digital Music Downloading and its Impact on Legitimate Sales: Australian Empirical ...																				1
2019	Waldfoegel	Concerning Piracy Without Compensating Producers ...																				2
2020	Andersen, Friess	Music File Sharing and Sales Displacement in the iTunes Era																				1
2021	Ba and Waldfoegel	Don't Blame the P2P Refusers: the Impact of File music download ...																				0
2022	Hong	Movie Prices and Sales Displacement in Two Sectors of Creative Consumers																				0
2023	Danaher, Smith, Telang, Chen	Measuring the Effect of Digital on Recorded Music Sales ...																				0
2024	Danaher, Smith	The Effect of Omnichannel Response Anti-Piracy Laws ...																				4
2025	Ma, Mongemary, Singh, Smith	Over to 60 Seconds: The Impact of the Neighborhood Shutdown on Music Sales																				9
2026	Alermon, Liang	The Effect of Pre-Release Music Prices on Box Office Revenue																				0
2027	Aguiar, Mirvus	Price and music sales: The effects of an anti-piracy law																				0
2028	McGenzie, Walls	Music Prices: Bad for Record Sales But Good for the IPed?																				0
2029	Reimers	Digital music consumption on the internet ...																				0
2030	Papaja, van Heerde	File Sharing and Film Revenues ...																				0
2031	Penker, Clausen, Kerschmer	Can Private Copyright Protection Be Effective? ...																				0
2032	Koh, Hain, Raghunathan	The Dynamic Interplay Between Recorded Music ...																				0
2033	Danaher, Herth, Smith, Telang	Price and Box Office Movie Revenue ...																				1
2034		Optimization of Music Consumer Adoption ...																				0
2035		The Effect of Price Waterfall Bleeding on Consumer Behavior																				0

blue blocks = period in which the empirical study would have been unpublished  
 beige blocks = year in which the empirical study was published in peer-reviewed journal  
 red = no home empirical study



Not surprisingly, citations to the empirical studies (both “no harm” and “harm”) peaked from 2005 to 2010, held steady for a few more years, then dropped off after 2016. As both the record industry recovered and online copyright enforcement strategies stabilized, academics moved to new topics of interest. Table 1 presents the year-to-year citation rates, both citations for each peer-reviewed empirical study, and total citations across all papers in that year.

While the total numbers of LEXIS citations are 120 for the five “no harm” empirical studies and 99 for the twenty-nine “harm” empirical studies, that tally hides one key fact evident from Table 1: Almost all the “no harm” citations are to one particular study, Felix Oberholzer-Gee and Koleman Strumpf’s research. That study combined weekly music album sales data with previously unused data on the weekly volume of downloads in an effort to identify sales displacement using within-album weekly variation in downloading and sales.<sup>15</sup>

The Oberholzer-Gee & Strumpf study—preliminarily released in 2004 and published after peer review in 2007—swamps the “no harm” study citations. Of the 120 citations to “no harm” empirical studies in law review literature available on LEXIS, the Oberholzer-Gee & Strumpf paper accounts for 110 citations. The paper also dominates *all* citations in the law literature to empirical studies on this question: The Oberholzer-Gee & Strumpf paper has 110 of the 219 total citations in the law review literature available on LEXIS.

While Part II presents our general hypotheses as to why the “no harm” empirical studies dominate citations in the law literature, we will probably never know the exact mechanism by which the legal community was first drawn to (and, in some sense, became fixated upon) the Oberholzer-Gee & Strumpf study. Nonetheless, the Oberholzer-Gee & Strumpf citation snowball is consistent with Part II’s proposed explanations for the skewing of citations.

#### B. HOW THE EMPIRICAL STUDIES ARE CITED IN THE ECONOMICS AND SOCIAL SCIENCE LITERATURE

Next, we used the Web of Science database to conduct a reverse citation lookup for the number of times each of the empirical studies was cited by peer-reviewed papers in the economics and social science literature from 2005 to 2022. We counted a total of 1,987 citations to the thirty-four empirical studies. Of these citations, 22% were to “no harm” papers and 78% were to “harm” papers—quite different from the 55% “no harm” and 45% “harm” split in the law literature.

The Oberholzer-Gee & Strumpf paper accounted for 63% of the “no harm” citations in the economics and social science literature, instead of the 92% of the “no harm” citations in the law literature. In the economics and social science literature, the Oberholzer-Gee & Strumpf paper accounted for only 14% of the total citations to the thirty-four empirical studies, “harm” and “no harm.” There is also evidence that

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15. Felix Oberholzer-Gee & Koleman Strumpf, *The Effect of File Sharing on Record Sales: An Empirical Analysis*, 115 J. POL. ECON. 1 (2007).

economists and social scientists increasingly recognized the dominant conclusion that online piracy reduced sales: Citations to the “harm” studies increased over time from about 70% of all citations in the economics and social science literature in 2010 to 82% of all citations in the economics and social science literature in 2022.

We also found that the number of other “harm” papers cited alongside the Oberholzer-Gee & Strumpf paper increased over time in the economics and social science literature. In 2010, papers citing Oberholzer-Gee & Strumpf cited, on average, two “harm” empirical studies. By 2022, papers citing Oberholzer-Gee & Strumpf also cited, on average, four “harm” empirical studies.

In other words, citations in the economics and social science literature gave a much more accurate picture of the overall body of empirical studies than citations in the law literature, particularly as the overall body of empirical studies evolved. The Oberholzer-Gee & Strumpf paper did not overwhelmingly dominate economics and social science citations, although it still commanded more citations than any other empirical study—“harm” or “no harm.” We assume that this happened because Oberholzer-Gee & Strumpf was the first significant, eventually peer-reviewed study that produced a “no harm” outcome and, as one person noted when we presented an early version of this Article, “it’s fun to cite the provocative.”

## II. POSSIBLE EXPLANATIONS FOR THE SKEWING

Law professors who specialize in copyright have certainly become accustomed to empirical work *within the law* (i.e., careful statistical analyses of how courts are deciding cases<sup>16</sup> and how the copyright registration system operates<sup>17</sup>). Law professors have also made empirical forays into understanding the business practices and creative processes of the authors and artists who benefit from copyright,<sup>18</sup> as well as the impact of copyright on the availability of expressive works.<sup>19</sup> In short, one cannot say that copyright academics are unappreciative of or insensitive to good empirical work.

So what accounts for the skewing of citations in favor of “no harm” empirical studies in the copyright law literature when the vast body of empirical work points in the opposite direction? We have four complementary hypotheses: citations beget citations, insensitivity to peer review, “balanced” presentations, and ideological predispositions.

16. See, e.g., Barton Beebe, *An Empirical Study of U.S. Copyright Fair Use Opinions, 1978–2005*, 156 U. PA. L. REV. 549 (2008); Daryl Lim, *Saving Substantial Similarity*, 73 FLA. L. REV. 591 (2021); Clark D. Asay, *An Empirical Study of Copyright’s Substantial Similarity Test*, 13 U.C. IRVINE L. REV. 35 (2022).

17. See, e.g., Zvi S. Rosen & Richard Schwinn, *An Empirical Study of 225 Years of Copyright Registrations*, 94 TUL. L. REV. 1003 (2020); Robert Brauneis & Dotan Oliar, *An Empirical Study of the Race, Ethnicity, Gender, and Age of Copyright Registrants*, 86 GEO. WASH. L. REV. 46 (2018).

18. See, e.g., Peter DiCola, *Money from Music: Survey Evidence on Musicians’ Revenue and Lessons About Copyright Incentives*, 55 ARIZ. L. REV. 301, 304–05 (2013); Jessica Silbey et al., *Existential Copyright and Professional Photography*, 95 NOTRE DAME L. REV. 263, 279–80 (2019).

19. See, e.g., Paul J. Heald, *How Copyright Keeps Works Disappeared*, 11 J. EMPIRICAL LEGAL STUD. 829, 829–31 (2014); Christopher Buccafusco & Paul J. Heald, *Do Bad Things Happen when Works Enter the Public Domain?: Empirical Tests of Copyright Term Extension*, 28 BERKELEY TECH. L.J. 1, 2–5 (2013).

### A. CITATIONS BEGET CITATIONS

In patent prosecutions, patent examiners are supposed to research and consider the *entirety* of the “prior art,” which is the known, relevant technological base that existed at the time of a patent application.<sup>20</sup> But scholars have noted that patent examiners tend to limit their prior art research to pre-existing patents and patent applications.<sup>21</sup> There is good reason to think that the same thing happens to legal academics: Their ideally *comprehensive* research tends to focus on what is accessible in the law literature. And the more law literature there is, the harder it becomes to devote time to research beyond the LEXIS/Westlaw frontiers. For law academics, law review literature becomes an enclosed garden from which escape is difficult.<sup>22</sup>

Therefore, once a piece of research from another field wanders into the enclosed garden—that is, makes it into *some* law review article(s), particularly law review articles from established scholars or highly-ranked law reviews—that non-legal research becomes “accessible” to legal scholars in a way that technology becomes accessible to patent examiners when it is described in a patent. We hypothesize that that is what happened to the Oberholzer-Gee & Strumpf study.

Indeed, Table 1 shows that the Oberholzer-Gee & Strumpf study *immediately* gained attention in the legal community and was cited over fifty times—almost half its

20. 37 C.F.R. § 1.104 (a)(1) (“On taking up an application for examination or a patent in a reexamination proceeding, the examiner shall make a thorough study thereof and shall make a thorough investigation of the available prior art relating to the subject matter of the claimed invention.”); U.S. PAT. & TRADEMARK OFF., MANUAL OF PATENT EXAMINING PROCEDURE § 904 (9th ed. 2023), <https://www.bitlaw.com/source/mpep/904.html> [https://perma.cc/FJL4-TY3L] [https://web.archive.org/web/20240102171805/https://www.bitlaw.com/source/mpep/904.html] (“The examiner, after having obtained a thorough understanding of the invention disclosed and claimed in the nonprovisional application, then searches the prior art as disclosed in patents and other published documents, i.e., nonpatent literature (NPL).”); see also Joseph Farrell & Robert P. Merges, *Incentives To Challenge and Defend Patents: Why Litigation Won’t Reliably Fix Patent Office Errors and Why Administrative Patent Review Might Help*, 19 BERKELEY TECH. L.J. 943, 962–63 (2004) (“The default rule is that it is the patent examiner, not the applicant, who must search for prior art.”).

21. See, e.g., Christopher A. Cotropia, *Modernizing Patent Law’s Inequitable Conduct Doctrine*, 24 BERKELEY TECH. L.J. 723, 753–54 (2009) (explaining that patent examiners’ prior art research is limited to “search[ing] world-wide patent databases and some technical article databases”); Jason Rantanen, *The Malleability of Patent Rights*, 2015 MICH. ST. L. REV. 895, 911–12 (2015) (arguing that “searches for nonpatent prior art” are “more challenging” for patent examiners); Roger Allan Ford, *The Patent Spiral*, 164 U. PA. L. REV. 827, 838–39 (2016) (“[Patent examiners] have limited ability to search nonpatent prior art.”); Neil C. Thompson & Jeffrey M. Kuhn, *Does Winning a Patent Race Lead To More Follow-on Innovation?*, 12 J. LEGAL ANALYSIS 183, 220 n.7 (2020) (“In practice, patent examiners are time constrained and focus their prior art searches on U.S. patents and patent applications.”).

22. Several academics have viewed the corpus of law reviews as its own unique information ecosystem—or what we call an enclosed garden—that has been studied a great deal by law academics. See, e.g., Christopher A. Cotropia & Lee Petherbridge, *Gender Disparity in Law Review Citation Rates*, 59 WM. & MARY L. REV. 771, 775 (2018); Albert H. Yoon, *Editorial Bias in Legal Academia*, 5 J. LEGAL ANALYSIS 309 (2013); Alfred L. Brophy, *The Relationship Between Law Review Citations and Law School Rankings*, 39 CONN. L. REV. 43 (2006).

citations—*before* it was formally published.<sup>23</sup> In 2004, the Oberholzer-Gee & Strumpf study was cited by a handful of respected intellectual property academics writing in respected law reviews, including the flagship law reviews at Yale, Duke, and Hofstra,<sup>24</sup> as well as IP-specific journals at Harvard and UC Hastings (which is now called UC Law San Francisco).<sup>25</sup> Oberholzer-Gee & Strumpf was also the first footnote in a student note published that year in the *Texas Law Review*.<sup>26</sup>

The Oberholzer-Gee & Strumpf study can be characterized—and was characterized by its authors—in different ways. But its authors did provide a summary of their study which fit into an internet-changes-everything narrative. Drawn from the end of the paper’s original abstract, the “take-away” for many legal academics was the following: “Downloads have an effect on sales that is statistically indistinguishable from zero. Our estimates are inconsistent with claims that file sharing is the primary reason for the decline in music sales during our study period.”<sup>27</sup>

Oberholzer-Gee and Strumpf also directly connected the empirical issue of whether online piracy reduced sales to the broader question among law professors of “whether strong protection for intellectual property is necessary to ensure innovation,”<sup>28</sup> and they offered their study as “specific evidence on this point for the case of a single industry, recorded music.”<sup>29</sup> Years later, the authors characterized their 2004/07 study by stating that they “found that piracy contributed to the decline in music sales but was not the main cause,”<sup>30</sup> a considerably more sanguine encapsulation, and quite different from the earlier catnip of “effect on sales that is statistically indistinguishable from zero.”<sup>31</sup>

Among the “harm” empirical studies, there is different evidence of how empirical research studies enter or do not enter into the enclosed garden to become a source for

23. We assume that when the Oberholzer-Gee & Strumpf study was cited in a 2007 law review article—that is, the same year the study was published in *J. POL. ECON.*—the study was already in the footnotes and references of the law review article prior to publication in *J. POL. ECON.*

24. Yoichi Benkler, *Sharing Nicely: On Shareable Goods and the Emergence of Sharing as a Modality of Economic Production*, 114 *YALE L.J.* 273, 351 n.189 (2004); Michael A. Carrier, *Cabining Intellectual Property Through a Property Paradigm*, 54 *DUKE L.J.* 1, 106 n.508 (2004); Peter K. Yu, *The Escalating Copyright Wars*, 32 *HOFSTRA L. REV.* 907, 921 n.94 (2004).

25. Peter Eckersley, *Virtual Markets for Virtual Goods: The Mirror Image of Digital Copyright?*, 18 *HARV. J.L. & TECH.* 85, 131 n.167 (2004); Jessica Litman, *Sharing and Stealing*, 27 *HASTINGS COMM. & ENT. L.J.* 1, 2 n.3 (2004).

26. J. Cam Barker, *Grossly Excessive Penalties in the Battle Against Illegal File-Sharing: The Troubling Effects of Aggregating Minimum Statutory Damages for Copyright Infringement*, 83 *TEX. L. REV.* 525, 525 n.1 (2004).

27. *Supra* note 15, at 1; cf. Felix Oberholzer & Koleman Strumpf, *The Effect of File Sharing on Record Sales: An Empirical Analysis* (Mar. 2004) (unpublished manuscript) [hereinafter Oberholzer, Strumpf 2004 version], <https://pages.stern.nyu.edu/~wgreene/entertainmentandmedia/FileSharing.pdf> [<https://perma.cc/9WRC-XE9S>] [<https://web.archive.org/web/20231021021311/https://pages.stern.nyu.edu/~wgreene/entertainmentandmedia/FileSharing.pdf>].

28. Oberholzer, Strumpf 2004 version, *supra* note 27, at 4.

29. *Id.*

30. Felix Oberholzer-Gee & Koleman Strumpf, *The Effect of File Sharing on Record Sales, Revisited*, 37 *INFO. ECON. & POL'Y* 61 (2016).

31. Oberholzer & Strumpf, *supra* note 27, at Abstract.

law academics. Of the twenty-nine “harm” empirical studies, prior to this Article fifteen have had *zero* citations in the law review literature. While there was no single study that dominated like Oberholzer-Gee & Strumpf, two “harm” studies account for more than 50% of the “harm” study citations: A study by Rafael Rob and Joel Waldfogel had thirty-five citations<sup>32</sup> and a study by Alejandro Zentner had seventeen citations.<sup>33</sup> Both studies were published in 2006. More importantly, both studies were published in the *Journal of Law and Economics*, which is available on both LEXIS and Westlaw.

We believe that the citations-beget-citations phenomenon may be enhanced by the combination of two distinct characteristics of law literature as compared to other academic and scholarly literature.

The first characteristic is that law review articles often offer commentary or assertions on issues that are not directly relevant to the article’s thesis. Perhaps one could draw a spectrum among scholarly writing as to how much the writing in any field discusses extraneous materials. In our view, in mathematics and the hard sciences, extraneous discussion is minimal or non-existent; in the social sciences, there may be more mention of extraneous matters; and in the liberal arts, there may be even more discussion of matters not directly bearing on the scholarly article’s thesis. It may be that law review articles are at the opposite extreme from articles in mathematics and the hard sciences: We believe that in law review articles, there is a tendency for writers to demonstrate erudition by drawing connections to matters that are peripheral to an article’s thesis.

The second characteristic is how law review articles provide footnote references to all—or almost all—assertions of fact. This custom in the law review literature is laudable in its effort to hold authors accountable for factual claims. Still, this custom can go overboard, as when student editors want footnote support for assertions that are truly basic, innocuous, or irrelevant to the author’s thesis.

How could these characteristics support the citations-beget-citations explanation? Obviously, the author will tend to spend less time and attention on peripheral matters; the easiest way to support peripheral assertions is by finding supporting material in familiar law literature. Indeed, the writer may have some unfootnoted peripheral assertion in their manuscript for which student editors request support, prompting the author (or the student editors) to find—sometimes hastily—support in the published law literature.

Some evidence of that effect is that the Oberholzer-Gee & Strumpf article was cited for propositions that were *not* its empirical results. Here is an example of a statement in law review text for which Oberholzer-Gee & Strumpf was the *only* support: “The dominant perception in the public is that peer-to-peer file sharing and robust piracy rising from the feasibility of cheap digital copying caused a drastic drop in album

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32. Rafael Rob & Joel Waldfogel, *Piracy on the High Cs: Music Downloading, Sales Displacement, and Social Welfare in a Sample of College Students*, 49 J.L. & ECON. 29 (2006).

33. Alejandro Zentner, *Measuring the Effect of File Sharing on Music Purchases*, 49 J.L. & ECON. 63 (2006).

sales.”<sup>34</sup> Another law article cited Oberholzer-Gee & Strumpf, as well as one “harm” empirical study, for this textual statement: “At the same time file sharing became widespread, revenue from the music industry as a whole decreased significantly.”<sup>35</sup>

These two statements could have been supported with all sorts of sources, many of them more germane than Oberholzer-Gee & Strumpf: newspaper articles, op-eds, Congressional testimony, or industry press releases, among other materials. In the body of law review literature citing the empirical studies, there was a group of footnote parenthetical citations citing both “harm” and “no harm” empirical studies for propositions different from the studies’ empirical findings, including “a tremendous increase in file sharing activity observed, including billions of files in 2002 alone”<sup>36</sup> or “that the non-rivalrous nature of sharing electronic media provides little disincentive for letting third parties access one’s media files.”<sup>37</sup>

We believe that citations to empirical studies for these sorts of propositions show that once an empirical study has entered the enclosed world of law literature, it becomes a resource for all kinds of descriptive propositions about the world—and that this enhances the citations-beget-citations aspect of the walled garden.

## B. INSENSITIVITY TO PEER REVIEW

A second reason for the strong skewing in favor of “no harm” empirical studies may be that law professors and law students (that is, lawyers in training) may not readily distinguish between peer-reviewed empirical work and empirical work that has not been subject to peer review. In fact, it appears that law articles cite a great deal of published articles with empirical claims that had not been peer-reviewed (while ignoring the bulk of peer-reviewed literature).

Again, citations to the Oberholzer-Gee & Strumpf study support this hypothesis. Oberholzer-Gee & Strumpf was publicized and made publicly available in 2004, but it was not published in a peer-reviewed journal until 2007. When the Oberholzer-Gee & Strumpf study was initially released in 2004, it appears to have been promoted by the Harvard Business School’s public relations office; the result was widespread reporting of Oberholzer-Gee & Strumpf’s preliminary results in the mainstream media.<sup>38</sup>

34. Omri Rachum-Twaig, *Book Review: Control Is a Double-Edged Sword, and One Edge Is Sharper*, 2014 U. ILL. J.L., TECH. & POL’Y 481, 492 (2014).

35. Megan M. Carpenter, *Space Age Love Song: The Mix Tape in a Digital Universe*, 11 NEV. L.J. 44, 53 (2010) (also citing Alejandro Zentner, *File Sharing and International Sales of Copyrighted Music: An Empirical Analysis with a Panel of Countries*, 5 TOPICS IN ECON. ANALYSIS & POL’Y 1, 1 (2005)).

36. Joshua J. Dubbelde, *A Potentially Fatal Cure: Does Digital Rights Management Ensure Balanced Protection of Property Rights?*, 2010 U. ILL. J.L., TECH. & POL’Y 409, 422 n.74 (2010).

37. *Id.* at 422 n.76.

38. See, e.g., John Borland, *Music Sharing Doesn’t Kill CD Sales, Study Says*, CNET (Mar. 29, 2004), <https://www.cnet.com/tech/home-entertainment/music-sharing-doesnt-kill-cd-sales-study-says/> [https://perma.cc/CB9Q-7ETE] [https://web.archive.org/web/20231107164308/https://www.cnet.com/tech/home-entertainment/music-sharing-doesnt-kill-cd-sales-study-says/]; Ben Fritz, *Study: File Sharing Doesn’t Hurt Sales*, VARIETY (Mar. 29, 2004), <https://variety.com/2004/biz/markets-festivals/study-file-sharing-doesnt-t-hurt-sales-1117902507/> [https://perma.cc/2MYU-BA3P]

With such extensive media attention, the study became a reference point for authors in the law literature who, like journalists in the mainstream media, did not seem to register that the study had not yet been peer-reviewed. Oberholzer-Gee & Strumpf was the only empirical study cited in the law literature in 2004, perhaps contributing to Justice Breyer citing the study in his 2005 *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.* concurrence (discussed in Part III below) which, in turn, may have contributed to the snowball of citations.

Another example of how law professors and law students (that is, lawyers in training) may not readily distinguish between peer-reviewed empirical work and empirical work that has not been subject to peer review comes from what was frequently juxtaposed to the Oberholzer-Gee & Strumpf study. In particular, one economist, Stan Liebowitz at the University of Texas, was responsible for a series of papers (a) summarizing arguments and studies on the impact of online piracy on sales, and/or (b) directly responding to the Oberholzer-Gee & Strumpf empirical study.<sup>39</sup>

[<https://web.archive.org/web/20231016024038/https://variety.com/2004/biz/markets-festivals/study-file-sharing-doesn-t-hurt-sales-1117902507/>]; John Schwartz, *A Heretical View of File Sharing*, N.Y. TIMES (Apr. 5, 2004), <https://www.nytimes.com/2004/04/05/business/a-heretical-view-of-file-sharing.html> [<https://perma.cc/HBS6-9EZH>]

[<https://web.archive.org/web/20231016024239/https://www.nytimes.com/2004/04/05/business/a-heretical-view-of-file-sharing.html>]; Richard Morin, *License To Steal?*, WASH. POST (June 27, 2004), <https://www.washingtonpost.com/archive/opinions/2004/06/27/license-to-steal/7e516dfa-36d5-40a8-9965-31313b4be994/> [<https://perma.cc/Y5EY-MXP5>]

[<https://web.archive.org/web/20240102203053/https://www.washingtonpost.com/archive/opinions/2004/06/27/license-to-steal/7e516dfa-36d5-40a8-9965-31313b4be994/>]; Suw Charman, *Listen To the Flip Side*, THE GUARDIAN (July 22, 2004), <https://www.theguardian.com/music/2004/jul/22/netmusic.digitalmedia> [<https://perma.cc/CA3Y-SAPU>]

[<https://web.archive.org/web/20231016024350/https://www.theguardian.com/music/2004/jul/22/netmusic.digitalmedia>].

39. Like the Oberholzer-Gee & Strumpf study, many of Professor Liebowitz's papers were distributed in some form prior to publication, creating different citations for the same paper as it was cited over time. For a rough list of Liebowitz papers used in the law literature to respond to Oberholzer-Gee & Strumpf, see, e.g., Stan J. Liebowitz, *Will MP3 Downloads Annihilate the Recording Industry? The Evidence So Far*, in 15 INTELLECTUAL PROPERTY AND ENTREPRENEURSHIP 229 (Gary D. Libecap ed. 2004); Stan J. Liebowitz, *Pitfalls in Measuring the Impact of File-Sharing on the Sound Recording Market*, 51 CESIFO ECON. STUD. 435 (2005); Stan J. Liebowitz & Stephen Margolis, *Seventeen Famous Economists Weigh in on Copyright: The Role of Theory, Empirics, and Network Effects*, 18 HARV. J.L. & TECH. 435, 448 (2005); Stan J. Liebowitz, *Filing Sharing: Creative Destruction or Just Plain Destruction?*, 49 J.L. & ECON. 1 (2006); Stan J. Liebowitz, *Economists Examine File Sharing and Music Sales*, in INDUSTRIAL ORGANIZATION AND THE DIGITAL ECONOMY 145 (Gerhard Illing & Martin Peitz eds., 2006); Stan J. Liebowitz & Richard Watt, *How To Best Ensure Remuneration for Creators in the Market for Music? Copyright and Its Alternatives*, 20 J. ECON. SURVS. 513, 520 (2006); Stan J. Liebowitz, *How Reliable is the Oberholzer-Gee and Strumpf Paper on File-Sharing?* (Sept. 23, 2007) (unpublished manuscript), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1014399](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1014399) [<https://perma.cc/QX6B-NYP8>]

[[https://web.archive.org/web/20231107174550/https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1014399](https://web.archive.org/web/20231107174550/https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1014399)]; Stan J. Liebowitz, *A Comment on the Oberholzer-Gee and Strumpf Paper on File-Sharing* (Sept. 27, 2007) (unpublished manuscript), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1017418](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1017418) [<https://perma.cc/YR59-KX7U>]

[[https://web.archive.org/web/20231107175120/https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1017418](https://web.archive.org/web/20231107175120/https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1017418)]; Stan J. Liebowitz, *The Key Instrument in the Oberholzer-Gee/Strumpf File-Sharing Paper Is Defective* (Apr. 2010) (unpublished manuscript), <https://musikwirtschaftsforschung.files.wordpress.com/2010/06/paper->

These papers were not empirical studies per se and often were unpublished or published in journals that did not use peer review. Frequently, a law review article would cite Oberholzer-Gee & Strumpf, then cite a Liebowitz piece responding to the Oberholzer-Gee & Strumpf results.<sup>40</sup> This often occurred even when there was a large body of published peer-reviewed “harm” empirical studies that could have been cited.

Again, we posit that once Professor Liebowitz’s papers had entered into the law literature, they were practically more accessible to law professors and law students, becoming a “go to” response for the Oberholzer-Gee & Strumpf study. But the fact that Liebowitz’s papers, either unpublished or published without peer-review, were cited when there were so many peer-reviewed studies showing “harm” results (including one by Professor Liebowitz himself) speaks to the legal community being insensitive to the value of formal peer review processes in other disciplines.

The reliance in law literature on non-peer reviewed articles to respond to peer-reviewed empirical studies is not particularly surprising, since almost all legal scholarship and commentary is published without a full peer review process.<sup>41</sup> In short, when citations to non-peer reviewed “harm” articles with empirical claims or responding to “no harm” empirical claims are included, citations in the legal literature appear more balanced.

### C. THE PROBLEM WITH “BALANCED” PRESENTATIONS

That leads to a third observation on how the law literature presents the empirical literature in this area: Once one includes the empirical claims in scholarly writing that was not peer-reviewed, the law literature—frankly, meaning the *footnotes*—shows a marked tendency to demonstrate “balance” or “bothsidesism,” meaning a footnote will have one to two “harm” references and one to two “no harm” references.

It is not surprising to see this tendency in footnotes of law review articles. In the case of legal authorities, it is a common practice for law review articles to present

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stan-j-liebowitz2.pdf [https://perma.cc/6CCS-LE36]; Stan J. Liebowitz, *How Much of the Decline in Sound Recording Sales Is Due To File-Sharing?*, 40 J. CULTURAL ECON. 13 (2016).

40. See, e.g., Christopher Buccafusco & Jonathan S. Masur, *Innovation and Incarceration: An Economic Analysis of Criminal Intellectual Property Law*, 87 S. CAL. L. REV. 275, 297 (2014); Patience Ren, Note, *The Fate of BitTorrent John Does: A Civil Procedure Analysis of Copyright Litigation*, 64 HASTINGS L.J. 1343, 1356 (2013); Peter DiCola & Matthew Sag, *An Information-Gathering Approach To Copyright Policy*, 34 CARDOZO L. REV. 173, 219 (2012); Olufunmilayo B. Arewa, *YouTube, UGC, and Digital Music: Competing Business and Cultural Models in the Internet Age*, 104 NW. U.L. REV. 431, 440 (2010); Rochelle Cooper Dreyfuss, *Does IP Need IP? Accommodating Intellectual Production Outside the Intellectual Property Paradigm*, 31 CARDOZO L. REV. 1437, 1451 (2010); Derek E. Bambauer, *Faulty Math: The Economics of Legalizing The Grey Album*, 59 ALA. L. REV. 345, 383–84 (2008); Diane Leenheer Zimmerman, *Can Our Culture Be Saved?: The Future of Digital Archiving*, 91 MINN. L. REV. 989, 1012 (2007). Again, our intent here is not to criticize individual writers or specific law review articles, but to point to a general characteristic of legal scholarship.

41. We recognize that a few student-edited law journals do ask one or more experts in the relevant specialty to review a manuscript before its final acceptance, but these processes are usually on tight deadlines and do not reflect a full peer-review process similar to what would occur in other disciplines.



conflicting evidence in the footnotes,<sup>42</sup> so much so that the formal “signals” for law review footnotes include various conventions to make such presentations (e.g., compare . . . with . . . , contra, but see, but cf.).<sup>43</sup> So, perhaps it is natural that the writers and editors of law review articles would do the same with empirical evidence.

But there is probably more here than law review footnote conventions. A footnote that cites conflicting empirical evidence in an “on the one hand, on the other hand” format is engaged in a trope of objectivity, a trope familiar to all of us from journalism and the social sciences. We think the comparison to journalism is appropriate because the law academic providing citations to empirical work is, in effect, *reporting* to her readers on that empirical work.

Much has been written about the rise of modern “objectivity” in journalism and the broader epistemic framework in which it sits. As Oren Soffer describes it, “the perception of objectivity in social sciences and journalism is based on observing, gathering information, mapping, and categorizing. Objectivity assumes that journalists can avoid bringing their personality, values, and inner world into their work.”<sup>44</sup> Michael Schudson has described the journalist’s role as one of the “naive empiricist” who believes that there are discoverable facts, discrete morsels of truth about the world.<sup>45</sup> This is familiar to anyone who knows the Supreme Court’s view of “facts” in the 1991 *Feist Publications, Inc. v. Rural Telephone Service Co.* decision.<sup>46</sup> Ekaterina Ognianova and James W. Endersby described the characteristics of objective

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42. We say “law review article” because footnotes are often a coproduction of the author and the student editors. Many years ago, one of us observed hyperbolically, “[c]ompared to legal journals elsewhere or other scholarly journals in the United States, the law review editing process produces an increasingly monotonous literature where . . . no propositions are put forward without the editor disagreeing in contrapuntal footnotes.” Justin Hughes, *The Philosophy of Intellectual Property*, 77 GEO. L.J. 287, 364 n.316 (1988). In response, the student editors humorously added, “But see Hughes, *The Philosophy of Intellectual Property*, 77 GEO. L.J. 287, 364 n.316 (1988) (author’s style retained in unedited tirade).” *Id.* In explaining “but see” footnotes, one author has suggested that the value of such footnotes is that “acknowledging but minimizing articulation of the opponent’s point of view is wise.” Joan Ames Magat, *Bottomheavy: Legal Footnotes*, 60 J. LEGAL EDUC. 65, 92 (2010). Another commentator has offered that “[t]he footnote, itself marginalized and excluded, is at first used to avoid (defer, put off, exclude) dispute by appeal to authority. Later, it is used to distinguish (defer, put off, avoid) the force of other cases.” J.M. Balkin, *The Footnote*, 83 NW. U.L. REV. 275, 278 (1989).

43. THE BLUEBOOK: A UNIFORM SYSTEM OF CITATION R. 1.2(b), at 63 (Columbia L. Rev. Ass’n et al. eds., 21st ed. 2020).

44. Oren Soffer, *The Competing Ideals of Objectivity and Dialogue in American Journalism*, 10 JOURNALISM 473, 477 (2009).

45. MICHAEL SCHUDSON, *DISCOVERING THE NEWS: A SOCIAL HISTORY OF AMERICAN NEWSPAPERS 6* (1978); MICHAEL SCHUDSON, *ORIGINS OF THE IDEAL OF OBJECTIVITY IN THE PROFESSIONS: STUDIES IN THE HISTORY OF AMERICAN JOURNALISM AND AMERICAN LAW, 1830–1940*, at 162 (1990).

46. *Feist Publ’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340 (1991). For the *Feist* Court, “facts” are pre-existing and are “discovered” by people, not “created” by authors. *Id.* at 347 (“The distinction is one between creation and discovery: The first person to find and report a particular fact has not created the fact; he or she has merely discovered its existence.”). Many legal scholars have given their own account of the *Feist* decision’s epistemological assumptions (and the historical background thereof). See, e.g., Justin Hughes, *Created Facts and the Flawed Ontology of Copyright*, 83 NOTRE DAME L. REV. 43 (2007); Jessica Silbey, *A Matter of Facts: The Evolution of the Copyright Fact-Exclusion and Its Implications for Disinformation and Democracy*, 71 J. COPYRIGHT SOC’Y U.S.A. (forthcoming 2024) (on file with authors).

journalism as “truthfulness, relevance, balance, impartiality, non-distortion, neutrality, testability, informativeness, fairness, depersonalization, skepticism and factuality.”<sup>47</sup> In this vision, journalists form “a Fourth Estate, independent and loyal to the abstract, objective truth.”<sup>48</sup>

Criticism of objectivity in journalism has been around for decades. In the 1960s and 1970s, there was the school of “new journalism” in which “the emphasis [was] on subjectivity and ‘getting inside’ the story or event.”<sup>49</sup> While objectivity required distance and neutrality from the subject matter, as Soffer observes, “the New Journalists aimed to become part of the scene they discussed.”<sup>50</sup> In the first decades of the twenty-first century, there has definitely been some movement away from the journalistic ideal of “dispassionate truth-seekers who avoid taking sides”<sup>51</sup> and toward presentation of events through a normative lens. As one *Boston Globe* reporter noted, “biased journalists don’t see themselves as biased. They see themselves as enlightened. They see themselves as having the moral clarity—and the moral obligation—to take sides on public controversies.”<sup>52</sup> If their presentation of facts and events leans one direction, it is because they do not conceive of themselves as neutrals but rather as “combatants in a culture war in which it is important to avoid giving any credence to wrong thinking.”<sup>53</sup>

If these alternatives sound a little familiar, they should. Law academics usually strive to present precedents, statutory laws, regulations, and treaties in an objective, but insightful, manner. Objective presentation is the principal epistemic posture for much of the law literature, including *most of each* law review article, almost all the content of treatises, and ideally all of summary works like the Restatements. This epistemic posture is not just about a commitment to truth, it is self-preservation: The respect that law professors enjoy—indeed, their relevance—comes largely from being sources of objective, insightful understanding of the law. At the same time, many law professors also want to be—and see themselves as—“part of the scene they discuss,” that is, as having “the moral clarity—and the moral obligation—to take sides on public controversies.”<sup>54</sup> Richard Fallon has written elegantly about the problems this *advocacy* role poses for law professors’ amici briefs.<sup>55</sup> In a real sense, many (if not most) law review articles are an interweaving of objective presentation with normative claims.

47. Ekaterina Ognianova & James W. Endersby, *Objectivity Revisited: A Spatial Model of Political Ideology and Mass Communication*, 159 JOURNALISM & MASS COMM’N MONOGRAPHS 1, 10 (1996).

48. Soffer, *supra* note 44, at 484.

49. Marshall W. Fishwick, *The New Journalism, 2: A Style Befitting Our Times and Tastes*, J. COMM’N, Sept. 1975, at 190, 190.

50. Soffer, *supra* note 44, at 481.

51. Jeff Jacoby, *Marty Baron*, in *Dissent, Rises in Defense of Objective Journalism*, BOS. GLOBE (Mar. 26, 2023), <https://www.bostonglobe.com/2023/03/26/opinion/marty-baron-dissent-rises-defense-objective-journalism/> [https://perma.cc/P728-2D3U] [https://web.archive.org/web/20231009213342/https://www.bostonglobe.com/2023/03/26/opinion/marty-baron-dissent-rises-defense-objective-journalism/].

52. *Id.*

53. *Id.*

54. *Id.*

55. See Richard H. Fallon, Jr., *Scholars’ Briefs and the Vocation of a Law Professor*, 4 J. LEGAL ANALYSIS 223 (2012).

Generally speaking, we believe that footnote citations are regarded as falling on the objective presentation side. The question is whether “both sides” footnotes adequately serve this purpose. On that count, we think a distinction needs to be drawn between “bothsidesism” on social, political, and cultural issues and “bothsidesism” on questions that are subject to empirical testing. Presenting both sides makes sense as a posture of objectivity on pure policy questions (e.g., is it better to have the Electoral College or to have direct elections of the U.S. President?). It also makes sense on cultural questions or questions of taste not subject to empirical verification (e.g., which is more culturally influential, *Star Wars* or *Star Trek*?).

On empirical questions, “bothsidesism” is different. When the empirical question is first being studied, there may be little or no consensus on the answer: At that moment, all reasonable possibilities should be presented in a balanced manner. But when extensive empirical work has been done and the bulk of that research points in one direction, “bothsidesism” tilts toward becoming superficial or false “objectivity.” Leading journalists reject “bothsidesism” on empirical questions when there is strong evidence pointing one direction. As Joseph Kahn, the executive editor of the *New York Times* said,

[W]hen the evidence is there, we should not default to some mealy-mouthed, so-called neutral language that some people see this as a falsehood, while others do not. When the evidence is there, we should be clear and direct with our audience that we don’t think there are multiple sides to this question.<sup>56</sup>

Or, as Martin Baron notes, “[o]bjectivity . . . is not giving equal weight to opposing arguments when the evidence points overwhelmingly in one direction.”<sup>57</sup> As climate journalist Ross Gelbspan noted in his 1998 book *The Heat is On*,

The professional canon of journalistic fairness requires reporters who write about a controversy to present competing points of view. . . . But this canon causes problems when it is applied to issues of science. It seems to demand that journalists present competing points of view on a scientific question as though they had equal scientific weight, when actually they do not.<sup>58</sup>

56. Leonard Downie, Jr., *Newsrooms that Move Beyond “Objectivity” Can Build Trust*, WASH. POST (Jan. 30, 2023), <https://www.washingtonpost.com/opinions/2023/01/30/newsrooms-news-reporting-objectivity-diversity/> [https://perma.cc/B687-ZFS3] [https://web.archive.org/web/20231107203737/https://www.washingtonpost.com/opinions/2023/01/30/newsrooms-news-reporting-objectivity-diversity/].

57. Martin Baron, *We Want Objective Judges and Doctors. Why Not Journalists Too?*, WASH. POST (Mar. 24, 2023), <https://www.washingtonpost.com/opinions/2023/03/24/journalism-objectivity-trump-misinformation-marty-baron/> [https://perma.cc/3ZHK-22HB] [https://web.archive.org/web/20231107204240/https://www.washingtonpost.com/opinions/2023/03/24/journalism-objectivity-trump-misinformation-marty-baron/] (“Objectivity is not neutrality. It is not on-the-one-hand, on-the-other-hand journalism. It is not false balance or both-sidesism. It is not giving equal weight to opposing arguments when the evidence points overwhelmingly in one direction.”).

58. ROSS GELBSPAN, *THE HEAT IS ON: THE CLIMATE CRISIS, THE COVER-UP, THE PRESCRIPTION* 57–58 (1998).

Gelbspan concludes that giving equal time to opposing views is itself *misleading* when the opposing views are not equally supported by the empirical evidence.<sup>59</sup> He is one of a number of commentators, scholars, and journalists concerned that “bothsidesism” journalism can be (and has been) misleading on scientifically settled topics like evolution versus creationism, health risks associated with genetically modified crops, the non-existent link between vaccines and autism, and, of course, anthropogenic climate change.<sup>60</sup>

In his writings on science reporting, the philosopher Mikkel Gerken characterizes this as a debate between “balanced reporting” and “reliable reporting.”<sup>61</sup> Gerken characterizes the principle of *balanced reporting* as being that “[s]cience reporters should, whenever feasible, report opposing hypotheses in a manner that does not favor any one of them.”<sup>62</sup> In contrast, Gerken presents what he calls *reliable reporting*, a principle that “[s]cience reporters should, whenever feasible, report the most reliably based hypotheses and avoid reporting hypotheses that are not reliably based.”<sup>63</sup> Recognizing the tension between these approaches, Gerken proposes that science journalists should ideally report “the nature and strength of the scientific justification for and against competing claims,” thereby producing a narrative that “favor[s] the most reliable ones.”<sup>64</sup> Gerken’s proposal dovetails with the recommendation of Chris Mooney and Matthew Nisbet, who, in the context of creationism versus evolution, recommend journalists “cit[e] the overwhelming scientific consensus in support of evolution” instead of “allocating ample quotes and sound bites to Darwin’s critics in a quest to achieve ‘balance.’”<sup>65</sup>

59. *Id. passim*.

60. Downie, Jr., *supra* note 56 (critiquing “false balance or misleading ‘bothsidesism’ in covering stories about race, the treatment of women, LGBTQ+ rights, income inequality, climate change and many other subject”); Megan N. Imundo & David N. Rapp, *When Fairness Is Flawed: Effects of False Balance Reporting and Weight-of-Evidence Statements on Beliefs and Perceptions of Climate Change*, 11 J. APPLIED RSCH. IN MEMORY AND COGNITION 258, 267–68 (2022) (concluding that “[w]hen perspectives sharply differ in evidentiary support . . . presenting them together can suggest they are equally plausible”); Figdor, *supra* note 10; Graham N. Dixon & Christopher E. Clarke, *Heightening Uncertainty Around Certain Science: Media Coverage, False Balance, and the Autism-Vaccine Controversy*, 35 SCIENCE COMMUN 358, 378 (2012) (“Falsely balancing risk perspectives can be troubling, as it can heighten readers’ uncertainty perceptions around certain science.”); Chris Mooney & Matthew C. Nisbet, *Undoing Darwin*, 44 COLUM. JOURNALISM REV., Sept.–Oct. 2005, at 30; Maxwell T. Boykoff & Jules M. Boykoff, *Balance as Bias: Global Warming and the US Prestige Press*, 14 GLOB. ENV’T CHANGE 125, 134 (2004) (concluding that “adherence to the norm of balanced reporting leads to informationally biased coverage of global warming,” providing “real political space for the US government to shirk responsibility and delay action regarding global warming”).

61. Mikkel Gerken, *How To Balance Balanced Reporting and Reliable Reporting*, 177 PHIL. STUD. 3117 (2020).

62. *Id.* at 3121. Gerken believes that such balanced reporting “reflects the scientific values of objectivity, neutrality and open-mindedness, as well as general journalistic norms and guidelines.” *Id.*

63. *Id.* at 3122.

64. *Id.* at 3130. Gerken calls this “inclusive reliable reporting,” where “[s]cience reporters should, whenever feasible, report hypotheses in a manner that favors the most reliably based ones by indicating the nature and strength of their respective scientific justifications.” *Id.*

65. Mooney & Nisbet, *supra* note 60, at 32–34.

What does any of this have to do with footnotes in law review articles? When a law professor provides citations to empirical materials, in some sense, the law professor is *reporting on* those empirical results (i.e., the law professor is playing the “naïve empiricist” when it comes to the social scientists’ research). Few would question that the ideal for law review footnotes is “the best obtainable version of the truth” (Woodward and Bernstein’s standard for good journalism),<sup>66</sup> but too much acceptance of “bothsidesism” as a legitimate form of objectivity in law review writing may be a significant contributing factor to the skewing described in Part I.

Of course, if one were disposed to favor minimal (or no) online copyright enforcement, if one believed that the internet truly held out a new paradigm for information goods *and* one were aware of the vast sweep of empirical work, one might write a “balanced” presentation (in text or footnotes) as a way of softening the blow of those brute facts’ assault on one’s beautiful worldview. That leads us to a final possible explanation: ideological preferences.

#### D. PRESENTATIONS THAT SEEM TO REFLECT IDEOLOGICAL PREDISPOSITIONS

While each of the three explanations above helps account for the skewed citations in the law literature, the discussion of empirical work in law literature may betray ideological preference—our fourth potential explanation of the disparity in citations in the law literature.<sup>67</sup> For example, in a 2020 law review article,<sup>68</sup> a law professor wrote the following: “In a recent study the European Commission also found that there is little or no economic effect from internet piracy.”<sup>69</sup> This particular law review article did not have any other statement describing the effects of online infringement.

The footnote correctly cited a 2015 study that had been *commissioned* by the European Commission,<sup>70</sup> although the sentence is written in a way that could suggest the study was *conducted* by the European Commission.<sup>71</sup> The actual results of that study, according to the study’s executive summary, include the following:

66. Downie, Jr., *supra* note 56.

67. Jessica Litman gave a classic description of ideological preference having *too much* impact in law review articles when she wrote about reading “a lot of pieces for which it was absolutely clear that the author had settled on the answer before coming up with the question. I ran into economic models that had been designed to deliver particular results. In most of those pieces, there was more than one moment where an inconvenient discrepancy or undesirable inference threatened to lead somewhere interesting and unexpected, and, wouldn’t you know it, those moments were glossed over or ignored.” Jessica Litman, *The Politics of Intellectual Property*, 27 CARDOZO ARTS & ENT. L.J. 313, 317 (2009).

68. We withhold the complete citation here; we are out to skewer neither particular academic(s) nor any particular published article (source on file with authors) [hereinafter ABC paper].

69. *Id.* at 72.

70. European Comm’n, Directorate-Gen. for Internal Mkt., Indus., Entrepreneurship & SMEs, van der Ende et al., *Estimating Displacement Rates of Copyrighted Content in the EU* (2014), <https://data.europa.eu/doi/10.2780/26736> [https://perma.cc/9TQX-8HCS] [<https://web.archive.org/save/https://data.europa.eu/doi/10.2780/26736>].

71. *Id.* at 4 (carrying the typical disclaimer for commissioned material that “[t]his document has been prepared for the European Commission however it reflects the views only of the authors, and the

In general, the results do not show robust statistical evidence of displacement of sales by online copyright infringements. That does not necessarily mean that piracy has no effect but only that the statistical analysis does not prove with sufficient reliability that there is an effect. An exception is the displacement of recent top films. The results show a displacement rate of 40 per cent which means that for every ten recent top films watched illegally, four fewer films are consumed legally.

...

In sum, the main contribution to the existing literature is the finding on displacement rates for recent top films and the lack of a robust (positive) displacement rate for films / TV-series in general, music, books and games despite the carefully developed questionnaire and the application of econometric analysis.<sup>72</sup>

The study did not find statistically robust information, *except* that it found that online infringement was causing meaningful, substantial displacement (lost sales) for top films. We leave it to the reader to decide whether that counts as a study that “found that there is little or no economic effect from internet piracy.”<sup>73</sup>

What seems more important to us is that neither the law article’s text nor its footnotes mentioned any other studies on the effects of online copyright infringement. The 2014 study commissioned by the European Union itself was *not* published in a peer-reviewed economics or social science journal. In these circumstances, it is fair to ask why the author of the law review article did not cite any of the peer-reviewed studies published between 2003 and 2018.

One possible explanation is that the author simply did not know about the thirty-two empirical studies published by 2018 (the year when we speculate that the 2020 law review article might have been first drafted). Another is that while the author knew of some (or all) of the empirical papers, the author did not give weight to the distinction between peer-reviewed and non-peer reviewed work in the economic and social science literature. And/or perhaps the author thought that something commissioned by the European Commission must be superior work.

But there is another possibility: Since the text of the law review article did not have any other statement describing the effects of online infringement, this single sentence could have been a skillful lawyerly effort (intentional or subconscious) to give the reader the impression that—generally speaking—empirical evidence has “found that there is little or no economic effect from internet piracy.”<sup>74</sup> Which, of course, is the opposite of the conclusion to which the majority of empirical work points.

Let’s consider another, more complex example of a law academic’s advocacy skills through a 2018 article in an American law review authored by two writers affiliated

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Commission cannot be held responsible for any use which may be made of the information contained therein.”)

72. *Id.* at 7–8. The methodology of the study was “an online questionnaire in September and October 2014 among the internet using population with close to 30,000 respondents . . .” *Id.* at 12.

73. See ABC paper, *supra* note 68.

74. *Id.*

with a European law faculty.<sup>75</sup> After discussing the steep decline in sales experienced by the music industry that coincided with the advent of P2P music sharing, as well as the plateau and decline in North American video revenues between 2005 and 2010, the authors write the following:

Nevertheless, the empirical question of the effect of unauthorized online content consumption on legal sales has proven to be cumbersome. In past years, a substantial body of academic literature emerged on the effect of the unauthorized sharing of copyrighted works, but no general consensus was reached. Most of the earlier contributions focus on the music industry. A smaller number of studies deal with the effect for films.<sup>76</sup>

The claim that “no general consensus was reached” is not footnoted, but to support the next two sentences—concerning music and films, respectively—the authors cite eight academic papers, seven being peer-reviewed studies on our list and the eighth being a survey piece by Professor Liebowitz (who had also published his own peer-reviewed study).<sup>77</sup>

So far, so good. And we think it is reasonable to expect that if the authors are citing those eight papers, the authors are familiar with what the eight papers said. However, of the seven peer-reviewed articles cited in the footnotes, six studies found that online copyright infringement had a negative impact on authorized sales,<sup>78</sup> so if the authors were familiar with all the studies in question, they would know that the footnotes are, at least, in tension with the statement “no general consensus was reached.”

The reader is saved from this potential cognitive dissonance by a careful construction of parentheticals for each study cited: In fact, the parenthetical explanations in the footnotes often deflect from the cited paper’s main finding. For example, the footnote parenthetical for the 2006 Zentner study describes the Zentner paper as “focusing on the decline of the global music industry since its high-level success in the 1990s,”<sup>79</sup> but Zentner’s actual results as stated at the end of the paper’s abstract were as follows: “The results suggest peer-to-peer usage reduces the probability of buying music by 30 percent. On the basis of my own estimates, back-of-the-envelope

75. Again, we withhold the complete citation here; we are not out to skewer any particular academic(s) or any particular published article (source on file with authors) [hereinafter DEF paper].

76. *Id.* at 815.

77. *Id.* at 815 nn.34–35. The eight papers cited in the two footnotes are, in order of citation, the following: Stan J. Liebowitz, *Internet Piracy: The Estimated Impact on Sales*, in HANDBOOK ON THE DIGITAL CREATIVE ECONOMY 262, 265 (Ruth Towse & Christian Handke ed., 2013); Oberholzer-Gee & Strumpf, *supra* note 15, at 3; Martin Peitz & Patrick Waelbroeck, *The Effect of Internet Piracy on Music Sales: Cross-Section Evidence*, 1 REV. ECON. RES. COPYRIGHT ISSUES 71, 71 (2004); Rob & Waldfogel, *supra* note 32, at 29–30; Zentner, *supra* note 33, at 63; David Bounie et al., *Piracy and the Demand for Films: Analysis of Piracy Behavior in French Universities*, 3 REV. ECON. RES. COPYRIGHT ISSUES 15, 16 (2006); Hennig-Thurau et al., *Consumer File Sharing of Motion Pictures*, 71 J. MARKETING 1, 1 (2007); Rafael Rob & Joel Waldfogel, *Piracy on the Silver Screen*, 55 J. INDUS. ECON. 379, 381–82 (2007). All but the first Liebowitz paper are in our set of peer-reviewed studies.

78. Of these cited studies, only Oberholzer-Gee & Strumpf, *supra* note 15, did not find a negative impact on legitimate sales.

79. DEF paper, *supra* note 75, at 815 n.34.

calculations indicate that—without downloads—sales in 2002 would have been around 7.8 percent higher.”<sup>80</sup>

Similarly, the law review article’s parenthetical for the 2007 Thorsten Hennig-Thurau et al. paper characterizes the Hennig-Thurau paper only as “describing the lack of evidence regarding the effect of file sharing on movie consumption.”<sup>81</sup> This simply hides the core conclusion of the Hennig-Thurau paper which, according to the paper’s abstract, is as follows:

The authors test the effect of file sharing on commercial movie consumption using a series of ReLogit regression analyses and apply partial least squares structural equation modeling to identify the determinants of consumer file sharing. They find evidence of substantial cannibalization of theater visits, DVD rentals, and DVD purchases responsible for annual revenue losses of \$300 million in Germany.<sup>82</sup>

We accept that many law professors might not be able to fully appreciate statistical or quantitative results; we also accept that many law review footnotes reflect substantial input from students. But the abstracts for these seven peer-reviewed and one survey articles are clear: Seven of the eight papers conclude online copyright piracy has a negative impact on legitimate sales. If “consensus” is anything short of unanimity, the two footnotes—even citing less than one fourth of the peer-reviewed studies—show consensus.

We also accept that a scholarly paper can be properly cited for a specific point separate from its main thesis or results. But after claiming that “no general consensus was reached” in the body of empirical studies and citing to eight publications, seven of which found a negative impact on sales of copyrighted works, these “deflective” parentheticals seem like the skillful advocacy of an appellate brief.

### III. BROADER SUGGESTIONS

The early internet’s dilemma with online piracy now seems to be largely settled. New infringement-based business models continue to emerge,<sup>83</sup> but the combination of authorized distribution of copyrighted content and law enforcement against unauthorized distribution now seems to have the upper hand.<sup>84</sup> As such, intellectual

80. Zentner, *supra* note 33, at 63.

81. DEF paper, *supra* note 75, at 815 n.35.

82. Hennig-Thurau et al., *supra* note 77, at 1.

83. Alexei Barrionuevo, *Indian Court Cracks Down on Stream-Ripping By 'Rogue Websites'*, BILLBOARD (Jan. 20, 2023), <https://www.billboard.com/pro/stream-ripping-websites-blocked-india-ifpi-piracy/> [<https://perma.cc/VZR2-4BLW>] [<https://web.archive.org/web/20231020185833/https://www.billboard.com/wp-content/uploads/2023/01/january-20-2023-billboard-bulletin.pdf>]; Dylan Smith, *British High Court Orders ISPs To Block Multiple Stream-Ripping Sites*, DIGIT. MUSIC NEWS (Mar. 1, 2021), <https://www.digitalmusicnews.com/2021/03/01/british-high-court-stream-ripping-order/> [<https://perma.cc/47H8-W4Y6>].

84. See, e.g., Brett Danaher et al., *Converting Pirates Without Cannibalizing Purchasers: The Impact of Digital Distribution on Physical Sales and Internet Piracy*, 29 MKTG. SCI. 1138 (2010) (showing that making content available on legal channels can reduce demand for that content on pirate channels); Brett Danaher et



property academics have moved on to other debates. But the point made here about the law literature's skewed citations to the empirical literature on the impact of online piracy could apply to other places where the empirical evidence can shape the policy debate. Views on labeling for foods with genetically modified ingredients will depend on beliefs about the safety of genetically modified plants (the overwhelming consensus is that they are completely safe); views on vaccine mandates will depend on views of vaccine safety (the overwhelming consensus is that FDA-approved vaccines are completely safe); and views on regulation of social media will depend on one's beliefs about the addictiveness of such platforms (unsettled as of the time of this Article's publication).

These are just some of 2024's issues. There will be many future empirical questions bearing on policy and law where initial uncertainty may be followed by subsequent consensus among empirical researchers. It is easy to think of examples in intellectual property. Will there be multiple ways to study whether or how generative AI is harming revenue for copyrighted works? How will we empirically study the impact of virtual reality environments on how consumers perceive trademarks? Will increasingly divergent United States and EU legal regimes for online platforms produce different economic or free expression outcomes? Will variations in legal regimes for artificial intelligence produce different innovation outcomes?<sup>85</sup>

With those future questions in mind, there are some broader lessons that might be taken from the skewing of citations we reported in Part I and the possible explanations we presented in Part II. We suggest those lessons include the following (some of which we have phrased as *presumptions* in the spirit of a legal presumption):

- Early on, there may be no peer-reviewed literature on an empirical question, in which case the citation of working papers that have not been peer-reviewed makes sense;
- Before citing a working paper on an empirical question, a law review author or editor should check to see if the paper has been published in a peer-reviewed journal;<sup>86</sup>

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al., *Understanding Media Markets in the Digital Age: Economics and Methodology*, in *ECONOMIC ANALYSIS OF THE DIGITAL ECONOMY* 385 (Avi Goldfarb et al. eds., 2015) (also showing that making content available on legal channels can reduce demand for that content on pirate channels); Brett Danaher et al., *The Effect of Graduated Response Anti-Piracy Laws on Music Sales: Evidence from an Event Study in France*, 62 J. INDUS. ECON. 541 (2014) (showing that anti-piracy notice sending programs can increase demand on legal channels); Brett Danaher et al., *The Effect of Piracy Website Blocking on Consumer Behavior*, 44 MGMT. INFO. SYS. Q. 631 (2020) (showing that no-fault injunctive relief for copyright owners can increase demand on legal channels).

85. With these last two questions, it may be too difficult to adequately control for other differences in the jurisdictions (economic, social, cultural), but empirical researchers are likely to construct models and measures that try.

86. Particularly as the final results reported may have changed to some degree in response to suggestions, comments, and analysis provided during the peer review process.

- Early uncertainty on an empirical question may be followed by later consensus, so the law academic should presume that early uncertainty will be followed by later consensus without knowing how long it will take for that consensus to emerge;
- The law academic should presume that there is probably more to the empirical literature than has appeared in the walled garden of law literature, and the strength of this presumption should increase with the passage of time from an initial wave of law literature citations;
- The law academic may want to avoid unnecessary empirical or factual claims, and law review editors should refrain from asking law academics to make unnecessary empirical or factual claims; and
- The “bothsidesism” format that makes sense for controverted social, political, cultural, and legal issues can produce false objectivity if used in relation to empirical questions where a consensus view has emerged.

These are suggestions, and one could make many more observations that might have future application. For example, if a law academic is committed to presenting both sides on any question where the weight of empirical evidence clearly favors one side, then we suggest that text and/or footnotes include what have been called “weight-of-evidence statements,” which are “statements that intentionally clarify which view warrants attention and which should be discounted.”<sup>87</sup> In a series of studies, Megan Imundo and David Rapp found that misperceptions in reaction to “bothsidesism” presentations on climate change were largely corrected by weight-of-evidence statements, such as a “short paragraph stating that, although the two sources disagreed on climate change, the overwhelming majority of researchers who are experts on climate change believe it is occurring.”<sup>88</sup> Given the accepted length of law review texts and law review footnotes, such weight of evidence statements should not be burdensome.

One response to our analysis and suggestions is to ask whether any of this matters. Perhaps we should just accept that law literature is a self-contained world in which legal academics present both imaginative theories of law and their own idiosyncratic takes on reality, including the empirical evidence. We do not accept that perspective, particularly not if it absolves authors and editors from trying to *reliably report* the empirical literature.

One reason to adhere to a reliable reporting standard is that law professors and law school students are not the only people who live in the walled garden of law literature. So do judges, their law clerks, and practicing attorneys. The *only* empirical evidence of

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87. Imundo & Rapp, *supra* note 60, at 258.

88. *Id.* at 263.

the impact of online piracy in the Supreme Court's 2005 *Grokster* decision came in Justice Breyer's concurrence, where he wrote the following:

Unauthorized copying likely diminishes industry revenue, though it is not clear by how much. Compare S. Liebowitz, Will MP3 Downloads Annihilate the Record Industry? The Evidence So Far 2 (June 2003) and Press Release, Informa Telecoms & Media, Steady Download Growth Defies P2P (Dec. 6, 2004) (estimating total lost sales to the music industry in the range of \$2 billion annually), with F. Oberholzer & K. Strumpf, The Effect of File Sharing on Record Sales: An Empirical Analysis 24 (Mar. 2004) (academic study concluding that "file sharing has no statistically significant effect on purchases of the average album"), and McGuire, Study: File-Sharing No Threat to Music Sales (Washington Post, Mar. 29, 2004) (discussing mixed evidence).<sup>89</sup>

The *Grokster* decision was released on June 25, 2005, and, assuming that the Breyer concurrence was largely drafted in the spring of 2005, it is intriguing to note that the Oberholzer-Gee & Strumpf paper had been the *only* peer-reviewed empirical study cited in the law literature in 2004. (In 2004 and 2005 the Oberholzer-Gee & Strumpf paper was cited twenty-six times in the law literature—some of those additional law review articles may have been available at the time Breyer's chambers was writing the concurrence.) By the end of 2004, the Liebowitz paper had been cited seven times in the law literature; it received another seven citations in 2005. Of course, we do not know whether Justice Breyer and his clerks encountered the Oberholzer-Gee & Strumpf study through the law literature, their amici brief, the popular press, or some combination of the three.<sup>90</sup> But as further evidence of the walled garden of law literature, after this reference in *Grokster*, citation to the Oberholzer-Gee & Strumpf paper in the law literature took off: forty-three citations from 2006 to 2010.

An interesting question for further research is whether empirical studies cited by courts and/or cited in legislative histories are disproportionately empirical studies that have previously been cited in the law literature. Our guess is that the answer would be yes.<sup>91</sup>

#### IV. CONCLUSION

In a 2012 article, Richard Fallon wrote, "[a] person who becomes a law professor adopts a role of reflecting thoughtfully and conscientiously on matters of legal policy

89. *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913, 961–62 (2005) (Breyer, J., concurring) (URL citations removed or summarized for ease of reading).

90. There were a total of sixty-eight amici briefs filed in *MGM v. Grokster*, seven of which cite to the Oberholzer-Gee and Strumpf study. That includes one brief from "law professors," one brief from "Internet Law Faculty," and one brief from Oberholzer-Gee and Strumpf themselves. Brief Amici Curiae of Felix Oberholzer-Gee and Koleman Strumpf in Support of Respondents, *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005) (No. 04-480).

91. We recognize that it might be difficult to construct such a study because one would want to control for the quality of the empirical research. In other words, a very large-set epidemiological study might be regarded as more important than smaller, peer-reviewed studies on the same question, with recognition of that difference accounting for both the larger study's appearance in legal citations and its use by courts or legislatures.

and justice, at least insofar as she addresses normative questions at all.<sup>92</sup> We believe that this role includes the accurate, reliable representation of empirical matters bearing on the descriptive or normative questions being addressed by the law professor.

This Article explores one area where we believe the law literature could have improved on accurately and reliably representing empirical results: the peer-reviewed literature analyzing the impact of digital piracy on legal sales. Specifically, within the economics and social science literature, 85% of the peer-reviewed publications on digital piracy found that piracy results in statistically and economically significant harm to sales, and 78% of the citations of papers discussing the effect of digital piracy on sales are to those “harm” papers. In contrast, only 45% of the citations in the legal literature are to papers finding that piracy harm sales, with the majority (55%) of citations to the relatively few empirical papers finding that piracy results in no harm to legal sales of copyrighted works.

We explore four potential explanations for this discrepancy in citation patterns between the economics and social science literature and law literature: an enclosed garden of the legal literature where citations beget citations, insensitivity to social science peer-review, “balanced” presentations, and citation patterns that reflect ideological predispositions. We believe that there is support for each potential explanation.

Finally, this Article discusses ways the law literature can work to ensure its future citations more accurately represent the empirical reality in the economics and social science literature. While the debate about the impact of online piracy is largely behind us, sometimes understanding what is in the rearview mirror can help us navigate the road ahead.

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92. Fallon, Jr., *supra* note 55, at 250.

## APPENDIX A

**TABLE 1: PEER-REVIEWED JOURNAL ARTICLES FINDING NO STATISTICAL IMPACT OF PIRACY**

Citation	Media Type	Primary Data	Result
Oberholzer-Gee and Strumpf (2007, <i>Journal of Political Economy</i> )	Music— Physical and Online Album Purchases	2002 OpenNap music downloads, 2002 U.S. sales of popular albums	“[F]ile sharing has had no statistically significant effect on purchases of the average album in our sample.”
Smith and Telang (2009, <i>MIS Quarterly</i> )	Movies— Physical (DVD)	2005-2006 Amazon DVD sales ranks and BitTorrent movie file downloads	“[T]he availability of pirated content at [television broadcast] has no effect on post-broadcast DVD sales gains.”
McKenzie (2009, <i>Australian Economic Papers</i> )	Music— Physical and Digital Single Chart Position	2007-2008 Australian Recording Industry Association Top 40 (digital) and Top 50 (physical) singles	“[T]he evidence suggests no discernible impact of [pirate] download activity on legitimate sales.”
Andersen and Frenz (2010, <i>J. of Evolutionary Economics</i> )	Music— Physical (CD)	2006 survey of Canadian customers’ file sharing and CD purchasing behavior	There is “no (statistical) association between the number of P2P files downloaded and CD album sales.”
Aguiar and Martens (2016, <i>Information Economics and Policy</i> )	Music—Digital	Clickstream data on a panel of European Internet users in 2011	Find “no evidence of digital music sales displacement by unlicensed downloading” and find a “small but positive” effect “for some countries.”

**TABLE 2: PEER-REVIEWED JOURNAL ARTICLES FINDING THAT PIRACY HARMS SALES**

Citation	Media Type	Primary Data	Result
Hui and Png (2003, <i>Contrib. to Economic Analysis &amp; Policy</i> )	Music—Physical (CD)	1994-98 IFPI worldwide CD sales data and physical piracy rates	“[D]emand for music CDs decreased with piracy, . . . actual losses amounted to about 6.6 percent of sales or 42 percent of industry estimates.”
Peitz and Waelbroeck (2004, <i>Rev. of Econ. Res. on Copyright</i> )	Music—Physical (Singles, LPs, Cassettes, CDs)	1998-2002 worldwide CD sales, IPSOS survey data for piracy downloads	Internet piracy may have been responsible for a 20 percent decrease in music sales between 1998-2002.
Stevens and Sessions (2005, <i>Journal of Consumer Policy</i> )	Music—Physical (Tapes, LPs, CDs)	1990-2004 consumer spending on cassette tapes, LPs, and CDs	“[T]he proliferation of peer-to-peer file sharing networks since 2000 has led to a <i>significant</i> decline in music format sales . . . Due to the increased availability of the substitute good, downloaded MP3 files, a 1 percent increase in the price of recorded music after 2000 was associated with a more than proportionate 1.4 percent decline in the quantity purchased—decreasing consumption and sales.”
Zentner (2005, <i>Topics in Economic Analysis and Policy</i> )	Music	1997-2002 country-level data on music sales and broadband usage	“Countries with higher internet and broadband penetration have suffered higher drops in music sales”
Bounie et al. (2006, <i>Rev. of Econ. Res. on Copyright</i> )	Movies—Theatrical & Video (DVD or VHS) Purchase and Rental	2005 survey of movie piracy and purchases from French universities	“[Piracy] has a strong [negative] impact on video [VHS and DVD] purchases and rentals” but statistically no impact on box office revenue.

Citation	Media Type	Primary Data	Result
Michel (2006, <i>Topics in Economic Analysis and Policy</i> )	Music—Physical (CD)	1995-2003 U.S. BLS Consumer Expenditure Survey data	“The relationship between computer ownership and music purchases weakened” due to piracy, potentially reducing CD sales by 13 percent.
Rob and Waldfogel (2006, <i>J. Law and Econ.</i> )	Music—Physical (CD)	2003 survey U.S. college student music piracy, sales	“[E]ach album download reduces purchases by 0.2 in our sample, although possibly by much more.”
Zentner (2006, <i>Journal of Law and Economics</i> )	Music—Physical & Digital	2001 survey of European music purchases, piracy	“[Piracy] may explain a 30 percent reduction in the probability of buying music.”
Bhattacharjee et al. (2007, <i>Management Science</i> )	Music—Weeks on Billboard Top 100	1995-2002 Billboard 100 chart rankings, WinMX file sharing post 2000.	P2P file sharing technologies have resulted in “significantly reduced chart survival except for those albums that debut high on the charts.”
DeVany and Walls (2007, <i>Review of Industrial Organization</i> )	Movie—Box Office	Box office revenue and the supply of pirated content for an unnamed movie	“[Piracy] of a major studio movie accelerated its box-office decline and caused the picture to lose about \$40 million in revenue.”
Hennig-Thurau, Henning, Sattler (2007, <i>Marketing Science</i> )	Movies—Box Office, Rental (DVD), and Purchases (DVD)	2006 survey of German movie purchases and piracy intentions	Piracy causes “substantial cannibalization of theater visits, DVD rentals [and] purchases responsible for annual revenue losses of \$300 million in Germany.”
Rob and Waldfogel (2007, <i>J. of Ind. Econ.</i> )	Movies—Legal Consumption (Theater, Television, Rental, or Purchase)	2005 U.S. college student survey movie piracy, sales	“[U]npaid first [piracy] consumption reduces paid consumption by about 1 unit.” “[Unpaid consumption] reduced paid consumption in [the] sample by 2.3 per cent.”

Citation	Media Type	Primary Data	Result
Liebowitz (2008, <i>Management Science</i> )	Music—Album Sales	1998-2003 Census data, Internet use, music sales	“[F]ile sharing appears to have caused the entire decline in record sales [observed from 1998-2003].”
Bender and Wang (2009, <i>International Social Science Review</i> )	Music—Digital (after 2005) and Physical	1999-2007 Country-level annual recorded music sales	“For a one percent increase in piracy rate, music sales declined about 0.6 percent.”
Danaher et al. (2010, <i>Marketing Science</i> )	Television Content—Pirated Digital (Bit Torrent) and Legal Physical (DVD)	2007-2008 BitTorrent downloads of TV shows	“[T]he removal of NBC content from iTunes resulted in an 11.4 percent increase in piracy for its content.”
Waldfoegel (2010, <i>Info. Econ and Policy</i> )	Music (Songs)—Physical and Digital	2009-10 survey of student music piracy, sales	“[A]n additional song stolen reduces paid consumption...between a third and a sixth of a song.”
Bai and Waldfoegel (2012, <i>Information Economics and Policy</i> )	Movies—Consumption (Theatrical, Digital, and/or Physical)	2008-2009 survey of Chinese university students’ movie behavior	“[T]hree quarters of [Chinese students’] movie consumption is unpaid and . . . each instance of [piracy] displaces 0.14 paid consumption instances.”
Hong (2013, <i>Journal of Applied Econometrics</i> )	Music—Recorded Music Expenditure (CDs, Tapes, and LPs)	1996-2002 survey data from U.S. BLS Consumer Expenditure Survey data	“[F]ile sharing is likely to explain about 20 percent of the total sales decline during the Napster period, mostly driven by . . . households with children aged 6-17.”
Danaher et al. (2014, <i>Journal of Industrial Economics</i> )	Music—Digital (iTunes)	2008-2011 iTunes music sales in France and other European countries	The HADOPI anti-piracy law “caused iTunes music sales to increase by 22-25 percent [in France] relative to changes in the control group [countries].”



Citation	Media Type	Primary Data	Result
Danaher and Smith (2014, <i>Intl. Journal of Industrial Org.</i> )	Movies—Digital (Sales and Rentals)	2011-2013 Movie sales and rentals, 12 European countries, 3 major studios	“The shutdown of Megaupload and its associated sites caused digital revenues for three major motion picture studios to increase by 6.5–8.5 percent.”
Ma et al. (2014, <i>Info. Sys. Research</i> )	Movies—Box Office	All movies in wide release, Feb. 2006 to Dec. 2008.	“Pre-release piracy causes a 19.1 percent decline in revenue compared to [post-release] piracy.”
Adermon and Liang (2014, <i>J. of Econ. Behavior &amp; Org.</i> )	Music—Digital and Physical	Digital and physical music sales in Sweden, Norway, and Finland, 2004-2009.	IPRED copyright reform measure in Sweden “increased music sales by 36 percent in during the first six months [after it was implemented].”
Leung (2015, <i>Information Economics and Policy</i> )	Music Demand—Physical (CD), Digital (iTunes songs), and pirated—and listening options (iPod, Computer, and Radio)	Survey data from ~900 college students in 2007-2008.	“Music piracy decreases music sales by 24-42 percent” but it also “contributes 12 percent to iPod sales”.
McKenzie and Walls (2016, <i>B.E. J. of Econ. Analysis and Policy</i> )	Movies—Box Office	Australian theatrical sales, torrent downloads, Jan. 2010 through Aug. 2011.	Piracy causes “a sales displacement effect on box office revenues” via “release delay between the U.S. and Australian markets”. However, “although statistically significant, the economic significance of this displacement appears relatively small.” “[F]or every 100 downloads [of a median film from the sample data] somewhere between 2.4 and 3.4 cinema admissions are displaced.”

Citation	Media Type	Primary Data	Result
Reimers (2016, <i>Journal of Law and Economics</i> )	Books—Physical, Audio, and Digital	Print and e-book sales of 653 book titles from 2010 to 2014.	Studies implementation of private copyright enforcement against piracy of some book titles and finds “a protection-related increase of e-book sales . . . of more than 14 percent” but “sales of non e-book formats are not affected.”
Papies and van Heerde (2017, <i>Journal of Marketing</i> )	Music—Concert and Recorded Format Revenues	German recorded music and live concert revenues for ~400 popular artists from 2003-2010.	Piracy and unbundling “weaken the effect of concert demand on record demand”, meaning that live performances have a smaller stimulating effect on record sales as a result of piracy.
Peukert, Claussen, and Kretschmer (2017, <i>International Journal of Industrial Organization</i> ) <sup>93</sup>	Movies—Box Office	Weekly box office revenue of 308 movies across 14 countries from 2011-2012.	The shutdown of Megaupload caused “an increase of 47 percent” in box office revenues for the top decile of wide release films, but also caused “an average weekly decrease of 4 percent for narrow release films”.
Koh, Hann, and Raghunathan (2019, <i>MIS Quarterly</i> )	Music—Physical and Digital	U.S. physical and digital album and single sales from 1982-2012.	Piracy displaces legal sales, but “the introduction of licensed digital downloads has weakened the piracy effect” by about “15 percent every year”.

93. This paper finds that shutting down a major piracy website helped box office ticket sales of movies in the top decile of sales but hurt ticket sales of films in the bottom decile of sales. I include this in the “piracy harms sales” category because sales of the top decile movies drive the vast majority of revenue in the motion picture industry.

Citation	Media Type	Primary Data	Result
Danaher, Hersh, Smith, and Telang (2020, <i>MIS Quarterly</i> )	Movies—Digital	Clickstream data to legal and illegal video sites among a sample of UK Internet users, 2012-2014.	Blocking access to a single dominant piracy site does not reduce piracy or increase legal consumption, but simultaneously blocking access to a number of piracy sites increased legal consumption by 7-12 percent and also caused some users to buy a legal streaming site subscription.
Hardy (2022, <i>Journal of Cultural Economics</i> )	TV Viewership	TV Ratings for 52 TV shows released between 1999-2016	Shows experiencing a pre-release pirate leak "lost viewership for both the leaked episodes and those that followed."

**TABLE 3: SUMMARY OF EMPIRICAL LITERATURE ON ANTIPIRACY ENFORCEMENT**

<b>Citation</b>	<b>Context</b>	<b>Potential Workaround</b>	<b>Result</b>
Danaher et al. (2014, <i>Journal of Industrial Economics</i> )	HADOPI “three strikes law” graduated response law in France	Use a VPN or wait for your second “strike” before changing behavior.	The HADOPI anti-piracy law “caused iTunes music sales to increase by 22-25 percent [in France] relative to changes in the control group [countries].”
Adermon and Liang (2014, <i>J. of Econ. Behavior &amp; Org.</i> )	IPRED law in Sweden allowing rightsholders to identify and take action against pirates	Use a VPN.	IPRED copyright reform measure in Sweden “increased music sales by 36 percent in during the first six months [after it was implemented].”
Danaher and Smith (2014, <i>Intl. Journal of Industrial Org.</i> )	Shutdown of Megaupload.com following DOJ legal action	Download pirated content from one of the many remaining pirate cyberlockers.	“The shutdown of Megaupload and its associated sites caused digital revenues for three major motion picture studios to increase by 6.5–8.5 percent.”
Reimers (2016, <i>Journal of Law and Economics</i> )	Piracy “takedown notices” and search delisting	Search harder, use BitTorrent	Finds “a protection-related increase of e-book sales . . . of more than 14 percent.”
Peukert, Claussen, and Kretschmer (2017, <i>International Journal of Industrial Organization</i> )	Shutdown of Megaupload.com following DOJ legal action	Download pirated content from one of the many remaining pirate cyberlockers.	The shutdown of Megaupload caused “an increase of 47 percent” in box office revenues for the top decile of wide release films.

Citation	Context	Potential Workaround	Result
Sivan et al. (2020, <i>Management Information Systems Quarterly</i> )	De-ranking of piracy sites from the first page of search engine results	Search to the second page of results where pirated links remained	“[R]educing the prominence of infringing links in search results causes users who otherwise would have consumed infringing content to switch their consumption to paid legal content, and that these results hold even among users whose initial search queries express an explicit preference for infringing content.”
Danaher et al. (2020, <i>Management Information Systems Quarterly</i> )	Court ordered ISP blocking of piracy websites, 3 separate waves	Use a VPN, find other unblocked sites.	Blocking access to ThePirateBay in 2012 “caused no increase in usage of legal sites but instead caused users to increase visits to other unblocked piracy sites and VPN sites,” whereas blocking 19 sites in 2013 and 53 sites in 2014 caused “users to decrease piracy and to increase their usage of legal subscription sites between 7% and 12%.”

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