

Total Scholarly Impact: Law Professor Citations in Non-Law Journals

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Introduction

Almost as soon as the ink was dry on the first *U.S. News & World Report* (*U.S. News*) ranking of law schools in 1987, scholars began developing rankings to replace or complement the *U.S. News* rankings. Over the past several decades, these efforts have included citation counts,¹ publication counts,² reputation surveys,³ and Social Science Research Network (SSRN) download counts.⁴ Many aspects of legal rankings have improved since 1987, and the Scholarly

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1. Brian Leiter, *Top 25 Law Faculties in Scholarly Impact, 2005-2009 (And Highest Impact Faculty in 13 Areas of Specialization)*, BRIAN LEITER'S LAW SCHOOL RANKINGS, http://www.leiterrankings.com/faculty/2010_scholarlyimpact.shtml (last accessed Nov. 21, 2020) (discussing results of law professor citation ranking); Gregory Sisk et al., *Scholarly Impact of Law School Faculties in 2018: Updating the Leiter Score Ranking for the Top Third*, 15 U. ST. THOMAS L.J. 95 (2018) (updating the Leiter rankings); Paul J. Heald & Ted Sichelman, *Ranking the Academic Reputation of 100 American Law Schools*, 60 JURIMETRICS 1 (2019) (ranking law professors based on HeinOnline journal citations and SSRN downloads). For a critique of law review citations, contending they lead to "citation cartels," see Oren Perez et al., *The Network of Law Reviews: Citation Cartels, Scientific Communities, and Journal Rankings*, 82 MODERN L. REV. 240 (2019).
2. See, e.g., James Lindgren & Daniel Seltzer, *The Most Prolific Law Professors and Faculties*, 71 CHI. KENT L. REV. 781 (1996) (discussing faculty publication quantity).
3. See, e.g., Brian Leiter, *Measuring the Academic Distinction of Law Faculties*, 29 J. LEGAL STUD. 451 (2000) (discussing results of faculty reputation survey). Of course, the *U.S. News* ranking also uses reputation surveys.
4. See, e.g., Bernard S. Black & Paul L. Caron, *Ranking Law Schools: Using SSRN to Measure Scholarly Performance*, 81 IND. L.J. 83 (2006).

Impact Scores pioneered by Brian Leiter and continued every three years by Gregory Sisk's research team have been particularly influential.⁵ But as the authors of the citation studies often acknowledge, citation counts are only one of several measures of scholarly impact, and citation counts are subject to fundamental shortcomings, including limitations arising from the time period and faculty included in the study, the difficulty of accounting for multiple co-authored works, and others.⁶

We agree that citation counts and other objective measures are valuable, and we believe that attempts to upgrade the design of these studies should evolve with the availability of data and developments in legal scholarship. We focus on one commonly excluded measure of a law faculty's scholarly impact: citations to the work of legal scholars in nonlegal academic publications. Many citation studies note that although citations to legal publications are obviously a core measure of legal scholarly impact, citations in legal publications are not the only valuable measure of scholarly impact by law professors.⁷ Publications and citations in the journals outside of a scholar's particular discipline can be equally important, signaling that the research has had a broad impact and has transcended the conceptual frameworks and methods of law or any other single discipline. Research by legal scholars that transcends disciplines offers some of the most promising opportunities to challenge and improve the theoretical constructs, methods, and reform proposals of legal scholarship.

In addition, excluding nonlegal citations can have negative effects on the scholarly enterprise by reducing legal scholars' motivation to collaborate with scholars from other disciplines and to publish work that can pass muster in non-law journals, particularly peer-reviewed journals, and reach the readership of those journals. The exclusion of nonlegal citations thus may not only underestimate the scholarly impact of some legal scholars, but also may

5. See Vikram D. Amar, *What a Recently Released Study Ranking Law School Faculties by Scholarly Impact Reveals, and Why Both Would-Be Students and Current/Prospective Professors Should Care*, JUSTIA: VERDICT (Aug. 3, 2012); Gary M. Lucas, Jr., *Measuring Scholarly Impact: A Guide for Law School Administrators and Legal Scholars*, 165 U. PA. L. REV. ONLINE 165, 170 (2017); Sisk et al., *Scholarly Impact*, *supra* note 1, at 104 (describing the Leiter and Sisk rankings as "most prominent"). See also Leiter, *Top 25*, *supra* note 1.
6. Gary M. Lucas, Jr., *Measuring Scholarly Impact: A Guide for Law School Administrators and Legal Scholars*, 165 U. PA. L. REV. ONLINE 165, 166-69 (2017). See also Black and Caron, *supra* note 4, at 93-4 (noting the limits regarding dynamism, coverage (including interdisciplinary authors, subjects, and audience), bias, leading versus lagging indicator, and other factors); Lawprofblawg & Darren Bush, *LAW REVIEWS, CITATION COUNTS, and TWITTER (Oh my!): Behind the Curtains of the Law Professor's Search for Meaning*, 50 LOY. U. CHI. L.J. 327 (2018) (arguing that scholarship metrics are biased against women, minorities, non doctrinal faculty, and faculty from lower-ranked schools).
7. See Sisk et al., *Scholarly Impact*, *supra* note 1, at 104 (noting that "[i]nterdisciplinary work may attract a large following in the journals of another discipline, although many influential interdisciplinary law scholars also have significant followings inside the legal academy and are among the most highly-cited scholars in our study"). Sisk et al. wrestle with the role of legal scholarship and emphasize the importance of "the intellectual curiosity, breadth of thought, and conscientious inquiry of a legal scholar..." *Id.* at 101.

discourage the movement of ideas between law and non-law fields, running counter to the interdisciplinary research that is routinely praised by the National Academies, National Science Foundation, and by many university administrators.⁸ Although including non-law citations in legal scholarly impact rankings will require additional work in the preparation of the rankings, an exclusive focus on law journal citations is no longer necessary and risks generating incomplete and potentially skewed scholarly impact assessments of individual scholars and faculties. With the increasing availability of citation data, non-law citations should no longer be excluded from scholarly impact rankings of law professors and law faculties.

In this article, we demonstrate that the citation counts and other author information available through the Web of Science database has made non-law citations possible to assemble and assess in a manner similar to the Sisk et al. methodology and the Hein legal citation study by Paul J. Heald and Ted Sichelman. A true apples-to-apples comparison, however, is not possible at this time given differences in the respective databases and search engines, as we explain in more detail in Part II.

Nevertheless, our study does serve as a demonstration project, showing that, with additional refinement of databases and search capacities, it is possible to capture the degree to which legal scholars are publishing in non-law journals and the extent to which that work is cited in law and non-law journals. We contend that this breadth of work and citations in non-law journals are a representation of interdisciplinary work by law faculty and its influence within and outside of legal scholarship. This is by no means a trivial body of work: In our five-year study period (2012–2018), over 600 tenured law faculty from the twenty-five schools in our study published almost 3,000 articles in the Web of Science database (with the “Law” category excluded) and received close to 20,000 citations to those articles during that period. Clearly, a good number of law faculty work at the core of interdisciplinary engagement—they publish in non-law journals, and those publications are recognized in law and non-law journals.

Currently, however, the impact of this work is largely being ignored. The Sisk et al. studies recognize the impact of this work only in terms of citations to non-law publications in law journals. And because the Hein study counted only citations to law journals in law journals,⁹ this body of interdisciplinary work will not appear in any measure of that study.¹⁰ But as our results show,

8. See the discussion *infra* Part I.B. See also Richard A. Posner, *Legal Scholarship Today*, 115 HARV. L. REV. 1314, 1321 (2002) (“Traditional doctrinal scholarship is disvalued at the leading law schools. They want their faculties to engage in ‘cutting edge’ research and thus orient their scholarship toward, and seek in their primary readership among, other scholars, not even limited to law professors, though they are the principal audience.”).
9. See, e.g., Gregory Sisk, *Measuring Law Faculty Scholarly Impact by Citations: Reliable and Valid for Collective Faculty Ranking*, 60 JURIMETRICS 41 (2019) (comparing the Leiter-Sisk and Heald-Sichelman citation ranking methods).
10. *Id.* This was the primary objection the Society for Empirical Legal Studies lodged in its

there is another important dimension to interdisciplinary work—publication in non-law journals—and another metric of impact—citations to that body of work in non-law journals.

We have designed a study that begins to bring this interdisciplinary work and its impact into the conversation about law faculty impact. We present the first ranking of law professors and faculties based on the Web of Science non-law journal citations metric, which we refer to as the “Interdisciplinary Scholarly Impact Score.” We argue that this kind of Interdisciplinary Scholarly Impact Score should be improved and accounted for in evaluations of the scholarly impact of law professors and law schools, and that the legal academy should work with both law citation engines such as Westlaw and Hein, and with non-law citation engines such as Web of Science, to make possible a more robust, consistent method for measuring law, non-law, and total scholarly impact of legal scholars’ work.

In Part I, we discuss why accounting for legal scholars’ non-law publications and citations is important when assessing scholarly impact. Part II describes our methodology, including its limitations. Part III presents our results, and Part IV provides a discussion of the results.

I. The Importance of Non-Law Citations in the Assessment of Law Faculty Scholarly Impact

Non-law citations are an important indication of legal scholarly impact for two principal reasons. First, non-law citations can be an important reflection of a legal scholar’s influence on theoretical and applied legal scholarship. Second, non-law citations can be an important indicator of a legal scholar’s influence on interdisciplinary scholarship. In our view, academic researchers are all part of one scholarly enterprise, and although disciplinary boundaries reflect the need to simplify and organize the conceptual constructs, assumptions, and methods of research, as well as the management of the research enterprise, they are not sacrosanct.¹¹ A great deal of productive work occurs when scholars challenge theoretical or methodological orthodoxy by bringing multiple disciplinary perspectives to bear on a problem. Citations to publications outside of a scholar’s principal discipline may indicate scholarly impact not only within the

opposition to the Hein citation study. Letter from Society for Empirical Legal Studies to Robert Morse, Chief Data Strategist, U.S. News & World Report 1 (Oct. 28, 2019) (“the HeinOnline citation metrics and scholar rankings significantly misrepresent the true impact of U.S. law faculty scholarship, especially empirical and other interdisciplinary work.”), <https://www.lawschool.cornell.edu/SELS/upload/SELSHeinOnlineOpenLetter10-28.pdf>.

11. “A ‘discipline’ can be conceptualized as ‘an area of structural, socially patterned activity that is organized around a body of internal protocols and assumptions, characteristic behaviors and self-sustaining values.’” Douglas W. Vick, *Interdisciplinarity and the Discipline of Law*, 31 J. L. & Soc’y 163, 166 (2004). A discipline can isolate itself through its use of distinct methods of training, modes of analysis and operation, and linguistic exclusivity. *Id.* at 167-68, 191. These isolating features can be enhanced by the administrative power structures in academic institutions and by academics’ sense of loyalty or duty to perpetuate a discipline in the way they were taught and practice the discipline.

discipline, but also interdisciplinary scholarly impact. We begin this section by examining the importance of non-law citations for assessing the legal scholarly impact of law professors. We then turn to the importance of non-law citations for assessing the interdisciplinary scholarly impact of law professors.

A. Importance of Non-Law Citations for Assessing Legal Scholarly Impact

Which is a more influential driver of legal theory or law reform on an issue of broad social importance: a publication in *Science* or the *Yale Law Journal*? Or a publication in the *Proceedings of the National Academy of Sciences of the United States of America* (PNAS) or the *Harvard Law Review*? A good argument can be made that in both cases, the former is at least as likely to be more influential—to answer important empirical and theoretical questions relevant to legal theory or law reform and to be read by policymakers and scholars. The readership of the top non-law journals is much larger than that of even top law reviews, and the readers of these journals often include influential scholars and policymakers at a level that few, if any, law reviews can match.¹² Legal scholars who publish in the former may therefore have a greater effect on our understanding of law and law reform than legal scholars who publish in the latter, yet rankings that assess the “Scholarly Impact Score” of legal scholars through citation counts typically exclude all citations of law professors’ legal publications that occur in non-law journals and all citations to publications in non-law journals that were authored or co-authored by legal scholars.¹³

When citation studies of law professors first began years ago, one might reasonably have assumed that they evaluated all scholarly citations, not just those in law journals. After all, if there is a lesson from the past fifty years of legal scholarship, it is that law is embedded in the society at large and that legal scholarship that fails to draw from and affect other disciplines often struggles to gain traction in the most important theoretical and policy debates. The law and economics, law and society, and law and neuroscience movements are

12. For instance, according to BPA Worldwide, *Science* had a paid circulation of 118,053 and an unpaid circulation of 11,513 for the six-month period ending in June 2019, with an average total number of subscriptions of 129,566, including print and digital. *Science AAAS Brand Report for the 6 Month Period Ended June 2019*, BPA WORLDWIDE, <https://www.bpaww.com/BPAWW/MemberTools/GetPDF?StatementId=108535> (last visited Nov. 24, 2020). The *Proceedings of the National Academies of Sciences of the United States of America* has approximately 5,400 subscribers. *PNAS Marketing Brochure*, PNAS, <https://blog.pnas.org/pnasmarketingbrochure.pdf> (last visited Aug. 21, 2019). Independent verification of circulation and subscription numbers for *Nature* was unavailable, however, according to *Nature’s* “About” page on their website, “Every month, nine million people read news, analysis and commentary on nature.com.” NATURE, <https://www.nature.com/nature-research/about> (last visited Aug. 21, 2019). *The Yale Law Journal* does not make its subscription or circulation information publicly available, and independent verification of circulation or subscription numbers was unavailable. *Harvard Law Review* had an average of 1,344 paid subscribers last year (from November 2017 to June 2018). 132 HARV. L. REV. viii (2018). *Columbia Law Review* distributed an average 822 copies from June 2017 to June 2018. 118 COLUM. L. REV. (2018).

13. See also Leiter, *Measuring*, *supra* note 3, at 469; Leiter, *Top 25*, *supra* note 1.

only three of many examples of cross-fertilization between law and non-law fields that have contributed to important advancements in legal scholarship over the past several decades.¹⁴

Other types of legal scholarship rankings reflect scholarly impact in non-law publications to some extent. For instance, citations to books by the publishers included in the Leiter-Sisk Scholarly Impact Score rankings may include nonlegal books.¹⁵ Similarly, as Black and Caron noted in 2004, SSRN downloads add more non-law and international dimensions than most other rankings.¹⁶ It is also likely that some of the respondents to Brian Leiter's scholarly reputation surveys were influenced by their knowledge of the non-law publications of legal scholars. All of these rankings likely reflect some level of legal scholarly impact via non-law publications, but the role of non-law publications is indirect at best, and an actual citation count is a more complete and objective measure of this form of scholarly impact.

Law professors are employed by law schools, not other units of universities, so it is fair to ask whether non-law citations should matter for evaluations of the scholarly impact of law faculty. Why might citations to the work of a legal scholar that appear in nonlegal publications be an indicator of the impact of that legal scholar on law?

- *Scope of Audience.* As we mentioned above, the readership of many non-law journals exceeds that of many law reviews, so a citation to a legal scholar's work in a non-law publication in many cases will reach a larger audience of scholars and policymakers than a citation in a law journal. The readership of the non-law journals also includes many law professors. In addition, the audience is often more global for non-law journals than for law journals.¹⁷
- *Influence of Audience.* Outside of the legal community, many leading scholars and policymakers view a publication in a peer-reviewed journal, which constitutes the bulk of the non-law citation sources in our study, as more authoritative than a publication in a law journal. This opinion is reflected in the citations to non-law versus law sources not only in many science reports, but also in many government and advocacy group policy reports, and in the membership of boards and committees formed by organizations such as the National Academies of Sciences, Engineering, and Medicine.
- *Publication Expertise.* The high value assigned to many non-law publications is in part the result of the peer review versus non-peer review divide, but also differences in the expertise of editors. Many non-

14. See generally BRIAN Z. TAMANAHA, *FAILING LAW SCHOOLS* 57 (2012) (discussing interdisciplinary scholarship by legal scholars).

15. See Sisk et al., *Scholarly Impact*, *supra* note 1, at 104.

16. See Black & Caron, *supra* note 4, at 85.

17. This is also true for SSRN. See Black & Caron, *supra* note 4, at 85.

law publications are edited and peer-reviewed by sophisticated experts in fields relevant to law, and citations in these journals may suggest empirical and theoretical advances that have passed muster among critics with expertise in these non-law areas that are relevant to law.

- *Problem Identification.* A citation to legal scholarship in a non-law publication may be an indication that the legal scholarship identified or framed legal problems in ways that have induced other fields to conduct new theoretical or empirical studies. In turn, these non-law studies may produce theories and data that shape legal research and law reform proposals.
- *Gap-Filling.* When legal scholars publish non-law scholarship in non-law journals, they often contribute to legal scholarship by answering factual or theoretical questions that are important for legal theory and law reform but require the co-authors, editing expertise, and peer review that are more common in many non-law journals.¹⁸ Again, the effect may be on legal scholarship, not just out-of-discipline or interdisciplinary scholarship.
- *Paradigm Shifting.* A common problem in all fields is that assumptions and theoretical constructs become dominant and resist change even long after empirical or theoretical work suggests the need for a new approach. Citations in non-law publications to the work of legal scholars can indicate that the legal scholar has presented empirical data or ideas that may transcend or challenge the dominant legal thinking and may over the long run force legal scholars to adopt new approaches.
- *Idea Transfer.* Legal scholars often cite law journals when they publish in nonlegal journals. This referencing of legal publications in nonlegal journals contributes to the movement of legal concepts into the literature of other disciplines. In turn, this increases the influence of legal scholarship vis-à-vis other disciplines.

B. Importance of Non-Law Citations for Assessing Interdisciplinary Research

Citations in non-law publications can serve as an indication of legal scholars' impact on legal scholarship, but also as an indication of the interdisciplinary impact of legal scholarship. For the purposes of this article, "interdisciplinary" research refers to scholarly research that combines methods or assumptions from two or more disciplines to address an issue or investigate a topic.¹⁹

18. See, e.g., Tracey E. George & Chris Guthrie, *Joining Forces: The Role of Collaboration in the Development of Legal Thought*, 52 J. LEGAL EDUC. 559 (2002) (noting the value of co-authorship by legal scholars).

19. This definition is consistent with the definition suggested by the National Academies:

Interdisciplinary research...is a mode of research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialized knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single

1. Growing Importance of Interdisciplinary Research in Scientific Scholarship

The importance of interdisciplinary research has been recognized by many research organizations that focus on the social and natural sciences. The National Academies of Science and Engineering and the Institute of Medicine published an influential report on the topic in 2005 and strongly supported the value of interdisciplinary research:

Interdisciplinary research (IDR) can be one of the most productive and inspiring of human pursuits—one that provides a format for conversations and connections that lead to new knowledge. As a mode of discovery and education, it has delivered much already and promises more—a sustainable environment, healthier and more prosperous lives, new discoveries and technologies to inspire young minds, and a deeper understanding of our place in space and time.²⁰

Proponents of interdisciplinarity in the social and physical sciences emphasize that interdisciplinary research can reveal blind spots in research methods or focuses, address issues in innovative ways, and generate new opportunities for academic recognition and collaboration.²¹ The importance of interdisciplinarity in the sciences may be growing in response to problems that are increasingly complex and global.²² Interdisciplinarity may be particularly valuable in fields like environmental science, where remediation of a problem detected by science involves sociopolitical intervention that would not necessarily develop quickly in the private market.²³ In reviewing the literature on interdisciplinary research, Klein and Falk-Krzesinski conclude that “interdisciplinary collaborations occur more in strategic disciplines that are application oriented than in basic disciplines, and they focus on practical problems,” although research in behavioral economics and other fields has demonstrated the value of interdisciplinarity for advancing basic disciplines.²⁴

discipline or area of research practice.

NAT'L ACAD. SCI., ENGINEERING & MED., INST. MED., FACILITATING INTERDISCIPLINARY RESEARCH 2 (2005).

20. *Id.* at 1.
21. David Owen & Caroline Noblet, *Interdisciplinary Research and Environmental Law*, 41 *ECOLOGY L.Q.* 887, 892-95 (2014). *See also* Robert J. Cottrol, *Legal Scholarship and Interdisciplinary Inquiry: A Compelling Combination for Minority Scholars*, 38 *LOY. L. REV.* 83 (1992); J.B. Ruhl et al., *Engaging Policy in Science Writing: Patterns and Strategies*, 14 *PLoS ONE* e0220497 (2019), <https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0220497&type=printable> (examining interdisciplinary writing in scientific journals).
22. Heidi Ledford, *Team Science: How to Solve the World's Biggest Problems*, 525 *NATURE* 308 (2015).
23. *See* Owen & Noblet, *supra* note 21, at 892.
24. Julie Thompson Klein & Holly J. Falk-Krzesinski, *Interdisciplinary and Collaborative Work: Framing Promotion and Tenure Practices and Policies*, 46 *RES. POL'Y* 1055 (2017) (citing Frank J. Van Rijnsvoever & Laurens K. Hessels, *Factors Associated with Disciplinary and Interdisciplinary Research Collaboration*, 40 *RES. POL'Y* 463, 464-65 (2011)).

One indication of the value of interdisciplinarity is the concerted effort by research funders and universities to facilitate interdisciplinary research. A survey conducted for the 2005 National Academies report found that the top three recommendations for academic institutions were “to foster a collaborative environment, to provide faculty incentives including hiring and tenure policies that reflect and reward involvement in [interdisciplinary research], and to provide seed money for [interdisciplinary research] projects.”²⁵ The efforts made by the National Science Foundation (NSF) are an example. The NSF recently released a report suggesting various methods of encouraging interdisciplinarity, ranging from undergraduate education to tenured faculty and institutional leadership,²⁶ and the NSF currently encourages interdisciplinary research through its program solicitations, activity portfolios that focus on areas of national interest, education, training, and conferences.²⁷ NSF grant incentives are also available to promote interdisciplinary work.²⁸ Similarly, the Council of Environmental Deans and Directors (CEDD) has recommended that institutions assess and address their readiness for the encouragement and facilitation of interdisciplinary work.²⁹ In 2007, the CEDD issued a report, *Interdisciplinary Hiring and Career Development*, which recommends that interdisciplinarity be encouraged at a systematic level and that agreements among schools or departments for a faculty position highlight an institution’s expectations for interdisciplinary work.³⁰

Despite numerous obstacles to interdisciplinary research, its presence is gradually increasing in the sciences. Roughly one third of references in published scientific papers now point to nonscientific fields.³¹ Academic accommodation and encouragement of interdisciplinarity also appear to be

25. FACILITATING INTERDISCIPLINARY RESEARCH, *supra* note 19, at 86.
26. See National Science Foundation, *How Does NSF Support Interdisciplinary Research?*, NAT’L SCI. FOUND. (Aug. 22, 2019, 4:06 PM), https://www.nsf.gov/od/oia/additional_resources/interdisciplinary_research/support.jsp (discussing interdisciplinary support).
27. *Id.*
28. See, e.g., National Science Foundation, *Water Sustainability & Climate*, NAT’L SCI. FOUND. (Aug. 22, 2019, 4:08 PM), <https://www.nsf.gov/pubs/2013/nsf13535/nsf13535.htm> (discussing interdisciplinary grant program), and National Science Foundation, *Award Abstract 1204865, Climate, Drought, and Agricultural Adaptations: An Investigation of Vulnerabilities and Responses to Water Stress Among Paddy Farmers in Sri Lanka*, NAT’L SCI. FOUND. (Nov. 23, 2020, 10:23 AM), https://www.nsf.gov/awardsearch/showAward?AWD_ID=1204685 (grant award under the program to an interdisciplinary project focused on water issues in Sri Lanka).
29. Klein & Falk-Krzesinski, *supra* note 24, at 1056.
30. Pfirman, Stephanie, et al., *Interdisciplinary Hiring, Tenure and Promotion: Guidance for Individuals and Institutions*, COUNCIL OF ENVIRONMENTAL DEANS AND DIRECTORS (2007), <http://www.ncseonline.org/CEDD/cms.cfm?id=2042> [https://web.archive.org/web/20110804232353/http://www.ncseonline.org/oo/Batch/CEDD/ITCDC/Interdisc_Hiring_and_Career_Dev.pdf].
31. Richard Van Noorden, *Interdisciplinary Research by the Numbers: An Analysis Reveals the Extent and Impact of Research that Bridges Disciplines*, 525 NATURE 306 (2015).

on the rise.³² As social problems become more complex, many intellectual disciplines are becoming less rigid, and interdisciplinary research is an important way to achieve innovation from across the spectrum of academic pursuits.

2. Growing Importance of Interdisciplinary Research in Legal Scholarship

The actions by funders and universities discussed above primarily focus on the social and natural sciences, but understanding the role of interdisciplinary research for legal scholarship is also important. Critics of interdisciplinarity in the sciences often cite the inherent differences and incompatibilities between certain academic disciplines and concerns about undermining existing academic disciplines.³³ Research by the committee that prepared the 2005 National Academies report suggests that some academics are “openly scornful” of interdisciplinary work because it can lack the depth achieved in any one discipline, and some express concerns that it can take time away from pursuits within disciplines and can complicate tenure and promotion decisions.³⁴

Interdisciplinary legal research is also not without critics. Scholars from disciplines that center on data-driven inquiry or applied policy considerations may have trouble navigating legal reasoning and language, and legal scholarship often draws on different authorities than the social and natural sciences.³⁵ Legal scholarship and education are also linked to the practice of law in ways that many other disciplines are not. Douglas Vick wrote that “the assimilation of law into the culture of another discipline will not occur,” because the “core identity of the discipline has not been, and likely will not be, fundamentally altered by interdisciplinary study.”³⁶ The growth of interdisciplinary research by legal scholars also has been criticized by Judge Harry Edwards of the United States Court of Appeals for the D.C. Circuit, who criticized legal academia for being full of “mediocre interdisciplinary articles,” and by United States Supreme Court Chief Justice John Roberts.³⁷

32. Helen Bridle et al., *Preparing for an Interdisciplinary Future: A Perspective from Early-Career Researchers*, 53 *FUTURES* 22 (2013). See also Van Noorden, *supra* note 31.
33. Owen & Noblet, *supra* note 21, at 897-900.
34. See *FACILITATING INTERDISCIPLINARY RESEARCH*, *supra* note 19, at 79.
35. See Owen & Noblet, *supra* note 21, at 892-94.
36. Vick, *supra* note 11, at 191. See also J.M. Balkin, *Interdisciplinarity as Colonization*, 53 *WASH. & LEE L. REV.* 949 (1996).
37. Harry T. Edwards, *The Growing Disjunction Between Legal Education and the Legal Profession*, 91 *MICH. L. REV.* 34, 36 (1992). See also Owen & Noblet, *supra* note 21, at 897 (the positions of many critics of interdisciplinary legal research, including the aforementioned, are based more on preconceived notions of the relevance of interdisciplinary work than the quality of topical research). But see Brian Leiter, *Intellectual Voyeurism in Legal Scholarship*, 4 *YALE L.J. & HUMAN.* 79, 80 (1992) (criticism of a specific type of interdisciplinary work related to law and philosophy).

In our view, however, much of the legal scholarship in the past several decades that has had the greatest impact on legal theory and practice has involved interdisciplinary research. Prominent examples arise from the theoretical and empirical research in law and economics, law and society, law and neuroscience, and work on social norms and private ordering. In addition to fostering the development of new cross-cutting theoretical and empirical approaches to law, interdisciplinary research is important to several subject matter areas for legal scholarship, including environmental and natural resources,³⁸ corporations, finance, health care, criminal law, and others.³⁹

In some cases, these new scholarly developments may have occurred without citations in non-law journals to law professors' publications in law journals and without citations in non-law journals to law professors' publications in non-law journals. But both types of citations are common among the leaders in movements such as law and economics, law and society, and law and neuroscience, and they are an indication of the scholarly impact of these scholars.

Interdisciplinary research can be important to legal scholars for a variety of reasons. In some cases, concepts and methods from other fields can provide new insights into the analysis of existing legal regimes and new legal remedies (e.g., law and economics). Some legal problems cannot be addressed with new laws, such as when the target behavior is difficult to regulate or legal reforms are not politically viable, and research in nonlegal fields may offer the best prospects for identifying an effective and viable societal response (e.g., the use of norms to influence household energy behavior when regulation of individual behavior is not desirable or viable). Similarly, the effort to develop legal solutions often raises questions that require answers from social, behavioral, or physical science research (e.g., the biological and economic research necessary to value ecosystem services). In other situations, legal solutions require insights from law, decision science, and organizational behavior or management (e.g., adaptive management).

The leading scholarly impact rankings have acknowledged that interdisciplinary work is valuable, and yet, for the most part, they do not account for it.⁴⁰ The explanation for not accounting for interdisciplinary work

38. Lisa Palmer, *Meeting the Leadership Challenges for Interdisciplinary Environmental Research*, 1 *NATURE SUSTAINABILITY* 330 (2018); Owen & Noblet, *supra* note 21; Dena P. MacMynowski, *Pausing at the Brink of Interdisciplinarity: Power and Knowledge at the Meeting of Social and Biophysical Science*, 12 *ECOLOGY & SOC'Y* (2007); Thomas A. Heberlein, *Improving Interdisciplinary Research: Integrating the Social and Natural Sciences*, 1 *SOC'Y & NAT. RESOURCES* 5 (1988); Eric D. Roy et al., *The Elusive Pursuit of Interdisciplinarity at the Human-Environment Interface*, 63 *BIOSCIENCE* 745 (2013).

39. See, e.g., MYRA H. STROBER, *INTERDISCIPLINARY CONVERSATIONS: CHALLENGING HABITS OF THOUGHT* (2011); *Innovations at the Nexus of Food, Energy and Water Systems (INFIEWS)*, NAT'L SCI. FOUND. (Aug. 22, 2019, 4:36 PM), https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505241&WT.mc_id=USNSF_44&WT.mc_ev=click.

40. See Sisk et al., *Scholarly Impact*, *supra* note 1, at 104. "Research and scholarship are also central because they inform and therefore help fulfill the teaching mission by deepening law professors' knowledge and thinking about the subject at hand. Often, this deepening

in scholarly impact rankings tends to be the additional effort necessary to account for non-law citations and that inclusion of non-law citations can be done on a one-off basis when necessary for personnel decisions.⁴¹ We argue that the added benefit of understanding legal scholars' impact on law and interdisciplinary scholarship via non-law publications disciplines justifies the effort required to include these citations in rankings. In fact, incentives for interdisciplinary work may be particularly important for promoting the exchange of concepts and methods between law and the social and natural sciences. The peer review versus non-peer review distinction may discourage social and physical scientists from publishing in law journals. The gold standard for the sciences is publication in a peer-reviewed journal, and publication in even the top-rated law journals would not "count" for scholars in many other fields. At the same time, the current methodology of citation counts means that a citation to a law professor's article in *Science*, *Nature*, or *PNAS* does not count in the rankings of legal scholars and law faculties.

II. Nature and Methodology of this Scholarly Impact Study

In an ideal world, a comprehensive citations analysis engine would exist through which one could reliably identify an author, all of the author's academic publications (including all types of academic publications), and all of the citations to all those publications in other publications of all types. This ideal search engine would then permit filtering for variables such as types of publications, time frames of publications, time frames of citations, and so on. Obviously, this search engine does not exist so we, like the law journal citation analyses, had to adapt a methodology to a limited database and search engine as best we could. Sisk et al. are forthright about the limitations of their study, and we will be as well.

Sisk et al. explain that their study is limited to the "Law Reviews and Journals" database under "Secondary Sources" in Westlaw.⁴² Sisk et al. do not claim that citation counts are the only measure of scholarly impact, but they focus on "citation in a published work of legal scholarship."⁴³ A legal citation count "provides a reasonably accurate measure of how a law faculty as a whole impacts legal scholarship."⁴⁴

Sisk et al. acknowledge the limitations that arise from excluding citations in non-law publications: "For individual assessment of law professors by law

becomes even more useful and profitable because it extends into related fields." Fabio Arcila, Jr., *The Future of Scholarship in Law Schools*, 31 *TOURO L. REV.* 15, 18 (2014). See also Black & Caron, *supra* note 4, at 85.

41. See Sisk et al., *Scholarly Impact*, *supra* note 1, at 104.

42. *Id.* at 109.

43. *Id.* at 105.

44. *Id.* at 105. See also Albert H. Yoon, *Editorial Bias in Legal Academia*, 5 *J. LEGAL ANALYSIS* 309, 314-15 (2013); Dennis J. Callahan & Neal Devins, *Law Review Article Placement: Benefit or Beauty Prize?*, 56 *J. LEGAL EDUC.* 374 (2006).

school administrators, consideration of a multitude of databases, including Google Scholar and HeinOnline, may be worthwhile, especially to encompass publications in other languages and register interdisciplinary work cited in social science journals.”⁴⁵ Sisk et al. opted out of including non-law citations in their study because of the difficulty of doing so. Sisk et al. note that “[b]ecause those other databases may be examined most efficiently and accurately when individual law professors have prepared public profiles within the database, they do not lend themselves to use in a nationwide comparison, like ours, which requires sifting through more than half a million citations by thousands of law professors at nearly one hundred law schools.”⁴⁶ To explain the decision to exclude these other publications, Sisk et al. argue that “the nature of the ‘law journals and reviews’ database focuses the study on law and legal scholarship and attention within the legal academy.”⁴⁷

Sisk et al. are also clear about the scope of their ranking. They note that they seek to “measure the collective attention given in American legal journals to the published work of the tenured members of a law faculty.”⁴⁸ Our point is simply that a ranking based on this scope is not an assessment that can yield a “Scholarly Impact Score.” Instead, it yields a “Legal Publication Scholarly Impact Score.” An assessment of the overall or total scholarly impact would include not only legal citations but also citations in nonlegal academic publications.

We do not claim that non-law citations are better than law citations, or even that they should always be given equal weight. Our point is only that law citations and non-law citations are valuable measures of both the legal and nonlegal scholarly impact by law professors, an assessment of only legal citations is an incomplete measure of scholarly impact, and an incomplete measure has the undesirable effect of discouraging interdisciplinary research. In essence, the Sisk et al. inquiry asks, “What is the impact of all law faculty scholarship of any sort *in law journals?*” Our inquiry asks, “What is the impact of all law faculty scholarship of any sort in non-law journals?” thus necessarily including “What is the impact of law faculty scholarship published in non-law journals that is cited in non-law journals?”

In addition, advances in citation databases have made it possible to conduct citation counts of non-law publications by legal scholars even if the legal scholars have not prepared a public profile within the database. Scholarly impact outside of law publications can be measured in several ways. One example is to count law faculty with advanced degrees in other fields.⁴⁹

45. Sisk et al., *Scholarly Impact*, *supra* note 1, at 107.

46. *Id.*

47. *Id.* at 108.

48. *Id.*

49. See Tracey E. George, *An Empirical Study of Empirical Legal Scholarship: The Top Law Schools*, 81 *IND. L.J.* 141, 149-50 (2006) (discussing whether interdisciplinary strength of a school can be

However, the Leiter-Sisk work has become the gold standard for citation studies.⁵⁰ Therefore, we designed our study to track as closely as possible the Sisk et al. law-only study, with the substitution of non-law publications and citations in Web of Science. Our goal is to supplement the Leiter-Sisk work by demonstrating the viability and importance of citation counts for legal scholars in non-law publications.

A. Selecting Law Schools and Faculty for Study

We conducted our study on tenured law faculty members of the top twenty-five *U.S. News* law schools (2019 rankings) who published at least one sole or co-authored article in a non-law journal during the 2012–2018 time frame.⁵¹ We appreciate Professor Sisk’s willingness to share the tenured law faculty roster data his team assembled and curated, which enabled us to reduce the number of variables involved in our study.

As for our choice of law schools, although it would have been ideal to include all of the eighty-plus schools included in the Sisk study, we limited our analysis to the *U.S. News* 2019 top twenty-five schools to manage the scope of the project, given the time and resources involved. This decision was also based, in part, on a premise that these schools might be the most likely to have the resources to support and reward interdisciplinary work. To test that premise we also studied four law schools from other “tiers” of the rankings as comparators.

Regarding our choice of faculty at those law schools, we acknowledge that, at least for now, there is little expectation in the law school culture that legal scholars have a substantial presence in non-law journal publications or citations. As discussed in Part III, this is amply reflected in the fact that over half the faculty for each law school in our study had zero non-law publications, as well as the fact that the median for non-law citations using all faculty was also zero for all the schools. In effect, however, there are subfaculties at most of the law schools we studied who have actively published sole or co-authored articles in non-law journals that have gained recognition through citation in non-law journals. Again, to emphasize the point, over 600 law school faculty from the twenty-five schools published almost 3,000 articles in the study time frame, with almost 20,000 citations to those articles in those five years alone.

We considered two methods for identifying that subfaculty cohort at each school: a publications-based approach (scholars with at least one publication) and a citations-based approach (scholars with at least one citation). We concluded that the publications-based method would be more representative because the act of publishing in a non-law journal is a clear indication of a

assessed by the number of faculty with joint degrees). See also Black & Caron, *supra* note 4, at 90.

50. See Sisk et al., *Scholarly Impact*, *supra* note 1, at 104.

51. We are grateful to Professor Sisk for supplying us the meticulously curated list of tenured law faculty his research team compiled. See Sisk et al., *Scholarly Impact*, *supra* note 1, at 108–09.

scholar's interdisciplinary engagement. It is important to note, however, citations are picked up in Web of Science only to articles published within the study period, thereby failing to account for publications without citations.

B. Conducting the Citation Counts for Scholarly Impact

Three dominant citation analysis engines cover non-law publications: Web of Science, Scopus, and Google Scholar. An excellent comparison of the three engines is available from the University of Michigan Library.⁵² Each citation analysis engine has its advantages and disadvantages, but of the three, Web of Science is considered “the most well-known and most used resource for citation analysis.”⁵³ A product of Clarivate Analytics, Web of Science’s “Core Collection” covers over 21,000 journals in the sciences, social sciences, arts, and humanities.⁵⁴ As mentioned in the introduction, using the Web of Science citation engine necessarily led to methodological and data differences between our study and Sisk et al.

First, the Web of Science Core Collection database allows one to specify a period and measure citations made during that period to a scholar’s *articles published during that same time period*. This means that we only counted those citations made in a specified time frame (2012–2018) to an author’s articles published during that same time frame. This limitation is not ideal by any means—it ignores citations during the time frame to articles published before the time frame—but overcoming it in Web of Science would have required manual computation as well as extensive time and resources.⁵⁵ We are working to develop a more streamlined method that avoids this limitation,⁵⁶ but for now,

52. Rebecca Welzenbach, *Research Impact Metrics: Citation Analysis*, <https://guides.lib.umich.edu/citation> (last visited Aug. 23, 2019).

53. *Id.*

54. *Web of Science Core Collection*, CLARIVATE ANALYTICS, <https://clarivate.com/products/web-of-science/web-science-form/web-science-core-collection/> (last visited Aug. 23, 2019) (“A curated collection, Web of Science Core Collection contains over 21,100 peer-reviewed, high quality scholarly journals published worldwide (including Open Access journals) in over 250 sciences, social sciences, and arts & humanities disciplines.”).

55. Although Google Scholar does not have this limitation, it is considered an unreliable and unwieldy method for scholarly citation analysis. WELZENBACH, *supra* note 52. In our next iteration of this study we will consider using Scopus and Web of Science, each with whatever efficient advancements we can develop, for comparison purposes.

56. For example, when we realized the limitations the specific time frame placed on our methodology and search results, we reached out to the Web of Science database in an attempt to find an easy way to resolve the missing citations during the time frame to articles published before then. Web of Science replied back to us that our query could not be solved by the Web of Science interface. E-mail from Clarivate Analytics Customer Care to author (July 26, 2019, 18:00 CST) (on file with author). The only workaround for this interface limitation on Web of Science would be to follow our methodology, with the exception of the time limitation, and then to manually export each individual citation report into an Excel spreadsheet for every author, exclude the years we are not interested in, manually compute the sum of those citations for the preferred years, and then move that data into a comprehensive spreadsheet that would include the data for each individual author. *Id.* If we

our method will have to serve as a proxy for a more robust citation analysis in the future. Our objective is to stimulate further advances in and use of non-law citation analyses for legal scholars.

Second, Web of Science allows one to exclude specified categories of journals from an author's publication profile.⁵⁷ One such category is "law." The Web of Science Core Collection includes 464 law journals from around the world. Some of these law journals, however, are catalogued in multiple categories because of a specialty focus, meaning that filtering out the "law" category does not necessarily exclude all law journals from an author's publication profile. Only seventy law journals fell into this category at the time of our study, however, and of those law journals, only twenty-nine are published in the United States and available in the Core Collection for at least one of the years in our study range. They are all what would be considered "specialty" journals. For all practical purposes, therefore, excluding the Web of Science "law" category from our study produced author non-law journal publication profiles.

It is important to note, however, that filtering out the "law" category affects only an author's *publications* profile; all law journals in the Web of Science Core Collection remain in the journal pool for purposes of counting the author's *citations*. The net result is that, while a few law journal publications "leak" through the filtering of the "law" category of publications, citations to both those law articles and the author's non-law journal publications will be counted in all law (and non-law) journals in the collection.

Given these features, we excluded the "law" category from the publication-based analysis for several reasons. Including all law journals in the Core Collection would count citations to them in all the journals in the Core Collection, including all the law journals. While it may seem ideal to have a search engine that counts both law and non-law, Web of Science included only 464 law journals at the time of our study,⁵⁸ most of which are foreign and thus in which a U.S. legal scholar is less likely to publish. Only 158 of those law journals are or were published in the United States, and the Core Collection does not include the years of our study range for twenty-eight of those journals, thereby leaving only 130 U.S. law journals. As a result, including all the collection's law journals in an author's publications profile for our study time

followed our methodology in Web of Science to resolve the date limitation issue, we would have to do this manual computation three times for more than 1,300 names (roughly 3,900 manual computations).

57. The Web of Science features described in this section are based on communications with Web of Science representatives and spreadsheets provided by them in a series of e-mails on file with the authors.
58. This figure is based on our communications with Clarivate Analytics Customer Care discussed in note 56, *supra*. There were 1,547 law journals worldwide at the time of our study, 958 of which are U.S. law journals, tracked in the Washington & Lee Law School Law Journal Rankings site. *W&L Law Journal Rankings*, <https://managementtools4.wlu.edu/LawJournals/> (last visited 11/9/20).

range would have substantially underrepresented an author's law publications and citations. In short, we leave the law journal publication citation counts to the Sisk et al. and Hein studies.

Also, as noted above, although filtering out the "law" category of journals removes most law journals from an author's *publications* profile, it does not remove any of the 130 active U.S. law journals in the collection, or the active foreign journals, from the pool of journals in which *citations* are counted. The result is that our study does count citations in the collection's law journals to an author's non-law publications, which measures, albeit to a limited extent, the influence of the author's non-law work in at least *some* law journals. To fully measure that impact would require a much-expanded pool of law journals in the Core Collection.

Finally, we had to address the difficult "same name" problem, which arises more often in Web of Science given the span of journals it covers and the fact that, if one searches by name rather than unique personal profile identification number,⁵⁹ Web of Science uses only last name plus initials or first four characters of a name, rather than the full author name.⁶⁰ Where a potential same-name concern was detected, we conducted a careful winnowing based on reviews of CVs, institutional associations, and the actual articles returned from the initial author name search. Three people conducted such studies using the same methods, with a fourth reconciling any discrepancies. Fortunately, because non-law journals require authors to provide reference lists with all author names, even for multiple-author publications, the Web of Science citations do not suffer from the "et al." problem that has presented challenges for law journal citation counts.⁶¹ Once an author was identified and potential same-name authors were properly excluded, we collected Web of Science's citation report data regarding the number of publications, number of citations excluding self-citations, and number of articles citing the author.

59. Many scholars from non-law disciplines register what is known as an ORCID identifier, a unique number that can be used to track the author in a variety of ways, including in Web of Science. See ORCID, ABOUT: WHAT IS ORCID, <https://orcid.org/about/what-is-orcid/mission> (last visited Aug. 23, 2019). We found that very few legal scholars have an ORCID identifier, so we had to resort to name searches.
60. It is important to note that Web of Science has improved its search functionality since this study was conducted and completed. Web of Science has improved its "search by name" functionality to expand search capabilities to full names (not just last name plus four characters) and it has built-in name variations recognition, thereby addressing some of the same-name problem we encountered when conducting our study.
61. For a recent discussion of this problem, see Brian Leiter, *Correcting for the Problem of Multi-author Articles Cited as "John Smith et al." in Citation Studies*, BRIAN LEITER'S LAW SCHOOL REPORTS (Aug. 29, 2018), <https://leiterlawschool.typepad.com/leiter/2018/08/correcting-for-the-problem-of-multi-author-articles-cited-as-john-smith-et-al-in-citation-studies.html>. See also Sisk et al., *Scholarly Impact*, *supra* note 1, at n.38. Although the HeinOnline database is limited to legal journals, it avoids the et al. problem, so the Heald and Sichelman study, which is based on HeinOnline, does not suffer from this problem. See Sisk, *Measuring Law*, *supra* note 9 (comparing the Leiter-Sisk and Heald-Sichelman citation ranking methods).

Clarivate Analytics, the company that operates Web of Science, has informed us that it currently has no method for overcoming the limitations detailed above, with the exception of its expansion of search capability to full name, rather than last name and four characters. An effort to work around these limitations by use of hand calculations would have been overwhelming to our study. Thus, our study cannot produce an exact match to the Sisk et al. or Hein methodologies. The following table summarizes the differences and similarities.

Citation Studies			
	Sisk et al.	Heald & Sichelman	Ruhl, Vandenberg & Dunaway
Time Period	2005-2009 2007-2011 2010-2014 2013-2017	All-time, as of September 2016, as well as one year of data from 2015 to 2016	2012-2018
Databases Used	Westlaw: “Law Reviews and Journals” database under “Secondary Sources”	HeinOnline: Law Journal Library database (likely, not identified in paper), for citation-based rankings Social Sciences Research Network (SSRN): Downloads for impact-based rankings	Web of Science: Core Collection
Law Sources Included	English-language law reviews and journals in the legal discipline	Law and law-related periodicals featuring subjects such as criminal justice, political science, technology, human rights, and others	None “Law” category excluded from the Core Collection

Citation Studies			
	Sisk et al.	Heald & Sichelman	Ruhl, Vandenberg & Dunaway
Non-Law Sources Included	None	<p>HeinOnline Law Journal Library includes law-related periodicals featuring subjects including criminal justice, political science, technology, human rights, and others</p> <p>SSRN eLibrary includes papers from over 50 disciplines, such as applied sciences, health sciences, humanities, life sciences, physical sciences, and social sciences</p>	Journals in sciences, social sciences, arts, and humanities
Metric	<p>Schools are ranked by weighted score, 2x mean + median, and then scaled scores from the top of the overall ranking</p> <p>*For the first time in the 2013-2017 study, employed new Westlaw field restriction term "TE," which omits the initial asterisk footnote, thus excluding mere acknowledgments of a professor without any accompanying citation to their work</p>	<p>HeinOnline database, for citation-based rankings, and SSRN downloads for impact-based rankings, as well as a combination of the two. Schools are ranked by weighted score, 2x mean + median</p>	Schools are ranked by weighted score, 2x mean + median

Citation Studies			
	Sisk et al.	Heald & Sichelman	Ruhl, Vandenberg & Dunaway
Law Schools Included	<p>Top third of ABA-accredited law schools, as ranked by U.S. News.</p> <p>Based on the results of the prior studies of scholarly impact in 2010, 2012, and 2015, included all law schools that previously ranked in or near the top seventy</p>	<p>Initial study compared the top 100 ranked schools, as ranked by U.S. News, with the top 100 (unadjusted) downloaded schools on SSRN; because of significant overlap, the top 83 schools from each list were chosen, which provided 100 schools for analysis</p>	<p>Top 25 law schools, as ranked by U.S. News (2019 rankings)</p>
Faculty Included	<p>Included: Tenured law faculty who have traditional scholarly expectations (legal literature)</p> <p>Excluded: Untenured, clinical teaching, and legal research and writing appointments</p>	<p>Included: “Traditional” tenured and tenure-track faculty</p> <p>Excluded: Librarians, clinicians, legal writing instructors, emeriti and adjuncts, even in rare cases where they have formal tenure status</p>	<p>Tenured law faculty (using Sisk et al. list), who published at least one sole or co-authored article in a non-law journal during the 2012–2018 time frame</p>

C. Calculating the Scholarly Impact Scores and Rankings

Once three researchers collected Web of Science’s citation report data for all of the scholars in the publications-based cohort for each school, averages of the results of the three researchers were calculated to provide us with our final source of data. An initial round of quality control included review of extreme outliers, double-checking the results, and updating the results where appropriate.⁶² Using this final averaged data, we calculated the mean and

62. We assessed interrater reliability by calculating the intraclass correlation coefficient (ICC) estimates and 95% confidence intervals for each of our three measures. We used the SPSS statistical package version 26 (IBM Corp.; Armonk, NY). Calculations were based on a mean-rating (k=3), absolute agreement, 2-way mixed-effects model. Interpretation was as follows: <0.50, poor; between 0.50 and 0.75, fair, between 0.75 and 0.90 good; above 0.90, excellent. An excellent degree of interrater reliability was found for each of the measures. The average measures ICC for total number of publications was 0.99 [CI: 0.99, 0.99], for

median number of citations for each school. We followed the Sisk et al. method, $2x \text{ mean} + \text{median}$, for calculating each school's Interdisciplinary Impact Score. We did not use this weighting because of any methodological preference, but rather to allow us to compare our study with the Sisk et al. study. We recognize that this score weighting method is susceptible to the "star effect," in which one or two scholars with outsized citation counts can inflate a school's score. Indeed, as we discuss in Part III, several schools in our study exhibited this effect to an extreme degree.

For demonstration purposes, we added the Sisk law weighted score to our non-law weighted scores to produce a Total Weighted Score for each school. We acknowledge that many questions would need to be considered regarding how best to compile a composite score. One question is whether the law score should receive greater weight than the non-law score. This is not a significant concern for our study, as the law scores are higher than the science scores by an order of magnitude. But as we report in Part III, the Total Weighted Score ranking does reshuffle a number of schools into different positions compared with the law-only scores when the interdisciplinary scores are included. And if the Web of Science limitations of our study can be mitigated in the future, then the interdisciplinary scores will only grow in magnitude as citation counts will include more of an author's articles.

The time frames differ between our study (2012–2018) and that of Sisk et al. (2013–2017), so it is not "apples to apples" to simply add the Web of Science citations to the Sisk et al. citations. However, a rough comparison can be made by adding the citations from the two studies, which we did using the non-law scores from our study for faculty who published at least one non-law article in the selected time period. A more complete ranking of legal scholars and law schools would include either a combination of both types of citations in one study or the use of two parallel studies, with equal or different weighting, when ranking scholars and faculties.

III. Results

Table 1 provides our non-law citation scores, which we call the Weighted Interdisciplinary Scores, for each school, ranking them from highest to lowest. Anyone familiar with the *U.S. News* rankings—and for anyone who is not, see Table 3—will observe a few surprising results. For example, Minnesota ranks first in our study but twentieth in the *U.S. News* rankings for 2019. This is an example of the star effect—one scholar, Professor Susan Wolf, is the second-most-cited scholar in our study (see Table 5). Removing her from Minnesota's cohort would drop the school's weighted score to 49, placing it nineteenth. Of course, Professor Susan Wolf is on Minnesota's faculty, so her citations count. We discuss the star effect more fully below in connection with Table 5.

total number of times cited without self-citations was 0.99 [CI: 0.99, 0.99], and for total number of citing articles without self-citations was 0.99 [CI: 0.99, 0.99].

A number of schools rank among the top ten in the *U.S. News* rankings for 2019 but in the bottom half of our study. This is also true in the Sisk et al. law citations study, and is to be expected when comparing a ranking based on a composite of factors, many of which having nothing to do with citations, to one drilling down on one specific metric. Especially when that metric is measuring something as specific as legal scholars publishing and being cited in non-law journals, substantial differences between the composite *U.S. News* rank and a school’s position in our study are a likely outcome.

Also revealing is how much spread there is in the scaled scores, with Emory at number twenty-five showing just two percent of Minnesota’s citation count. This is also likely due in part to the effect of measuring the non-law citations variable in a law-dominated culture, but also confirms our premise that, even within the top twenty-five schools, not all have devoted the resources or cultural commitment needed to support and reward publication outside of legal journals and texts. This is further borne out by the four schools we examined outside the top twenty-five, which ranged in 2019 *U.S. News* rankings from tiers 25-40, 41-60, 61-80, and >80, none of which had a weighted score in our study above 20.

Table 1. Interdisciplinary (IDR) Impact Rankings, Weighted Scores, and Scaled Scores

IDR Impact Rank	Law School	IDR Weighted Score	IDR Scaled Score
1	Minnesota	190	100
2	Stanford	141	74
3	Yale	121	64
4	Duke	117	62
5	Cal-Irvine	110	58
6	Georgetown	97	51
7	Boston University	96	51
8	USC	92	48
9	Vanderbilt	89	47
10	George Washington	81	43
11	Michigan	79	42
12	Virginia	78	41
13	UCLA	72	38
14	Columbia	67	35
15	Harvard	59	31
16	NYU	55	29
17	Cal-Berkeley	54	28

IDR Impact Rank	Law School	IDR Weighted Score	IDR Scaled Score
18	Pennsylvania	50	26
19	Chicago	40	21
20	Northwestern	38	20
21	Texas	22	12
22	Notre Dame	14	7
23	Washington University	12	6
24	Cornell	5	3
25	Emory	3	2

Table 2 shows the Sisk et al. weighted scores (Law Weighted Score), our weighted scores (Interdisciplinary Impact Score), and the combined weighted scores (Total Impact Score), with schools ranked according to combined weighted scores, which we use to create what we call Total Impact Rank. This ranking looks considerably closer to the *U.S. News* rankings than our Interdisciplinary Impact Rank results, which is expected given the law citations are so much larger in scale compared with the non-law citations. Notably, of the four schools outside of the top twenty-five that we studied, a school from the 41-60 tier had a Total Impact Score of 497, which would have placed it twenty-third in our rankings.

Table 2. Total Impact Rankings and Law, Interdisciplinary (IDR), and Total Weighted Scores

Total Impact Rank	Law School	Law Weighted Score	IDR Weighted Score	Total Impact Score
1	Yale	1474	121	1595
2	Harvard	1252	59	1311
3	Chicago	1119	40	1159
5	NYU	979	55	1034
4	Stanford	862	141	1003
6	Columbia	892	67	959
7	Duke	763	117	880
8	Cal-Berkeley	803	54	857
9	Pennsylvania	722	50	822
10	Vanderbilt	671	89	760
11	Cal-Irvine	638	110	748
12	UCLA	644	72	736

Total Impact Rank	Law School	Law Weighted Score	IDR Weighted Score	Total Impact Score
13	Minnesota	467	190	657
14	Michigan	560	79	639
15	Cornell	620	5	625
16	Georgetown	527	97	624
17	George Washington	537	81	618
18	Virginia	529	78	607
19	Northwestern	556	38	594
20	USC	437	92	529
21	Boston University	420	96	516
22	Texas	492	22	514
23	Washington University	465	12	477
24	Notre Dame	421	14	435
25	Emory	348	3	350

Table 3 compares the ordinal rankings for the twenty-five schools from the 2019 *U.S. News* rankings, Sisk et al. (Law Impact Rank), our study (Interdisciplinary Impact Rank), and combined (Total Impact Rank), with schools listed in order of their 2019 *U.S. News* ranking.

Table 3. Comparison of U.S. News, Total Impact, Law Impact, and Interdisciplinary (IDR) Impact Rankings

2019 U.S. News Rank	Law School	Total Impact Rank	Law Impact Rank	IDR Impact Rank
1	Yale	1	1	3
2	Stanford	4	6	2
3	Harvard	2	2	15
4	Chicago	3	3	19
5	Columbia	6	5	14
6	NYU	5	4	16
7	Pennsylvania	9	8	18
8	Michigan	14	14	11
9	Cal-Berkeley	8	7	17
9	Virginia	18	16	12
11	Duke	7	8	4
11	Northwestern	19	14	20

2019 U.S. News Rank	Law School	Total Impact Rank	Law Impact Rank	IDR Impact Rank
13	Cornell	15	13	24
14	Georgetown	16	16	6
15	Texas	22	19	21
16	UCLA	12	11	13
17	Vanderbilt	10	10	9
18	Washington University	23	21	23
19	USC	20	23	8
20	Minnesota	13	21	1
21	Cal-Irvine	11	12	5
22	Boston University	21	27	7
22	Emory	25	25	25
24	George Washington	17	16	10
24	Notre Dame	24	26	22

Table 4 shows the differences between schools' Law Impact Ranks and Interdisciplinary Impact Ranks, with schools listed in order of Law Impact Ranks (2019 *U.S. News* rankings shown for reference).

Table 4. Differences between Law Impact Scores and Interdisciplinary (IDR) Impact Scores

2019 U.S. News Rank	Law School	Law Impact Rank	IDR Impact Rank	Difference Law- IDR
1	Yale	1	3	-2
3	Harvard	2	15	-13
4	Chicago	3	19	-16
6	NYU	4	16	-12
5	Columbia	5	14	-9
2	Stanford	6	2	+4
9	Cal-Berkeley	7	17	-10
7	Pennsylvania	8	18	-10
11	Duke	8	4	+4
17	Vanderbilt	10	9	+1
16	UCLA	11	13	-2
21	Cal-Irvine	12	5	+7
13	Cornell	13	24	-11

2019 U.S. News Rank	Law School	Law Impact Rank	IDR Impact Rank	Difference Law-IDR
8	Michigan	14	11	+3
11	Northwestern	14	20	-6
9	Virginia	16	12	+4
14	Georgetown	16	6	+10
24	George Washington	16	10	+6
15	Texas	19	21	-2
18	Washington University	21	23	-2
20	Minnesota	21	1	+20
19	USC	23	8	+15
22	Emory	25	25	same
24	Notre Dame	26	22	+4
22	Boston University	27	7	+20

Table 5 shows the top fifty legal scholars in our citation study, based on total citations, excluding self-citations. Three fields dominate, accounting for over half of the authors: law and health/medicine, law and psychology, and environmental law. Moreover, these fifty legal scholars account for roughly eight percent of the cohort of 605 included in the study but received 14,295 of the 19,630 total citations (seventy-three percent). In short, interdisciplinary work by law faculty, as reflected in publication and citation in non-law journals, is largely limited to a small number of legal scholars working in three fields.

Table 5. Top 50 Cited Faculty with Fields and Citation Counts

Name	School Affiliation	Primary Field(s)
Gostin, Lawrence O.	Georgetown	Health Law & Public Health
Wolf, Susan M.	Minnesota	Law, Medicine & Public Policy
Kahan, Dan M.	Yale	Law & Psychology
Greely, Henry T.	Stanford	Law & Biosciences
Braman, Donald	George Washington	Law & Anthropology
Tyler, Tom R.	Yale	Law & Psychology
Annas, George J.	Boston University	Law & Public Health
Crenshaw, Kimberlé W.	Columbia & UCLA	Law & Race Theory
Ellsworth, Phoebe C.	Michigan	Law & Psychology
Sunstein, Cass R.	Harvard	Law & Public Policy
Cohen, I. Glenn	Harvard	Law & Bioethics
Mello, Michelle M.	Stanford	Health Law & Public Health

Name	School Affiliation	Primary Field(s)
Outterson, Kevin	Boston University	Law, Medicine & Ethics
Auerbach, Alan J.	Cal - Berkeley	Law & Economics
Loftus, Elizabeth F.	Cal - Irvine	Law & Cognitive Science
Mitchell, Gregory	Virginia	Law & Psychology
Ruhl, J.B.	Vanderbilt	Law & Environmental Policy
Studdert, David M.	Stanford	Law & Medicine
Capron, Alexander M.	USC	Law & Public Health
Bonnie, Richard J.	Virginia	Law, Psychiatry & Public Policy
McGeveran, William	Minnesota	Law & Media Studies
Fagan, Jeffrey A.	Columbia	Law & Public Health
Stewart, Richard B.	NYU	Law & Environmental Policy
Vandenbergh, Michael P.	Vanderbilt	Law & Environmental Policy
Black, Bernard	Northwestern	Law & Management
Roberts, Dorothy E.	Pennsylvania	Law & Sociology
Malloy, Timothy F.	UCLA	Law, Technology, & Environmental Policy
MacCoun, Robert J.	Stanford	Law & Social Psychology
Viscusi, W. Kip	Vanderbilt	Law, Economics, & Management
Simmons, Beth	Pennsylvania	Law, Political Science, & Business Ethics
Camacho, Alejandro	Cal - Irvine	Law & Environmental Policy
Benkler, Yochai	Harvard	Law, the Internet, and Information Access
Monahan, John	Virginia	Law & Psychology
Doremus, Holly	Cal - Berkeley	Law & Environmental Science
Kessler, Daniel P.	Stanford	Law, Business, & Healthcare
Carbado, Devon W.	UCLA	Law & Race
Horwitz, Jill R.	UCLA	Law, Economics, & Health Policy
Biber, Eric	Cal - Berkeley	Law & Environmental Policy
Spellman, Barbara A.	Virginia	Law & Psychology
Farahany, Nita A.	Duke	Law & Biosciences
Garland, David W.	NYU	Law & Sociology
Plaut, Victoria	Cal - Berkeley	Law & Cultural Psychology
Tonry, Michael	Minnesota	Criminal Law & Policy

Name	School Affiliation	Primary Field(s)
Jones, Owen D.	Vanderbilt	Law & Brain Science
Pistor, Katharina	Columbia	Comparative Law & Finance
Thompson, Barton H., Jr.	Stanford	Environmental Law & Policy
Lyon, Tom	USC	Law & Psychology
Adler, Matthew	Duke	Law & Economics
Revesz, Richard	NYU	Law & Environmental Policy

Table 6 shows the top five cited scholars for each law school.

Table 6. Top 5 Cited Faculty at Each School

IDR Impact Rank	Law School	Top Five Faculty
1	Minnesota	Wolf, S.M.; McGeeveran, W.; Tonry, M.; Vaaler, P.; Shen, F.
2	Stanford	Greely, H.T.; Mello, M.M.; Studdert, D.M.; MacCoun, R.J.; Kessler, D.P.
3	Yale	Kahan, D.M.; Tyler, T.R.; Kapczynski, A.; Meares, T.L.; Moyn, S.
4	Duke	Farahany, N.A.; Adler, M.; Gulati, M.; Wiener, J.B.; de Figueiredo, J.M.
5	Cal-Irvine	Loftus, E.F.; Camacho, A.; Simons, K.; DiMento, J. F.C.; Garth, B.
6	Georgetown	Gostin, L.O.; Teitelbaum, J.C.; Hyman, D.; Levitin, A.J.; Thompson, R.B.
7	Boston University	Annas, G. J.; Outterson, K.; Mariner, W.K.; Huberfeld, N.; Onwuachi-Willig, A.L.
8	USC	Capron, A.M.; Lyon, T.D.; Saks, E.R.; Simon, D.; Simkovic, M.N.
9	Vanderbilt	Ruhl, J.B.; Vandenbergh, M.P.; Viscusi, W.K.; Jones, O.D.; Skiba, P.M.
10	George Washington	Braman, D.; Kovacic, W.E.; Charnovitz, S.; Cahn, N.R.; Glicksman, R.L.
11	Michigan	Ellsworth, P.C.; Khanna, V.S.; Bagley, N.; Pottow, J.A.E.; MacKinnon, C.A.
12	Virginia	Mitchell, G.; Bonnie, R.J.; Monahan, J.; Spellman, B.A.; Versteeg, M.
13	UCLA	Crenshaw, K.W.; Malloy, T.F.; Carbado, D.W.; Horwitz, J.R.; Parson, E.A.
14	Columbia	Crenshaw, K.W.; Fagan, J.A.; Pistor, K.; Sabel, C.F.; McCrary, J.

IDR Impact Rank	Law School	Top Five Faculty
15	Harvard	Sunstein, C.R.; Cohen, I.G.; Benkler, Y.; Bechuk, L.A.; Zittrain, J.
16	NYU	Stewart, R.B.; Garland, D.W.; Revesz, R.L.; Strandburg, K.J.; Hemphill, C.S.
17	Cal-Berkeley	Auerbach, A.J.; Doremus, H.; Biber, E.; Plaut, V.; Morrill, C.
18	Pennsylvania	Roberts, D.E.; Simmons, B.; Baker, T.; Gelbach, J.B.; Feldman, E.A.
19	Chicago	Dharmapala, D.; Ginsburg, T.; Malani, A.; Leiter, B.; Nussbaum, M.
20	Northwestern	Black, B.; Litvak, K.; Riles, A.; Lee, Y.H.A.; Schanzenbach, M.M.
21	Texas	Cohen, J.M.; Sage, W.M.; Wickelgren, A.L.; Deigh, J.G.; Wasserman, M.
22	Notre Dame	Tor, A.; Cushman, B.; Snead, O.C.; Carozza, P.G.; O'Connell, M.E.
23	Washington University	Epstein, L.; Kuehn, R.R.; Tamanaha, B.Z.; Hollander-Blumoff, R.; Richards, N.M.
24	Cornell	Marmor, A.; Farina, C.R.; Dorf, M.C.; Grimmelmann, J.; Schwab, S.J.
25	Emory	Witte, J., Jr.; Shepherd, J.M.

IV. Discussion

The 2005 National Academies report on interdisciplinary research acknowledged the barriers to conducting interdisciplinary research:

Despite the apparent benefits of IDR, researchers interested in pursuing it often face daunting obstacles and disincentives. Some of them take the form of personal communication or culture barriers; others are related to the tradition in academic institutions of organizing research and teaching activities by discipline-based departments—a tradition that is commonly mirrored in funding organizations, professional societies, and journals.⁶³

One such barrier arises from the treatment of citations. Citation counts can affect not only personal and faculty rankings, but also tenure and promotion, salary, academic awards, research support, and other factors that reflect and motivate scholarship. In fact, respondents to the 2005 National Academy committee's survey listed tenure and promotion criteria as the top impediment to interdisciplinary research.⁶⁴ Research teams often require Ph.D. social and

63. FACILITATING INTERDISCIPLINARY RESEARCH, *supra* note 19, at 3.

64. *Id.* For a discussion of citation counts and tenure in the legal academy, see Arthur Austin, *The Reliability of Citation Counts in Judgments on Promotion, Tenure, and Status*, 35 ARIZ. L. REV. 829 (1993).

behavioral scientists whose professional norms require publication in peer-reviewed journals, but exclusion of citations in those journals discourages legal scholars from engaging with those scientists. The 2005 report suggests that “comparative evaluations of research institutions...should include the contributions of interdisciplinary activities that involve more than one department (even if it involves double-counting), as well as single-department contributions.”⁶⁵ The preparation of the Interdisciplinary Impact factor for legal scholars and faculties is a first step in the process of addressing this gap in assessments of legal scholarly impact.

This article demonstrates that it is feasible to assemble a ranking for legal scholars and law faculties based on nonlegal citations, and it provides the first ranking based on those citations. Citations in nonlegal publications will often not be as important to the scholarly impact of legal scholars as citations in legal publications, and a lesser impact could justify a discount factor to be applied to non-law citations. In many cases, however, non-law citations will be equally or greater indicators of scholarly impact. Extensive citation by nonlegal scholars may suggest that a legal scholar has escaped factual assumptions or conceptual stovepipes in ways that enable their work to influence other fields. Ranking tenured law faculty and faculties by the Interdisciplinary Scholarly Impact Scores suggests many parallels with other rankings but several important differences.

*A. Interdisciplinary Scholarly Impact Score Results vs.
Leiter-Sisk Scholarly Impact Score Results*

Based on the Interdisciplinary Scholarly Impact rankings, several law faculties appear to be significantly outperforming their traditional law faculties when comparing the interdisciplinary rank with Sisk et al.’s Law Impact Ranks (see Table 4):

- As stated above, Minnesota ranks first in our study but twenty-first in the Sisk et al. Law Impact Ranks. As we mentioned earlier, this is an example of the star effect—one scholar, Professor Susan Wolf, is the second-most-cited scholar in our study (see Table 5). Removing Professor Wolf from Minnesota’s cohort would drop the school’s weighted score to forty-nine, placing it nineteenth, which is much closer to the Law Impact Rank of twenty-first. Of course, Professor Susan Wolf is on Minnesota’s faculty, so her citations count, as do all other “stars” at other schools.
- Within the top ten for Interdisciplinary Scholarly Impact, Boston University (at number 7) and the University of Southern California (at number 8) show a significant gap with the Sisk et al. Law Impact Ranks (at number 27 and number 23, respectively). This is also attributable to the star effect—two scholars from each school, Professors George J. Annas and Kevin Outterson of Boston University and Professors

65. FACILITATING INTERDISCIPLINARY RESEARCH, *supra* note 19, at 1.

Alexander M. Capron and Thomas D. Lyon of USC, are the only two faculty from each school to make it into the top fifty cited faculty within the Interdisciplinary Scholarly Impact rankings. Removing those two scholars from each faculty would drop Boston University from number 7 to a tie at number 23 with a score of fourteen and would drop USC from number 8 to number 22 with a score of twenty, ranks more consistent with their respective Sisk et al. ranks. While these recalculations and the one above for Minnesota are illustrative of the star effect, there are likely also “stars” in the Sisk et al. law journal citations study that drive a school’s law journal ranking, and they may not be the same “stars” as in our study. This gives further value to the idea of formulating a Total Scholarly Impact Score accounting for citations in both law and non-law journals.

- Within the top ten for Interdisciplinary Scholarly Impact, Vanderbilt (at number 9) shows a consistent ranking with the Sisk et al. Law Impact Ranks (at number 10). Given that Vanderbilt was also in the top ten for the Sisk et al. Law Impact Ranks in both 2012 and 2015, Vanderbilt has become a stable presence in the top ten for both legal and interdisciplinary scholarship.
- Of the top ten schools according to the Sisk et al. Law Impact Ranks, only three schools saw a neutral or positive increase in Interdisciplinary Scholarly Impact (Stanford University, Duke University, and Vanderbilt University). The remaining top ten schools, according to the Sisk et al. Law Impact Ranks, dropped in the Interdisciplinary Scholarly Impact rankings. The most severe drop in rankings was the University of Chicago, which dropped from number 3 in the Sisk et al. Law Impact Rankings to number 19 in the Interdisciplinary Scholarly Impact ranking.

B. Interdisciplinary Scholarly Impact Score Results vs. U.S. News Results

Based on Interdisciplinary Scholarly Impact rankings, several law faculties appear to be significantly undervalued in popular rankings of law schools. The faculties at these law schools achieve much higher Interdisciplinary Scholarly Impact rankings than the overall ranking assigned by *U.S. News* (see Tables 3 and 4):

- Minnesota ranks first in our study but twentieth in the *U.S. News* rankings for 2019. As we discussed above, this is an example of the star effect—one scholar, Professor Susan Wolf, is the second-most-cited scholar in our study (see Table 5).
- Within the top ten for Interdisciplinary Scholarly Impact, the University of California-Irvine (at number 10) shows a significant gap with its rank in the *U.S. News* rankings (at number 21).

- George Washington University (number 10) and Boston University (number 7) also show significant gaps with the *U.S. News* rankings (number 24 and number 22, respectively).
- Among schools in the top ten for Interdisciplinary Scholarly Impact ranking, Vanderbilt at number 9 and George Washington at number 10 show similar incongruity with the 2019 *U.S. News* rankings (number 17 and number 24, respectively).
- Of the top ten schools according to the *U.S. News* rankings, only two schools saw a neutral or positive increase in Interdisciplinary Scholarly Impact (Stanford University and Duke University). The remaining top ten schools, according to *U.S. News* rankings, dropped in the Interdisciplinary Scholarly Impact rankings. The most severe drop in rankings was the University of Chicago, which dropped from number 4 in the *U.S. News* rankings to number 19 in the Interdisciplinary Scholarly Impact rankings.

C. Interdisciplinary Scholarly Impact Score Results vs. Other Rankings

It is important to note that there are other methods by which to evaluate and rank law schools and law faculty. Examples of these include Brian Leiter’s reputation survey⁶⁶ and downloads from electronic databases such as the Social Science Research Network (SSRN).⁶⁷ The most recent Leiter reputation survey is roughly five years old, so it provides limited insight into the current reputational status of law schools. The SSRN download results are more current, and the comparisons among the *U.S. News*, SSRN, and Interdisciplinary Impact Rankings are evident from Table 7.

Table 7. Comparison of U.S. News, Interdisciplinary (IDR) Impact, and Electronic Downloads (SSRN) Rankings

2019 U.S. News Rank	Law School	IDR Impact Ranks	SSRN Rank ⁶⁸
1	Yale	3	4
2	Stanford	2	2
3	Harvard	15	1

66. Leiter, *Measuring*, *supra* note 3; Leiter, *Top 50 Law Faculties, 2014 Edition*, BRIAN LEITER’S LAW SCHOOL REPORTS (Sept. 6, 2019, 3:20 PM), <https://leiterlawschool.typepad.com/leiter/2014/11/top-50-law-faculties-2014-edition.html>.

67. *SSRN Top 350 U.S. Law Schools*, SOCIAL SCIENCE RESEARCH NETWORK (Sept. 6, 2019, 2:59 PM), https://hq.ssrn.com/rankings/Ranking_Display.cfm?TMY_gID=2&TRN_gID=13. *See also Top Downloads for: Legal Scholarship Network*, SOCIAL SCIENCE RESEARCH NETWORK (Sept. 6, 2019, 2:56 PM), <https://papers.ssrn.com/sol3/topTen/topTenResults.cfm?groupingId=201&netorjrn1=ntwk>.

68. These SSRN rankings are based on statistics from SSRN’s eLibrary and updated monthly. *SSRN Top 350 U.S. Law Schools*, *supra* note 67.

2019 U.S. News Rank	Law School	IDR Impact Ranks	SSRN Rank ⁶⁹
4	Chicago	19	7
5	Columbia	14	6
6	NYU	16	3
7	Pennsylvania	18	11
8	Michigan	11	10
9	Cal-Berkeley	17	5
9	Virginia	12	16
11	Duke	4	17
11	Northwestern	20	14
13	Cornell	24	26
14	Georgetown	6	9
15	Texas	21	21
16	UCLA	13	12
17	Vanderbilt	9	15
18	Washington University	23	28
19	USC	8	45
20	Minnesota	1	19
21	Cal-Irvine	5	24
22	Boston University	7	20
22	George Washington	10	8
24	Notre Dame	22	39

In our view, the comparisons with Leiter-Sisk, *U.S. News*, and SSRN download rankings suggest that the Interdisciplinary Scholarly Impact Score provides a valuable supplement to the other rankings. The results of this study are sufficiently consistent with other measures of scholarly impact to suggest that they reflect actual differences among faculty. At the same time, the results of this study offer sufficiently different faculty and law school rankings to provide important new information for the overall assessment of scholarly impact. Over the long term, a more accurate and complete assessment of scholarly impact would include a hybrid calculation that combines citations in both legal and nonlegal scholarly publications, which could be called a “Total Scholarly Impact Score,” rather than a Legal Impact Score and Interdisciplinary Impact Score. Regardless of the specific use and weighting of nonlegal citations, and despite the extra effort required, future rankings of scholarly impact by legal scholars should include both types of citations.

69. These SSRN rankings are based on statistics from SSRN’s eLibrary and updated monthly. SSRN Top 350 U.S. Law Schools, *supra* note 67.

Conclusions

Citation counts, reputation surveys, SSRN downloads, and other analyses can provide insights into the scholarly impact of law professors and law faculties, and citation counts are a particularly valuable measure. We have concerns with the concept of presenting a law-only citation count as an expression of a “Scholarly Impact Factor,” however, given the complete dismissal of citations in nonlegal scholarly publications. The exclusion of citations in nonlegal publications in rankings of scholarly impact by legal scholars is understandable given the additional work required to assess nonlegal citations, but it leaves those rankings as incomplete measures of legal impact and undermines efforts to evaluate and promote interdisciplinary research.

Non-law citations provide only a partial assessment of scholarly impact, but an important one. An exclusive focus on law journal citations generates incomplete and potentially skewed scholarly impact assessments of individual scholars and faculties. Many of the most interesting analyses of and responses to social problems over the last several decades have arisen from individuals or teams of scholars who have brought new disciplinary perspectives and methods to bear on old problems. In addition, inclusion of citations from non-law publications will encourage legal scholars to produce scholarship that is sufficiently persuasive that it attracts the attention of scholars in other fields. As in any field, scholarship often begins with a set of assumptions, and since many of the members of the discipline share the assumptions, work that challenges or works outside the assumptions have difficulty getting attention. However, in some cases, the assumptions are unrealistic or outdated and may induce scholars in other fields not to take the work seriously.

Past citation studies have acknowledged that exclusion of citations in nonlegal journals is a shortcoming, but these studies have justified the choice to exclude those citations because of the time and expense of calculating non-law citations. The emergence of Web of Science as a reliable academic citation database has undermined that reasoning for excluding nonlegal citations. In addition, much of the heavy lifting is associated with assembling the lists of scholars who are included in the effort, and those lists can be shared and used for both legal and nonlegal citation counts.

We present the first ranking of law professors and faculties based on citations in non-law journals, which we refer to as the Interdisciplinary Scholarly Impact Score, and we suggest that future rankings calculate a Total Scholarly Impact Score that includes citations in both law and non-law publications. Our work on this topic also suggests the potential value of another concept: an “Index of Insularity,” which would identify the extent to which disciplines cite only work inside the discipline. We have intuitions about which fields would score highly on this measure, but we leave that to another day.