

DECLARATION OF DANIEL MARTIN KATZ

I, Daniel Martin Katz, declare:

1. I am an Associate Professor of Law at the Michigan State University College of Law, where I have taught since 2011. I also serve as the Director & Co-Founder of the Reinvent Law Laboratory. I have personal knowledge of the matters stated in this declaration and could competently testify to them if called as a witness.

Empirical Research in the Field of Law

2. I completed my legal education with a J.D. from the University of Michigan Law School, Cum Laude in 2005, then continued on to receive a Ph.D. Political Science and Public Policy from the University of Michigan in 2011, where my dissertation topic was “Modeling the Law as a Complex Adaptive System.”

3. I serve as an editor of the International Journal of Law and Information Technology (Oxford University Press) and am a member of the American Bar Association Task Force on Big Data and the Law.

4. With my colleagues Michael J. Bommarito II, Julie Seaman, Adam Candeub, and Eugene Agichtein, we published research on the topic of “Legal N-Grams? A Simple Approach to Track the ‘Evolution’ of Legal Language,” Proceedings of JURIX 2011: The 24th International Conference on Legal

Knowledge and Information Systems, Vienna, 2011. In this paper, we used the full corpus of all Supreme Court opinions to demonstrate the evolution over time of legal terms of art and phrases, such as “Clear and Present Danger.” A copy of this paper may be found at this URL:

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1971953

5. With my colleagues Michael J. Bommarito II and Jillian Bommarito, we published research on the topic of “An Empirical Survey of the Population of United States Tax Court Written Decisions,” *Virginia Tax Review*, Vol. 30, No. 2, 2011. This paper may be viewed at this URL:

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1441007

6. In this paper, we analyzed the citation practices of the United State Tax Court between 1990 and 2008, analyzing 11,000 decisions and extracting 244,000 statutory citations to uncover patterns in citation practices, concept relationships, and legislative acts. Among our findings were an analysis of which sections of the Tax Code are discussed and invoked over time, highlighting both expected and unexpected ties between provisions of the Internal Revenue Code.

7. In addition to publishing our summary of findings in a legal journal, we have made our Tax Court data available so that other researchers may continue the analysis without replicating the lengthy data collection process. This practice of making data available for further research has long been a feature in the “hard”

sciences, and we believe bringing it into the legal academy is important to encourage further empirical analysis.

8. With my colleagues Michael J. Bommarito II, Jon Zelner, and James H. Fowler, we published research on the topic of “Distance Measures for Dynamic Citation Networks,” *Physica A*, Vol. 389, pp. 4201-4208, 2010. This paper may be viewed at this URL: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1472037

9. In this research, we applied advanced mathematical techniques to citations to the first quarter century of decisions of the United States Supreme Court. We have then continued this research in a variety of ways to show the evolution of different fields of law (such as admiralty law) over time, to show the importance of key decisions (such as the relative lack of importance of *Marbury v. Madison* as precedent in the earlier years of the court and the increasing importance of that decision near the end of the 19th century. A visualization of these empirical results may be found at the following URL:

<http://computationallegalstudies.com/2010/02/the-development-of-structure-in-the-citation-network-of-the-united-states-supreme-court-now-in-hd/>

10. I have written a review essay that summarizes various ongoing efforts to apply prediction science within the delivery of legal services. Among other things, access to high quality and meaningful data represents a significant limitation on such efforts. The paper is entitled *Quantitative Legal Prediction - or*

- *How I Learned to Stop Worrying and Start Preparing for the Data Driven Future of the Legal Services Industry* and was published in Volume 62 of Emory Law Journal (2013) available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2187752

11. Along with my colleague Michael Bommarito and Josh Blackman from South Texas College of Law, I have published a working paper entitled “*Predicting the Behavior of the United States Supreme Court: A General Approach*” where we use a database of prior voting behavior to forecasting the decisions of the Supreme Court of the United States. Our model achieves roughly 70% accuracy is rigorously backtested over the past sixty years using only information known prior to the decision of the Court. A copy of the paper is currently under review at a major scientific journal and is available at the following URL: <http://arxiv.org/abs/1407.6333>.


The Public Resource Fee Exemption Request

12. Access to the proceedings of a District Court would be an invaluable resource for our own research and for the growing number of scholars who do empirical analysis of the law. Access to the proceedings of two different District Courts would be even more valuable, allowing us to compare decisions in two different jurisdictions.

13. Likewise, full access to the dockets and proceedings at the Appellate level would be a very useful adjunct to our current databases of the U.S. Code, the Tax Court, the Supreme Court, and other related sets of documents.

14. Access to all 4 requested Districts and the Circuit court would of course be ideal, allowing us and our colleagues around the country to conduct research that is simply not possible today. This research will help us analyze the operations of our courts and our system of justice in ways that have not been possible due to the current technical structure of the PACER system.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct, and that this declaration was executed on this 2nd day of April, 2015, at Ann Arbor, Michigan.

By 
Daniel Martin Katz