

The Citizen Lawyer in the Coming Era: Technology is Changing the Practice of Law, but Legal Education Must Remain Committed to Humanistic Learning

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Recommended Citation

Lee, Kevin P. () "The Citizen Lawyer in the Coming Era: Technology is Changing the Practice of Law, but Legal Education Must Remain Committed to Humanistic Learning," *Ohio Northern University Law Review*. Vol. 40: Iss. 1, Article 1.

Available at: https://digitalcommons.onu.edu/onu_law_review/vol40/iss1/1

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**Ohio Northern University
Law Review**

Dean's Lecture Series

**The Citizen Lawyer in the Coming Era: Technology is Changing
the Practice of Law, but Legal Education Must Remain
Committed to Humanistic Learning**

KEVIN P. LEE*

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I. INTRODUCTION

We live in confusing times, as is often the case in periods of historical transition to new forms of society.¹ This is because the intellectual

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categories that we use to understand what happens around us were coined in different circumstances, and we can hardly grasp what is new by referring to the past.² I contend that around the end of the second millennium of the common era a number of major social, technological, economic, and cultural transformations came together to give rise to a new form of society: the network society.³ Traditionally, lawyers have played unique roles as citizens in the American democracy,⁴ but in the period of rapid social, political, economic, and technological changes to which sociologist Manuel Castells refers, their roles in the networked society are changing, too.⁵ Lawyers have always been the advocates for a just society; they have been in the front lines of public discourse about the meaning of justice, and the successes and failures that the polity faces in attempting to achieve a just society.⁶ For many lawyers, working with victims of societal ills leads to engagement in public discourse.⁷ Lawyers have played a significant role by applying their skills and knowledge to preserve and enhance the institutional structures that maintain the vitality of the democracy.⁸ The public service that the profession provides to the polity, as advocates for justice and social welfare in matters large and small, has promoted the respect and reputation of the rule of law.⁹ The *ABA Model Code of Professional Responsibility* (“MCPR”) continues to view lawyers as essential to the vitality of a democratic polity.¹⁰

1. See MANUEL CASTELLS, *THE RISE OF THE NETWORK SOCIETY* 4 (2d ed. 2000).

2. See *id.* at 508-09.

3. See *id.* at 1-3.

4. See ALEXIS DE TOCQUEVILLE, *DEMOCRACY IN AMERICA* 251 (Harvey C. Mansfield & Delba Winthrop eds. & trans., Univ. of Chicago 2000). Alexis De Tocqueville stated:

When one visits Americans and when one studies their laws, one sees that the authority they have given to lawyers and the influence that they have allowed them to have in the government form the most powerful barrier today against the lapses of democracy. This effect seems to me to have a general cause that is useful to inquire about, for it can be reproduced elsewhere.

Id.

5. See CASTELLS, *supra* note 1, at 13; See Daniel Martin Katz, *Quantitative Legal Prediction—or—How I Learned to Stop Worrying and Start Preparing for the Data Driven Future of the Legal Services Industry*, 62 EMORY L.J. 909, 910-11, 913-14 (2013).

6. MODEL CODE OF PROF'L RESPONSIBILITY pmb1. (1980).

7. *Id.*

8. *Id.*

9. *Id.*

10. *Id.* The Model Rules of Professional Conduct describes the role of the lawyer in the United States as follows:

A lawyer, as a member of the legal profession, is a representative of clients, an officer of the legal system and a public citizen having special responsibility for the quality of justice. As a representative of clients, a lawyer performs various functions. As advisor, a lawyer provides a client with an informed understanding of the client's legal rights and obligations and

It should be of some concern then that the legal profession is experiencing a period of massive change.¹¹ Major news sources of record, like the *New York Times*,¹² the *Washington Post*,¹³ and the *Wall Street Journal*,¹⁴ have reported on the recent decline of the profession, and noted the near collapse in the applicant pool of prospective law school students. While some of this decline is likely due to the Great Recession of 2008, there is some indication that a decline in legal services preceded the recession, and that it has not recovered.¹⁵ The now well-recognized crisis in legal education is a symptom of the changes that the legal services segment is facing. Recent works by Richard Susskind,¹⁶ Paul Campos,¹⁷ Brian Tamanaha,¹⁸ Daniel Katz,¹⁹ and William Henderson²⁰ chronicle the dramatic challenges to the continued viability of many law schools. There is an emerging sense of crisis that is driving reform in legal education.²¹ Many seek to re-evaluate the nature of legal education, legal scholarship, and the

explains their practical implications. As advocate, a lawyer zealously asserts the client's position under the rules of the adversary system. As negotiator, a lawyer seeks a result advantageous to the client but consistent with requirements of honest dealings with others. As an evaluator, a lawyer acts by examining a client's legal affairs and reporting about them to the client or to others.

Model Rules of Prof'l Conduct pmb1. (1983).

11. For a general description of the economic conditions influencing the legal sector, see Daniel Thies, *Rethinking Legal Education in Hard Times: The Recession, Practical Legal Education, and the New Job Market*, 59 J. LEGAL EDUC. 598, 599-600 (2010).

12. See Stanley Fish, *The Bad News Law Schools*, N.Y. TIMES OPINIONATOR BLOG (Feb. 20, 2012, 9:00 PM), http://opinionator.blogs.nytimes.com/2012/02/20/the-bad-news-law-schools/?_r=0.

13. See Charles Lane, *Book Review: 'Failing Law Schools' by Brian Z. Tamanaha*, WASH. POST (Aug. 3, 2012), http://www.washingtonpost.com/opinions/book-review-failing-law-schools-by-brian-z-tamanaha/2012/08/03/e7054c9c-c6df-11e1-916d-a4bc61efcad8_story.html.

14. See Jennifer Smith, *Crop of New Law Schools Opens Amid a Lawyer Glut*, WALL ST. J. (Jan. 31, 2013), <http://online.wsj.com/article/SB10001424127887323926104578276301888284108.html>.

15. See William D. Henderson & Rachel M. Zahorsky, *Law Job Stagnation May Have Started before the Recession—And it May be a Sign of Lasting Change*, A.B.A. J. (Jul. 1, 2011), http://www.abajournal.com/magazine/article/paradigm_shift.

16. RICHARD SUSSKIND, *TOMORROW'S LAWYER: AN INTRODUCTION TO YOUR FUTURE* 132 (2013).

17. PAUL CAMPOS, *DON'T GO TO LAW SCHOOL (UNLESS): A LAW PROFESSOR'S INSIDE GUIDE TO MAXIMIZING OPPORTUNITY AND MINIMIZING RISK* 1 (2012).

18. BRIAN Z. TAMANAHA, *FAILING LAW SCHOOLS* ix-xiii (John M. Conley & Lynn Mather eds., 2012).

19. See Katz, *supra* note 5, at 913.

20. William Henderson, *A Blueprint for Change*, 40 PEPP. L. REV. 461, 462 (2013).

21. A number of news sources have described a crisis among legal academics. See, e.g., Mark Nuckols, *Legal Education Crisis: Schools Need to Cut the Fluff*, HUFFINGTON POST (Mar. 12, 2013), http://www.huffingtonpost.com/mark-nuckols/legal-education-crisis-sc_b_2863170.html; Paul Lippe, *Why Waste the Crisis in Legal Education?*, A.B.A. J. (Mar. 7, 2013), <http://www.abajournal.com/legalrebels/article/lawschool.next>; Katherine Mangan, *Accountability and Flexibility are Said to be Keys to the Crisis in Legal Education*, CHRON. OF HIGHER EDUC. (Apr. 24, 2013), <http://chronicle.com/article/AccountabilityFlexibility/138767/?cid=pm>.

place of the law school in the academy.²² Susskind, Campos, Tamanaha, Katz, and Henderson have developed narratives of decline that suggest that the legal services sectors of the economy are restructuring, that the demand for new lawyers is shrinking, that low-cost alternatives to traditional lawyering are developing; however, legal education has been slow to recognize and respond to these changes.²³ Campos, Tamanaha, and Henderson argue that legal education is simply too expensive to be justified by the declining starting salary²⁴ for what Campos calls the “80% rule” of down-market graduates.²⁵ Others look to the structural changes in the profession.²⁶ In the near future, lawyers may find their roles marginalized by procurement officers and others with skill sets, including supply-chain management and project management, in complex transactions.²⁷ According to a number of influential sources, a substantial force (but not the exclusive force) behind these changes is new technology, which is driving down the cost of basic legal research and analysis.²⁸ For example, in his recent book, *Tomorrow’s Lawyers*, Richard Susskind argues that three factors are changing the legal profession.²⁹ The first factor is the need for lower-cost legal services.³⁰ The cost of legal services has grown disproportionately as a percentage of the GDP, and corporations are less willing to pay for high-cost legal fees when quality services can be found.³¹ Second, Susskind notes the liberalization of practice rules, which allows for greater participation by alternative legal services providers—providers who are not licensed lawyers.³² Finally, he looks to the information technology’s potential to increase productivity and lower costs for traditional and non-traditional legal service providers.³³

22. See, e.g., TAMANAHA, *supra* note 18, at 168-82.

23. See SUSSKIND, *supra* note 16, at xiv-xv; see also CAMPOS, *supra* note 17, at 39; TAMANAHA, *supra* note 18, at 182; Katz, *supra* note 5, at 909-13; Henderson & Zahorsky, *supra* note 15.

24. See CAMPOS, *supra* note 17, at xiii; TAMANAHA, *supra* note 18, at x-xi; Henderson, *supra* note 20, at 973.

25. CAMPOS, *supra* note 17, at 19.

26. See Katz, *supra* note 5, at 909.

27. Daniel Currell & M. Todd Henderson, for example, note the steady increase in revenue for legal service providers throughout the 2008 great recession. See Daniel Currell & M. Todd Henderson, *Can Lawyers Stay in the Driver’s Seat?*, 8, 34 (U. Chi. Inst. for L. & Econ., Working Paper No. 629, 2013), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2201800. They draw an analogy to architects who once had oversight over construction projects but lost out to general contractors who orchestrate workflow and logistics. *Id.* They argue that lawyers need to gain project management skills to avoid a similar fate. See *id.*

28. See SUSSKIND, *supra* note 16, at 3.

29. *Id.*

30. *Id.* at 4-5.

31. See *id.*

32. See *id.* at 5-6.

33. See SUSSKIND, *supra* note 16, at 10-11.

The latter phenomenon, the “legal information revolution,”³⁴ is the focus of this essay.³⁵ Shifts in thinking about the nature of law support these new trends.³⁶ The idea that law is essentially an information system (an idea associated with Niklas Luhmann)³⁷ has generated interest in applying advanced computing and specialized forms of data analysis to describe the structure of legal reasoning.³⁸ The ability to aggregate and search massive amounts of data, along with artificial intelligence technology, can now be applied to legal research and analysis.³⁹ The emerging results enable better legal research and analysis at lower cost.⁴⁰ While there are many technical details to be worked out before these new advances can be brought to market, major research centers are developing early applications.⁴¹ This new technology (along with legal outsourcing,

34. See Bruce H. Kobayashi & Larry E. Ribstein, *Law's Information Revolution*, 53 ARIZ. L. REV. 1169, 1169 (2011); see also Larry E. Ribstein, *The Death of Big Law*, 2010 WIS. L. REV. 749, 752 (2010).

35. See *infra* Part II.

36. See Claire M. Germain, *Legal Information Management in a Global and Digital Age: Revolution and Tradition* 3 (Cornell Law Sch. Legal Studies Research, Working Paper No. 07-005, 2007), available at <http://scholarship.law.cornell.edu/cgi/viewcontent.cgi?article=1087&context=ijli>.

37. For a discussion of Luhmann's theory of law, see ANDREAS PHILIPPOPOULOS-MIHALOPOULOS, NIKLAS LUHMANN: LAW, JUSTICE, SOCIETY 105 (2011).

38. See Kobayashi & Ribstein, *supra* note 34, at 1171-72.

39. See *id.* at 1194-96.

40. See *id.* at 1192.

41. See, e.g., *CodeX: The Stanford Center for Legal Informatics – Overview*, STANFORD LAW SCHOOL, <http://www.law.stanford.edu/organizations/programs-and-centers/codex-the-stanford-center-for-legal-informatics> (last visited Sept. 29, 2013).

Computational law is an innovative approach to legal informatics stemming from many of the advances described above. Through Computational Law, regulations may be formally represented as behavioral constraints operating in explicitly modeled, dynamic environments. Even modest success in this area will enable superior technologies for: (i) finding, aggregating, and disseminating regulatory information; (ii) decision-making, compliance checking, and ex ante regulatory enforcement; and (iii) analyzing and synthesizing regulations. A strength of the Computational Law approach is its core recognition of ambiguity and inconsistency in the law. By attempting to isolate elements of the law which are standardizable, to differentiate between routine procedures and decision points requiring professional analysis, CodeX seeks to foment greater efficiency in both. Where, for example, national legal treatises may sometimes overgeneralize, and gloss over jurisdictional variation, Computational Law seeks the opposite result: Leveraging Internet architectures and advanced data protocols to manifest the most substantively and jurisdictionally specific code possible. Where much scholarship pursues necessarily oversimplified models of immensely complex social interactions, our goal is often the inverse: To architect ideal models which – through public or private ratification – constitute the legal framework of their respective users.

CodeX: The Stanford Center for Legal Informatics - Background, STANFORD LAW SCHOOL, <http://www.law.stanford.edu/organizations/programs-and-centers/codex-stanford-center-for-computers-and-law/background> (last visited Sept. 29, 2013).

which also has some impact)⁴² is already changing the way lawyers practice, and driving change in the structure of the legal services sector of the economy.⁴³ As new products come online, the change will accelerate, and the place of the lawyer in the American democracy will also evolve.⁴⁴ It is difficult to assess the importance of these developments for the quality of the American democracy.⁴⁵ Optimistic predictions tout the benefits of lower cost legal services, which will undoubtedly lead to greater access for the lower-middle class and poor.⁴⁶ While this is laudable, there will also, without a doubt, be negative consequences to the automation of law.⁴⁷ Theoretical understandings of the law and of its role in democracy will be significantly shaped by the methodological presuppositions of the approaches that will effectuate the new technology.⁴⁸ Predictability is the central virtue of law for automated research and practice.⁴⁹ In the coming, data-driven era, law is an information technology, which has meaning primarily in the regularity and predictability of order it brings to society.⁵⁰ Lawyering in such a future would be much more like engineering than statesmanship.⁵¹

Nonetheless, this essay defends humanistic education (described herein) as necessary for the formation of citizen lawyers who are the artisans of democratic citizenship.⁵² Part I is this introduction.⁵³ Part II examines the technology that is creating the changes on the horizon.⁵⁴ It focuses primarily on attempts to view law as an information technology, reviewing

42. See Jayanth K. Krishnan, *Outsourcing and the Globalizing Legal Profession*, 48 WM. & MARY L. REV. 2189, 2193-94 (2007).

43. See generally Donald H. Berman & Carole D. Hafner, *The Potential of Artificial Intelligence to Help Solve the Crisis in Our Legal System*, 32 COMM'NS OF THE ASS'N FOR COMPUTING MACH. 928, 928 (1989).

44. See Kobayashi & Ribstein, *supra* note 34, at 1218-19.

45. See David Nuffer, *The Future of Legal Systems, the Legal Profession, and the Rule of Law: A Paradigm for a Season of Change*, 13 UTAH B. J. 9, 12 (2000) ("The Texas Bar stood against technology and democracy when it attempted to declare that Quicken Family Lawyer was engaging in the unauthorized practice of law.").

46. See, e.g., Renee Newman Knake, *Cultivating Learners Who Will Invent the Future of Law Practice: Some Thoughts on Educating Entrepreneurial and Innovative Lawyers*, 38 OHIO N.U. L. REV. 847, 853-54 (2012).

47. See Kobayashi & Ribstein, *supra* note 34, at 1219.

48. See *id.*

49. See Tanya L. Yarbrough, Note, *Connecting the World: The Development of the Global Information Infrastructure*, 53 FED. COMM. L.J. 315, 317 (2001).

50. See *id.* at 331 (quoting DAVID N. TOWNSEND, BRIEFING REPORT ON TELECOMMUNICATIONS REGULATORY ISSUES FOR ELECTRONIC COMMERCE 14-15 (1999)).

51. The metaphor of lawyer as engineer has been advanced by Daniel Katz, who imagined the future of legal education by speculating about what a law school would be like if it were a part of the Massachusetts Institute of Technology. See Katz, *supra* note 5, at 965-66 nn. 238, 241.

52. See *infra* Part V.

53. See *supra* Part I.

54. See *infra* Part II.

some presuppositions of these efforts and some of the resulting applications that are emerging.⁵⁵ Part III considers the plight of the middle class lawyer, who is increasingly feeling the influences from emerging cognitive systems that allow for the automation of routine components of legal work.⁵⁶ The most well-known example of this sort of automation is e-discovery, but there are many other innovative legal applications of automation that are becoming available, and many more on the way.⁵⁷ Part IV looks at the challenges facing legal education,⁵⁸ while Part V assesses some implications of the technological developments for legal education.⁵⁹ Part V reviews the proposals of a number of law professors who are calling for reform in the law school curriculum in light of the changed economic circumstances, paying particular attention to William Henderson's recent work.⁶⁰ Further, Part V advocates an alternative view, rooted in the humanities, that is responsive to the needs of both society and the law student to be able to think critically about intercultural issues and deal effectively with nuanced differences in viewpoint.⁶¹ Part VI concludes the essay by citing to Plato's early work, the "Statesman."⁶²

II. THE TECHNOLOGY DRIVING CHANGE

Lawyers have been using computers in legal practice for several decades.⁶³ What is different about the contemporary information revolution that makes it transformative?⁶⁴ The answer to this question has to do with the radical changes that are occurring in computing and networking that are allowing the creation of massive, searchable databases.⁶⁵ As the first industrial revolution involved the replacement of human and animal physical power by mechanized inventions,⁶⁶ today's revolution in cognitive computing is allowing sophisticated computing networks with increasing cognitive abilities to perform routine mental operations.⁶⁷ This change

55. See *infra* Part II.

56. See *infra* Part III.

57. See *infra* Part III.

58. See *infra* Part IV.

59. See *infra* Part V.

60. See *infra* Part V.

61. See *infra* Part V.

62. See *infra* Part VI.

63. See *A Brief History of the Society for Computers & Law*, SOC'Y FOR COMPUTERS & LAW, <http://www.scl.org/site.aspx?i=pg16690> (last visited Sept. 29, 2013). The Society for Computers and Law was founded in 1973. *Id.*

64. See Kobayashi & Ribstein, *supra* note 34, at 1218-20.

65. See *id.* at 1199.

66. See Bradford L. Smith, *The Third Industrial Revolution: Policymaking for the Internet*, 3 COLUM. SCI. & TECH. L. REV. 1, 1-2 (2001).

67. See CHRISTOPHER STEINER, AUTOMATE THIS: HOW ALGORITHMS CAME TO RULE OUR WORLD 217 (2012). Two economists, Eric Brynjolfsson and Andrew P. McAfee, in a landmark paper,

allows for human-machine *complementarity* with unprecedented levels of intricate intimacy.⁶⁸

Two innovations allow for this change. One is the development of extremely low-cost computer memory, which allows for the accumulation of ubiquitous legal data in the form of legal sources and documents, ranging from court opinions to pleadings to forms.⁶⁹ Court papers at every level, from the Supreme Court of the United States to local, state trial courts, from opinion and judgments to pleading and filing receipts, are available for online search and retrieval; along with substantial information about the legal agent-actors—the judges, lawyers, litigants, and other persons who can influence the outcomes of disputes.⁷⁰ This is the so-called “Big Data” of the legal services industry.⁷¹ The term “Big Data” refers to massive amounts of unstructured data that arise in everyday, real-life situations, and are being recorded in greater numbers today due to the rise of networked sensor systems and new social media.⁷²

The second development is the recent explosion of massively networked computing with vast computational power.⁷³ “[C]ognitive computing systems[?] learn and interact naturally with people to extend what either man or machine could do on their own. They help human experts make better decisions by penetrating the complexity of Big Data.”⁷⁴ Cognitive computing systems have the ability to identify significant patterns

describe how “[m]any workers, in short, are losing the race against the machine.” *Id.* The economists warn white-collar workers to prepare to be replaced. *See id.*

68. For a discussion of the possibilities for machine/human complementarity, see *id.* at 215-16.

69. *See* Kobayashi & Ribstein, *supra* note 34, at 1192-1207.

70. *See, e.g.*, Court Records, UNITED STATES CTS., <http://www.uscourts.gov/CourtRecords.aspx> (last visited Sept. 29, 2013); Case Docket, CUYAHOGA CNTY. CLERK OF CTS., <http://www.coc.cuyahogacounty.us> (last visited Nov. 5, 2013).

71. *See* Katz, *supra* note 5, at 916; Tam Harbert, *Big Data Meets Big Law: Will Algorithms be Able to Predict Trial Outcomes?*, LAW TECH. NEWS (Dec. 27, 2012), <http://www.law.com/jsp/lawtechnologynews/PubArticleLTN.jsp?id=1202555605051>; Farhad Manjoo, *Will Robots Steal Your Job? Software Could Kill Lawyers. Why That's Good for Everyone Else*, SLATE (Sept. 29, 2011), http://www.slate.com/articles/technology/robot_invasion/2011/09/will_robots_steal_your_job_5.html; Jeff Gray, *Welcome to Robot, Android & Automaton LLP*, GLOBE & MAIL (June 14, 2011), <http://www.theglobeandmail.com/report-on-business/industry-news/the-law-page/welcome-to-robot-android-automaton-llp/article4261559>; Nolan M. Goldberg & Micah W. Miller, *The Practice of Law in the Era of 'Big Data,'* NAT'L LAW J. (Apr. 9, 2011), http://www.law.com/corporatecounsel/PubArticleCC.jsp?id=1202490617573&The_Practice_of_Law_in_the_Era_of_Big_Data. *See also* Neil Rickman & James M. Anderson, *Innovations in the Provision of Legal Services in the United States: An Overview for Policymakers*, RAND INST. FOR ENTREPRENEURSHIP PUB. POL'Y (2011), http://www.rand.org/content/dam/rand/pubs/occasional_papers/2011/RAND_OP354.sum.pdf.

72. *See* IBM Big Data Platform: *Bringing Big Data to the Enterprise*, IBM, <http://www-01.ibm.com/software/data/bigdata> (last visited Nov. 15, 2013).

73. *See* SUSSKIND, *supra* note 16, at 10-11.

74. *Cognitive computing: Artificial intelligence meets business intelligence*, IBM RESEARCH, <http://www.research.ibm.com/cognitive-computing/index.shtml> (last visited Sept. 19, 2013).

in the massive amounts of unstructured data.⁷⁵ This is a new development, which makes it possible for computers to mine the unstructured data of case law, statutes, regulations, and other sources of law or legal information for relevant correlations and connections.⁷⁶

A. Low Cost Memory Storage

An well-known agency case from the 1970s, *Three-Seventy Leasing Corp. v. Ampex Corp.*,⁷⁷ involves the sale and purchase of six “core memory units” with a total capacity of three megabytes and a total cost of approximately \$600,000, or about \$200,000 per megabyte.⁷⁸ Today, it is possible to buy one thousand times as much memory for less than \$0.03.⁷⁹ In the 1970s, the exorbitant cost of memory limited its use to only the largest computer firms (*Three-Seventy Leasing Corp.* involved EDS, the company that Ross Perot sold to General Motors), but today the retail consumer can make use of terabytes of information.⁸⁰ Large corporate users and social networking sites like Facebook annually collect many “petabytes” (one quadrillion bytes)⁸¹ of data.⁸² But soon, rather than petabytes of data, some predict that organizations will store multiple

75. A white paper prepared for IBM describes cognitive systems this way:

The development of cognitive systems is premised on the conviction that machines can be designed and built that can assemble evidence and develop logical hypotheses, thus improving people’s ability to make well-informed decisions. These systems are able to learn – that is, to receive queries in natural language, form and evaluate hypotheses, return responses that are relevant, and in the process integrate new information and discover new patterns. They represent a step beyond currently available systems in that they can actively assist human users in decision-making rather than simply providing neutral input.

VENTANA RESEARCH, COGNITIVE SYSTEMS REDEFINE BUSINESS POTENTIAL: ADAPTIVE INTELLIGENCE CAN HELP TO OPTIMIZE DECISION-MAKING 3 (2012) [hereinafter IBM White Paper], available at http://www03.ibm.com/innovation/us/watson/pdf/cognitive_systems_2012.pdf http://www03.ibm.com/innovation/us/watson/pdf/cognitive_systems_2012.pdf.

76. *See id.*

77. 528 F.2d 993 (5th Cir. 1976).

78. *Id.* at 995.

79. Robin Harris, *Hard Drive Prices (and Innovation) Decline*, ZDNET (Apr. 2, 2013), <http://www.zdnet.com/hard-drive-prices-and-innovation-decline-7000013399/>.

80. *Three-Seventy Leasing Corp. v. Ampex Corp.*, 528 F.2d at 995; *Ross Perot: The Billionaire Boy Scout*, ENTREPRENEUR (Oct. 9, 2008), <http://www.entrepreneur.com/article/197682>; Katz, *supra* note 5, at 917.

81. *See* Rich Miller, *Facebook Builds Exabyte Data Centers for Cold Storage*, DATA CTR. KNOWLEDGE (Jan. 18, 2013), <http://www.datacenterknowledge.com/archives/2013/01/18/facebook-builds-new-data-centers-for-cold-storage/>.

82. *Facebook: 100 Petabytes becomes Exabytes Not Too Far Off in the Future*, BITSHARE, <http://bitshare.cm/post/25949358463/facebook-100-petabytes-becomes-exabytes-not-too-far> (last visited Nov. 7, 2013).

zettabytes (a billion terabytes) annually.⁸³ The massive rate of decline in memory storage cost follows Kryder's law, which predicts an exponential decline in cost for the foreseeable future.⁸⁴ Daniel Katz explains:

Kryder's Law . . . holds that the decrease in data storage costs follow a pattern similar to, if not exceeding, the pace of the corresponding increase in transistor count. This decrease in storage cost is a key component in the rise of Big Data. Indeed, many commentators have identified this as the age of Big Data and those prepared to deal this data deluge will drive productivity, innovation, and the future of the economy.⁸⁵

The availability of massive storage capabilities at consumer prices allows for unprecedented information processing and utilization by individuals at a level of information analysis that was, until recently, only available to industrial and institutional decision makers.⁸⁶

B. Moore's Law and Computer Power

Moore's Law,⁸⁷ named after a speculation advanced by Gordon Moore in 1965, is more widely-known than Kryder's law.⁸⁸ Moore predicted that the transistor count of computer processors would continue to double every twelve to twenty-four months.⁸⁹ Because the transistor count determines a computer's processing speed,⁹⁰ his prediction was an assessment of

83. For a discussion of Facebook's storage challenges, see Miller, *supra* note 81; see also IBM White Paper, *supra* note 75, at 5.

84. See Katz, *supra* note 5, at 916.

85. *Id.* The current rate of increase in hard drive capacity is roughly similar to the rate of increase in transistor count. Recent trends show that this rate has been maintained into 2007. *Id.* at 914-16. See also Chip Walter, *Kryder's Law*, SCIENTIFIC AMERICAN (last visited Apr. 5, 2014), <http://www.scientificamerican.com/article/kryders-law/> (describing the work of Mark Kryder and the fact that magnetic disk areal storage density is increasing very quickly, at a pace much faster than the doubling transistor count occurring every eighteen months in Moore's Law."); See also Moore's Law, INTEL, <http://web.archive.org/web/20110629140637/http://www.intel.com/technology/mooreslaw/> (last visited Nov. 6, 2013).

86. See Katz, *supra* note 5, at 917.

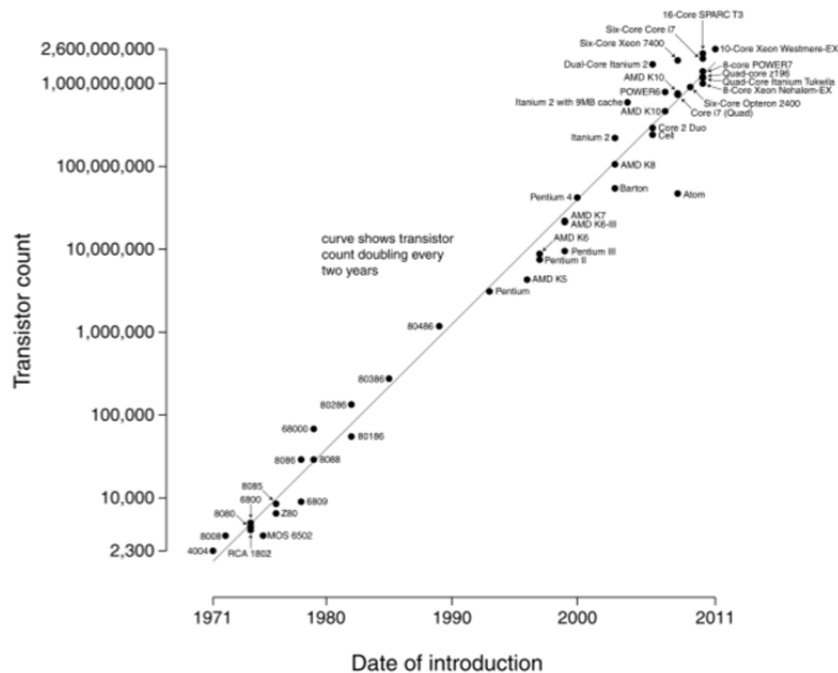
87. *Bezos Law*, 2600HZ BLOG (July 16, 2013, 10:31 AM), blog.2600hz.com/post/55614383443/bezos-law.

88. See Gordon E. Moore, *Cramming More Components onto Integrated Circuits*, ELECS., Apr. 19, 1965, at 114-17 fig. 3, reprinted in 86 PROCEEDINGS OF THE IEEE 1, 82-85 (1998); see also *Transistors to Transformations*, INTEL, <http://www.intel.com/content/dam/www/public/us/en/documents/corporate-information/museum-transistors-to-transformations-brochure.pdf> (last visited Nov. 7, 2013).

89. See Moore, *supra* note 88, at 84 fig. 3.

90. See generally *Transistors to Transformations*, *supra* note 88. Note that in some years, the computing speed is higher even with lower transistor counts, leading to an alternative perspective indicating that higher transistor counts enable the ability to integrate more capabilities on a chip and increase device complexity. See *id.*

computing speed.⁹¹ It has proven to be an accurate description of the development of computational ability for over forty years.⁹² An often used graph⁹³ illustrates the rapidity of computation growth under Moore's law:



C. Cognitive Systems

Increased processing speed alone, while significant in itself, is not the entire story.⁹⁴ The vast amounts of information that are gathered today are often not amenable to analysis by conventional means.⁹⁵ Facebook, for example, gathers volumes of information each year about its users, but little of that information arrives as neatly structured data.⁹⁶ It comes in many forms, from photographs and videos, to “likes,” “friend lists,” and privacy

91. See *Bezos Law*, *supra* note 87.

92. See Jeremy A. Kaplan, *45 Years Later, Does Moore's Law Still Hold True?*, FOXNEWS (Jan. 4, 2011), <http://www.foxnews.com/tech/2011/01/04/years-later-does-moores-law-hold-true/>.

93. Katz, *supra* note 5, at 915 fig 2.

94. See *id.* at 918.

95. See *id.* at 916.

96. See Miller, *supra* note 81.

preferences.⁹⁷ All of these elements (and many more) might have significant correlations, which would be of interest to marketers and Facebook designers.⁹⁸ But it is not neatly packageable into spreadsheets and standard databases.⁹⁹ The phrase Big Data refers in part to the unstructured nature of the vast collections of information that are now the object of analysis.¹⁰⁰

New techniques of analysis and computing are needed to meet the needs of Big Data. The term “predictive coding” is loosely used to describe the use of algorithms to replace aspects of human cognition in the analysis of Big Data.¹⁰¹ While there are many techniques that fall under the broad heading of “predictive coding,”¹⁰² one development that has great potential to influence legal practice is broadly known as “cognitive computing.”¹⁰³ IBM’s Watson computer is an example of what can now be achieved with cognitive systems.¹⁰⁴ Watson came to national attention in the winter of 2011 when it appeared as an automated contestant on the TV game show, “Jeopardy.”¹⁰⁵ Despite some amusing erroneous statements, the system outperformed the human competition.¹⁰⁶ Watson is a cognitive system that learns as it encounters and works with data.¹⁰⁷ One source explains,

Cognitive systems use recursive feedback cycles to improve the quality of their situation-specific guidance. In other words, the computer is programmed to continue learning as it receives and processes new data. The sophisticated learning algorithms deployed in a cognitive system enable the computer to process and respond to actual outcomes rather than relying solely on speculative forecasts or anticipated results.¹⁰⁸

97. See *id.*; see also Donna Tam, *Facebook Processes More than 500 TB of Data Daily*, CNET (Aug. 22, 2012), http://news.cnet.com/8301-1023_3-57498531-93/facebook-processes-more-than-500-tb-of-data-daily/.

98. See Katz, *supra* note 5, at 954.

99. See *id.* (giving the example of algorithmically matching songs).

100. See *id.* at 916.

101. See, e.g., Melissa Whittingham et al., *Predictive Coding: E-Discovery Game Changer?*, 2 EDDE J. 11, 11 (2011).

102. See, e.g., *id.* at 11-12 (indicating that many predictive coding services fall under the broad heading and vary significantly in their usefulness and capabilities).

103. See IBM White Paper, *supra* note 75, at 3.

104. See *id.* at 3, 8; see also *Cognitive Computing: Artificial Intelligence Meets Business Intelligence*, IBM RESEARCH, <http://www.research.ibm.com/cognitive-computing/index.shtml> (last visited Sept. 19, 2013).

105. Seth Borenstein & Jordan Robertson, *IBM ‘Watson’ Wins: ‘Jeopardy’ Computer Beats Ken Jennings*, Brad Rutter, HUFFINGTON POST (May 25, 2011), http://www.huffingtonpost.com/2011/02/17/ibm-watson-jeopardy-wins_n_824382.html.

106. See *id.*

107. See IBM White Paper, *supra* note 75, at 3, 8.

108. See *id.* at 4.

The significance of cognitive systems has to do with their ability to analyze tremendous amounts of data without relying on pre-set algorithms.¹⁰⁹ A cognitive system can analyze large amounts and different types of data through machine-based learning, which actually improves as it operates.¹¹⁰ As it turns out, human beings have a fairly limited capacity to analyze data.¹¹¹ “The amount of unstructured data available [through remote sensors and] on the Internet is [vast and growing] exponentially.”¹¹² Human beings cannot analyze data in such large amounts, but cognitive systems, like Watson, are able to do so.¹¹³

D. Cognitive Systems, “Big Data,” and the Law

Applied to the Big Data of law, cognitive systems hold the potential for significant change.¹¹⁴ Systems like IBM’s Watson allow for the use of powerful algorithms, which enable the automation of legal research and legal analysis.¹¹⁵ The emerging technology views law as information, and uses information processing and technology developed for web searches and data mining to discover the relationships among legal documents and legal outcomes.¹¹⁶ The availability of the same technology that allows for the mining and manipulation of massive databases such as Facebook, iTunes, Google Search, and other Big Data, allows law to be searched quickly, and also permits the prediction of legal outcomes based on the analysis of conditional probabilities, using methods such as Bayesian analysis.¹¹⁷

These new technologies have already led to new, sophisticated practice tools.¹¹⁸ Bruce Kobiyashi and Larry Ribstein explain, “Like other mass-produced products, legal information or software products can reduce the costs of legal information compared to one-to-one legal advice of comparable quality by systemizing procedures and aggregating information.”¹¹⁹ This allows for the creation of innovative products, which

109. *See id.*

110. *See id.*

111. *See Katz, supra note 5, at 629.*

112. *See IBM White Paper, supra note 75, at 5.*

113. *See Katz, supra note 5, at 929; see also IBM White Paper, supra note 75, at 3.*

114. *See Whittingham et al., supra note 101, at 11-13.*

115. For a discussion of IBM’s Watson’s application to legal services, *see Mariella Moon, IBM’s Watson SuperComputer Has a New Job, as a Lawyer*, DIGITAL TRENDS (Mar. 13, 2013), <http://www.digitaltrends.com/computing/watson-usc-competition/>.

116. *See Katz, supra note 5, at 954.*

117. *See id.* at 941; *see also generally* Blakeley B. McShane et al., *Predicting Securities Fraud Settlements and Amounts: A Hierarchical Bayesian Model of Federal Securities Class Action Lawsuits*, 9 J. EMPIRICAL STUD. 482, 495 (2012).

118. *See, e.g., Whittingham et al., supra note 101, at 11.*

119. Kobayashi & Ribstein, *supra note 34, at 1194.*

are disrupting the legal services industry.¹²⁰ This points beyond simple legal forms that are available online and through providers like LegalZoom.¹²¹ Significantly, in the area of commercial law, they note a particularly interesting development:

More sophisticated software can assist larger firms in constructing complex corporate contracts. For example, ContractExpress DealBuilder enables organizations to automate contract construction using web-based templates, questionnaires, and other materials. ContractExpress has partnered with Koncision Contract Automation, LLC to incorporate that firm's techniques for increasing the clarity and reducing the length of business agreements. Weagree.com also provides an online drafting wizard, model contracts and clauses, a drafting manual, and customized contract drafting services.¹²²

Similar developments are occurring in other areas of the law, and some are influencing the economics of practice by coordinating auctions where clients benefit from lowest cost bidders from legal service providers.¹²³ Efforts to produce such products are particularly impacting corporate counsel, and having a rippling effect throughout the profession.¹²⁴

III. THE VANISHING MIDDLE CLASS LAWYER

It seems clear then that a consequence of the new technology will be competition between law firms and computing firms and other non-legal professionals to provide some of the routine components of legal services, such as e-discovery, automated contract review, the use of intelligent forms, predictive analysis, and many other discrete tasks.¹²⁵ These tasks can be automated, and a number of researchers are working on bringing products to market that will increase the productivity of lawyers, and enable non-lawyers to provide some of the component legal services.¹²⁶ The labor

120. See generally *id.* at 1220.

121. See *id.* at 1194.

122. *Id.*

123. See e.g., *Competitive Law Firm Event for Corporate Legal Departments (Reverse Auctions for Legal Services)*, ARGOPPOINT, <http://www.argopoint.com/outside-counsel-reverse-auctions/legal-services-reverse-auctions/> (last visited Nov. 7, 2013).

124. See Kobayashi & Ribstein, *supra* note 34, at 1220.

125. See *id.* at 1214-15; see also, e.g., *Clearwell eDiscovery Platform, Now from Symantec*, SYMANTEC, http://www.symantec.com/page.jsp?id=ediscovery-platform&header=0&depthpath=0&om_sem_cid=biz_sem_nam_us_Google_eDiscovery&mktsrc=paidsearch (last visited Nov. 8, 2013); *Bluestreak Automatic Contract Review*, THROUGHPUT BLUESTREAK <http://go-bluestreak.com/bluestreak-solutions/automatic-contract-review> (last visited Nov. 8, 2013).

126. See Kobayashi & Ribstein, *supra* note 34, at 1194-96.

market for lawyers will undoubtedly be impacted by these changes.¹²⁷ United Auto Workers chief, Walter Reuther, shared this anecdote:

I went through this Ford engine plant about three years ago, when they first opened it. There are acres and acres of machines, and here and there you will find a worker standing at a master switchboard, just watching, green and yellow lights blinking off and on, which tell the worker what is happening in the machine. One of the management people, with a slightly gleeful tone in his voice said to me, “How are you going to collect union dues from all these machines?” And I replied, “You know, that is not what’s bothering me. I’m troubled by the problem of how to sell automobiles to these machines.”¹²⁸

Reuther’s story suggests why labor unions have long opposed automation.¹²⁹ Robots are competition for human laborers.¹³⁰ While the automation that transformed the automobile assembly line focused mostly on replacing human physical action with more precise and tireless robotics,¹³¹ the coming technological revolution will be focused on replacing human routine mental effort with efficient, productive cognitive systems that will outperform human beings in delivering repetitive tasks.¹³² As cognitive systems grow in capabilities, they can surpass human beings in basic cognitive functions.¹³³

While the precise impact of technology on the job market for lawyers remains unclear, there has been a longstanding concern among some liberal economists over the possibility that technology could vastly transform the nature and role of work.¹³⁴ As early as 1932, John Maynard Keynes, for example, was concerned with what he called “technological

127. *See id.*

128. WALTER P. REUTHER, *The Future of American Education – A Labor View: Address before the National Council for Social Studies of the National Education Association*, in WALTER P. REUTHER: SELECTED PAPERS 151 (Henry M. Christman ed., Penguin Books 1964). *See, e.g., Difference Engine: Luddite Legacy*, BABBAGE SCI. & TECH. (Nov. 4, 2011), <http://www.economist.com/blogs/babbage/2011/11/artificial-intelligence>.

129. *See* REUTHER, *supra* note 128, at 151; *see also* Ed Townsend, *Those New ‘Steel Collar’ Workers Have American Unions Worried*, CHRISTIAN SCI. MONITOR (Feb. 11, 1981), [http://www.csmonitor.com/1981/0211/021144.html/\(page\)/2](http://www.csmonitor.com/1981/0211/021144.html/(page)/2).

130. *See* REUTHER, *supra* note 128, at 151; *see also* Townsend, *supra* note 129.

131. *See, e.g.,* David Rotman, *How Technology is Destroying Jobs*, MIT TECH. REV. (June 12, 2013), <http://www.technologyreview.com/featuredstory/515926/how-technology-is-destroying-jobs/> (illustrating examples of automation replacing human physical labor such as welding and painting in automotive plants, and throwing boxes in the manufacturing setting).

132. *See* IBM White Paper, *supra* note 75, at 5.

133. *See id.*

134. *See* JOHN MAYNARD KEYNES, *ESSAYS IN PERSUASION* 364 (1932).

unemployment.”¹³⁵ More recently, Paul Krugman has observed the consistent concern over the effects of technology on the standard of living for labor since the 1817 revision of David Ricardo’s *On the Principles of Political Economy and Taxation*.¹³⁶ Krugman points out that scholars have long been debating the effects of technology on labor.¹³⁷

In a recent book by MIT Sloan School of Business professors Erik Brynjolfsson and Andrew McAfee, titled *The Race Against the Machine, How the Digital Revolution is Accelerating Innovation, Driving Productivity, and Irreversibly Transforming Employment and the Economy*,¹³⁸ the authors argue that, in the short-term, technology will greatly disadvantage labor, but in the long-term, there is a very bright future as human beings learn to exploit the productive potential of cognitive systems.¹³⁹ Brynjolfsson and McAfee “believe that rapid technological change has been destroying jobs faster than it is creating them, contributing to the stagnation of median income and the growth of inequality in the United States.”¹⁴⁰ They argue that since about 2000 there has been a substantial “decoupling” of economic productivity and employment growth, meaning that although technology has allowed workers to be more productive than ever before, the gains in productivity are not benefiting workers.¹⁴¹ The benefits of technology are capital biased in the sense that new technologies are primarily increasing shareholder value rather than

135. Keynes writes:

We are being afflicted with a new disease of which some readers may not yet have heard the name, but of which they will hear a great deal in the years to come—namely, *technological unemployment*. This means unemployment due to our discovery of means of economising the use of labour outrunning the pace at which we can find new uses for labour.

Id.

136. See Paul Krugman, *Robots and Robber Barons*, N.Y. TIMES (Dec. 9, 2012), <http://www.nytimes.com/2012/12/10/opinion/krugman-robots-and-robber-barons.html> (citing David Ricardo, *On Machinery*, in *On the Principles of Political Economy and Taxation* (3d ed. 1821), available at <http://www.econlib.org/library/Ricardo/ricP7.html>); see also Paul Krugman, *Rise of the Robots*, N.Y. TIMES (Dec. 8, 2012), <http://krugman.blogs.nytimes.com/2012/12/08/rise-of-the-robots/> [hereinafter Krugman, *Rise of the Robots*]. But see, e.g., Tim Worstall, *Robots and Jobs: Is Krugman Really Saying This?*, FORBES (Dec. 27, 2012), <http://www.forbes.com/sites/timworstall/2012/12/27/robots-and-jobs-is-paul-krugman-really-saying-this/>. For review of the literature, see Clark Nardinelli, *The Industrial Revolution and the Standard of Living*, CONCISE ENCYC. OF ECON. (2007), <http://www.econlib.org/library/Enc/IndustrialRevolutionandtheStandardofLiving.html>.

137. See Krugman, *supra* note 136 (citing Ricardo, *supra* note 136).

138. See Erik Brynjolfsson & Andrew McAfee, *Race Against the Machine: How the Digital Revolution is Accelerating Innovation, Driving Productivity, and Irreversibly Transforming Employment and the Economy*, MIT CTR. FOR DIGITAL BUS. (Jan. 2012), http://digital.mit.edu/research/briefs/brynjolfsson_McAfee_Race_Against_the_Machine.pdf (summarizing the arguments set forth in the authors’ book).

139. See generally *id.*

140. Rotman, *supra* note 131.

141. See *id.*

benefitting employees.¹⁴² As Brynjolfsson states, “Productivity is at record levels, innovation has never been faster, and yet at the same time, we have a falling median income and we have fewer jobs. People are falling behind because technology is advancing so fast and our skills and organizations aren’t keeping up.”¹⁴³

It is not just happening to physical laborers, but increasingly to middle class professionals, as well.¹⁴⁴ W. Brian Arthur, an economist and Visiting Researcher at the Intelligence Systems Lab at the Palo Alto Research Center, explains that “‘digital processes talking to other digital processes and creating new processes,’ enable[e] us to do many things with fewer people and mak[e] yet other human jobs obsolete.”¹⁴⁵ In October 2012, USNews.com reported:

According to an August 2012 Pew Research Center report, only half of American households are middle-income, down from 61 percent in the 1970s. In addition, median middle-class income decreased by 5 percent in the last decade, while total wealth dropped 28 percent. According to the Economic Policy Institute, households in the wealthiest 1 percent of the U.S. population now have 288 times the amount of wealth of the average middle-class American family.¹⁴⁶

Although there is a great deal of debate about its causes and the long term significance of the decline, it is clear that middle-income Americans have been earning less and shrinking in number since the Great Recession of 2008.¹⁴⁷ According to McAfee, “New technologies are ‘encroaching into human skills in a way that is completely unprecedented,’ . . . and many middle-class jobs are right in the bull’s-eye; even relatively high-skill work in education, medicine, and law is affected.”¹⁴⁸ McAfee contends, “‘The middle seems to be going away The top and bottom are clearly getting farther apart.’”¹⁴⁹

Lawyers are taking part in the alarming decline of the middle class professionals.¹⁵⁰ In 2011, during the depths of the down market for

142. *See id.*

143. *Id.* (internal quotation marks omitted).

144. *See id.*

145. Rotman, *supra* note 131.

146. David Francis, *An Inside Look at the Middle-Class Squeeze*, U.S. NEWS (Oct. 16, 2012), <http://money.usnews.com/money/personal-finance/articles/2012/10/16/decline-of-the-middle-class-behind-the-numbers>.

147. *See id.*

148. Rotman, *supra* note 131.

149. *Id.*

150. *See id.*

graduating law students,¹⁵¹ the *New York Times* reported on the impact of technology on the legal profession:

“The economic impact will be huge,” said Tom Mitchell, chairman of the machine learning department at Carnegie Mellon University in Pittsburgh. “We’re at the beginning of a 10-year period where we’re going to transition from computers that can’t understand language to a point where computers can understand quite a bit about language.”¹⁵²

Much of the concern raised by Campos and Tamanaha is the decline in median starting salaries.¹⁵³ The National Association of Law Placement (“NALP”) published two charts, reproduced below, that make the case:

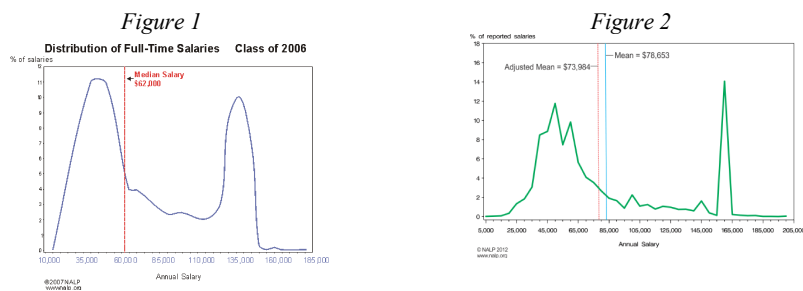


Figure 1 is a summary of data collected in 2006, and Figure 2 reports the data collected in 2011.¹⁵⁴ For this essay, what is particularly interesting about these charts is the change that occurs in the left-side modal distribution on the two charts (i.e., salaries less than the median \$63,000 in 2006 and less than \$73,984 in 2011).¹⁵⁵ Note that in 2006, approximately 5.5% of the students were employed at the median starting salary, but in 2011, only about 2% were employed at the mean.¹⁵⁶ There has been an increase in median starting salaries overall, but this is due to the spike in the

151. See Joe Palazzolo, *Law Grads Face Brutal Job Market*, WALL ST. J. (June 25, 2012), <http://online.wsj.com/news/articles/SB10001424052702304458604577486623469958142> (suggesting that law students graduating in 2011 had little more than a 50/50 shot of landing a job).

152. John Markoff, *Armies of Expensive Lawyers, Replaced by Cheaper Software*, N.Y. TIMES (Mar. 4, 2011), <http://www.nytimes.com/2011/03/05/science/05legal.html?pagewanted=all>.

153. See CAMPOS, *supra* note 17, at xiii; TAMANAHA, *supra* note 18, at x-xi.

154. NALP, *Salary Distribution Curve*, <http://www.nalp.org/salarydistrib> (last visited Sept. 16, 2013).

155. *Id.*

156. *Id.*

higher income mode for elite students.¹⁵⁷ Down-market law students were placed in fewer “middle” income jobs, and there was substantial growth at the lowest end of the market.¹⁵⁸

IV. THE CHALLENGE FOR LEGAL EDUCATION

Paul Campos and Brian Tamanaha are perhaps the most widely-known critics of the current state of legal education. Both advance criticism that is focused on the economic interests of students, who, they argue, are not deriving adequate benefit from legal education to justify the growing costs.¹⁵⁹ Campos argues that eighty percent of students will fail to find legal work that will adequately compensate them for the sunken and opportunity costs of going to law school.¹⁶⁰ Tamanaha offers a similar assessment, arguing that *U.S. News & World Report's* annual law school ranking delivers little of value, but contributes to ever-increasing costs by forcing law schools to maintain high standards in areas that do not contribute to students' marketability.¹⁶¹ He warns that law schools face substantial overcapacity because there is a growing gap between the total number of 1L class seats and the total applicant pool.¹⁶² Tamanaha proposes that the uniformity of programs, created in part by the *U.S. News & World Report* ranking, should be replaced by a plurality of diverse law schools, seeking to serve substantially different markets.¹⁶³

These assessments of legal education are accompanied by two other types of critiques, which are related, yet distinct.¹⁶⁴ One is the belief that law school is failing to train lawyers in the skill, values, and attitudes needed to be a legal professional.¹⁶⁵ This assessment has a purely utilitarian form, and a more refined form that considers the ideals of the profession beyond the economic concerns of the legal services industry.¹⁶⁶ The utilitarian form is exemplified by the call for greater “skills” training—practical and experiential rather than theoretical learning—in law school, in order to make law students more “marketable,” which means immediately commercially exploitable.¹⁶⁷ This was the theme of a recent Association of

157. *See id.*

158. *See id.*

159. *See* CAMPOS, *supra* note 17, at xiii; TAMANAHA, *supra* note 18, at x.

160. CAMPOS, *supra* note 17, at xiii.

161. TAMANAHA, *supra* note 18, at 78.

162. *See id.* at 163-64.

163. *See id.* at 174.

164. *See* Harry T. Edwards, *Renewing Our Commitment to the Highest Ideals of the Legal Profession*, 84 N.C. L. REV. 1421, 1421 (2006); Kenneth M. Rosen, *Lessons on Lawyers, Democracy, and Professional Responsibility*, 19 GEO. J. LEGAL ETHICS 155, 155 (2006).

165. *See* Edwards, *supra* note 164, at 1421.

166. *See id.* at 1422.

167. *See id.* at 1430.

American Law Schools (“AALS”) mid-year conference.¹⁶⁸ The other, more broadly conceived, views the professionalization of the lawyer as including the cultivation of the values and attitudes that are the foundation of the rule of law in the American democracy.¹⁶⁹ The legal profession, in this view, depends upon lawyers who respect and honor the law; who see it as noble and honorable.¹⁷⁰ Legal educators need to cultivate lawyers as citizens of the democracy who find moral worth in the practice of law and virtue in the democracy.¹⁷¹

If, however, the suggestion of Brynjolfsson, MacAfee, and others, that technology is displacing the legal professional, is true, then skills training may be no more than a palliative measure that does not address the causes of the illness.¹⁷² In the abstract, skills-training means little.¹⁷³ Law schools must teach skills that are relevant to the student’s technologically-driven future.¹⁷⁴ It would be absurd to address capital biased technological change by training students to be effective in areas that are being eclipsed by technology. To use an industrial revolution analogy, training better buggy whip makers will do little for the livery industry when automobiles are displacing buggies. Similarly, the skills for tomorrow’s legal professional must be the skills that will be useful for the working conditions created by the emerging technology.¹⁷⁵ There would be little point in focusing on practice skills that have not evolved much in the past hundred years.

One proposal that Daniel Katz has advanced is that legal education could become more like engineering education; that, in fact, lawyers need to become engineers.¹⁷⁶ Katz argues that there would be benefits to legal services providers who could program software solutions to various components of legal representation.¹⁷⁷ Katz believes:

We are undergoing a great transition in the market for legal services and how to respond to it is arguably the most important question facing law schools, law students, law firms, and practicing lawyers. The legal service industry has experienced very little net job growth over the past fifteen years and significant contraction since 2008. Law schools are currently graduating roughly two students for

168. *See id.* at 1421.

169. *See Rosen, supra* note 164, at 155.

170. *See id.*

171. *See id.*

172. *See supra* note 148 and accompanying text.

173. *See supra* note 148 and accompanying text.

174. *See supra* note 148 and accompanying text.

175. *See supra* note 143 and accompanying text.

176. Katz, *supra* note 19, at 965-66.

177. *See id.* at 910-12.

every projected job opening, and this trend is predicted to continue into the foreseeable future. A variety of factors are of course responsible for this overarching trend, including the aftermath of the 2008 financial crisis. However, going forward it is legal information technology, including but not limited to *quantitative legal prediction*, that will help define the future of the legal services industry. It is in this space where arbitrage opportunities abound for entrepreneurially minded law schools, law students, and practicing lawyers.¹⁷⁸

Katz views legal education as needing to include technological training.¹⁷⁹ He calls this the “Law + Tech” option (and a complementary “Tech + Law” option could be advanced in engineering schools).¹⁸⁰ While his proposal clearly addresses technological change, it is not clear that many law students would actually have either the skills or the interest in the type of education that he is proposing.

William Henderson has offered another type of proposal in his recent essay, *A Blue Print for Change*.¹⁸¹ Like Katz, Henderson believes that technology is a significant factor in changing the economics of legal practice.¹⁸² His “blueprint” is not intended to be a long-term solution that responds to all the needs of the profession.¹⁸³ It is a short-term solution that is intended to offer only “business solutions,” and is intentionally avoiding social issues.¹⁸⁴ His essay offers a “blueprint” for reforming legal education that is rooted in the business needs of law schools.¹⁸⁵ It focuses on several elements that are related to labor market outcomes for law students.¹⁸⁶

His argument is, essentially, that law schools first need to change their value propositions by ensuring that legal education leads to professional employment.¹⁸⁷ While he acknowledges that significant changes may result in the profession as a result of the new technology, he focuses on the immediate needs of legal institutions to improve their quality.¹⁸⁸ Toward this end, he makes three interrelated claims. First, he argues that “the types of education that will attain the highest valuation are complex problem-solving skills that enable law school graduates to communicate and

178. *Id.* at 965 (emphasis added).

179. *See id.* at 966.

180. *See id.* at 964-65.

181. *See Henderson, supra note 20*, at 461.

182. *See id.* at 479-80.

183. *See id.* at 463-64.

184. *See id.*

185. *See id.* at 464.

186. *See Henderson, supra note 20*, at 465.

187. *See id.* at 466-67, 470.

188. *See id.* at 490.

collaborate in a highly complex, globalized environment.”¹⁸⁹ Law schools need to educate lawyers to be subtle and sophisticated problem-solvers with a range of skills that can be commercially exploited.¹⁹⁰ While he places a great emphasis on commercial exploitation, “This is not vocational training,” he contends, “it is the creation of a new model of professional education that better prepares our graduates for the daunting political and economic challenges ahead.”¹⁹¹ He recognizes that the challenges that lawyers will face in the future will be complex political and social issues.¹⁹²

Second, Henderson may doubt the abilities of current law faculties to teach lawyers due to his wide-ranging and vague view of the challenges they will face. He contends that “it should be obvious that as a group, we legal academics lack these skills ourselves.”¹⁹³ Moreover, “virtually all [law faculty members] lack the skills needed to differentiate themselves or to be economically valuable to an employer or client without additional training.”¹⁹⁴ While he admits that some would be able to retrain, most would not be interested in doing so.¹⁹⁵

Third, he contends, law professors need to partner in new ways with employers, because the “lack of professional employment for graduates is the economic force that could put many law schools out of business.”¹⁹⁶ He glumly summarizes that, “Simply stated, the market for traditional legal education is drying up.”¹⁹⁷

Henderson’s conclusion is that “the most serious problem is inadequate quality.”¹⁹⁸ In order to address this problem he believes that law schools need to work with alumni, employers, and others to identify the skills of highly successful lawyers and non-lawyers.¹⁹⁹ “Industrial and organization psychology provides the methodology,” Henderson argues, for classifying and analyzing these skills by their “distinctive features” and relevant practice areas.²⁰⁰ To this end, he would apply data analysis and experimental investigation to determine the best pedagogy and to measure performance.²⁰¹ He makes three specific recommendations.²⁰² First,

189. *Id.* at 493.

190. *See id.*

191. Henderson, *supra* note 20, at 493.

192. *See id.*

193. *Id.*

194. *Id.*

195. *See id.* at 463.

196. *See* Henderson, *supra* note 20, at 494.

197. *Id.*

198. *Id.*

199. *See id.* at 494-96.

200. *Id.* at 496.

201. *See* Henderson, *supra* note 20, at 496.

202. *See id.* at 501.

producing practice-ready lawyers is not adequate to ensure the success of law schools, because in the coming era technological change, there will simply be fewer jobs.²⁰³ While more able lawyers will fare better in the marketplace, there is no reason to believe that there will be enough jobs.²⁰⁴ Skills training will not increase the number of total jobs.²⁰⁵ Second, although he favorably cites the Schultz-Zedeck landmark study in the field of organizational psychology, which describes a number of traits of successful persons in different fields,²⁰⁶ Henderson believes that law schools should develop their own sets of traits and processes for assessing educational outcomes.²⁰⁷ Finally, he proposes that one of the greatest strengths that law schools can have is close relationship with employers.²⁰⁸ He concludes that “it is ripe for a law school-legal employer collaboration that drives down costs while accelerating lawyer development.”²⁰⁹

Henderson’s proposal has many merits, but by viewing legal education primarily as a for-profit endeavor, he may be overlooking other significant goals of legal education.²¹⁰ He asserts that all law schools are businesses, and that law professors are, by nature, more concerned with social issues and not the businesses that are significant to the lawyer’s role in the democracy.²¹¹ Although much maligned in recent years, at least part of the societal obligation of the law professor, a part of the justification for the relatively comfortable compensation and social standing, is the forming of the lawyer as a professional who looks beyond the law as a means for commercial gain.²¹² A broader understanding of the role of the lawyer as a public citizen is therefore needed.

V. TECHNOLOGICAL CHANGE AND THE LAWYER AS CITIZEN

A. *The Carnegie Report and Educating Lawyers for Citizenship*

The *Carnegie Report on Legal Education*,²¹³ (“Carnegie Report”) which cites to the preamble of the Model Rules of Professional Conduct’s

203. *See id.* at 501-02.

204. *See id.*

205. *See id.*

206. *See* Henderson, *supra* note 20, at 498-99.

207. *See id.* at 502-03.

208. *See id.* at 503.

209. *See id.*

210. *See id.* at 493.

211. *See* Henderson, *supra* note 20, at 463-64.

212. *See id.* at 464, 493.

213. *See generally* WILLIAM M. SULLIVAN ET AL., EDUCATING LAWYERS 127 (2007). For a discussion of the Carnegie Report as a whole, see Bruce P. Frohnen & Kevin P. Lee, *Lawyers, Loyalty, and the Question of Citizenship: Perspectives from the Classroom and from Catholic Social Thought*, 6 J. CATH. SOC. TH. 417 (2009).

(“MRPC”)²¹⁴ description of the work of the lawyer, offers a broader view.²¹⁵ Of particular importance to the present analysis is the portion of the preamble that states, “A lawyer, as a member of the legal profession, is a representative of clients, an officer of the legal system and a *public citizen having special responsibility for the quality of justice.*”²¹⁶ The Carnegie Report concludes that “[law] schools need to attend more systematically to the pedagogical practices that foster the formation of integrated, responsible lawyers.”²¹⁷ It cites a number of particular approaches to curricular reform, but the meaning of public citizenship and responsibility for the “quality” of justice are not fully considered in the report.²¹⁸

This is not a criticism of the Carnegie Report, because of the nature of democratic citizenship, the special responsibilities of lawyers in the American polity, the nature of justice, and the duties of responsible citizen, lawyers are under-theorized in the professional literature and are not the typical fare of legal education.²¹⁹ A recent essay surveying the law review literature on the “public citizen” clause of the preamble concludes:

the statement [in paragraph eight of the Preamble]²²⁰ suggests that lawyers should not burden themselves directly with the “public citizen” concern of ensuring that justice is achieved and should simply “assume that [it] is being done.” In doing so, the Rules

214. MODEL RULES OF PROF'L CONDUCT pmbl.

215. The Preamble of the Model Rules of Professional Conduct, paragraph 6 states:

As a public citizen, a lawyer should seek improvement of the law, access to the legal system, the administration of justice and the quality of service rendered by the legal profession. As a member of a learned profession, a lawyer should cultivate knowledge of the law beyond its use for clients, employ that knowledge in reform of the law and work to strengthen legal education. In addition, a lawyer should further the public's understanding of and confidence in the rule of law and the justice system because legal institutions in a constitutional democracy depend on popular participation and support to maintain their authority. A lawyer should be mindful of deficiencies in the administration of justice and of the fact that the poor, and sometimes persons who are not poor, cannot afford adequate legal assistance. Therefore, all lawyers should devote professional time and resources and use civic influence to ensure equal access to our system of justice for all those who because of economic or social barriers cannot afford or secure adequate legal counsel. A lawyer should aid the legal profession in pursuing these objectives and should help the bar regulate itself in the public interest.

Id.

216. SULLIVAN ET AL., *supra* note 213, at 126 (citing MODEL RULES OF PROF'L CONDUCT pmbl. (emphasis added)).

217. *Id.* at 128.

218. *Id.* at 34.

219. See, e.g., Matthew E. Meany, “*Lawyer as Public Citizen*” – *A Futile Attempt to Close Pandora's Box*, 35 CAMPBELL L. REV. 119, 120 (2012).

220. “[W]hen an opposing party is well represented, a lawyer can be a zealous advocate on behalf of a client and at the same time *assume* that justice is being done.” MODEL RULES OF PROF'L CONDUCT pmbl. (emphasis added).

essentially advocate willful blindness on the part of counsel, who may know very well under the posture of a particular case that zealous advocacy will thwart an objectively just outcome, especially where one of the aforementioned advantages exists. This rationalization comforts very few lawyers who care about fulfilling both the zealous advocate and public citizen roles. After all, lawyers are trained to recognize subtle, yet significant, distinctions and can easily see the inherent problem with assuming that they can fulfill their public citizen duty to administer justice by pursuing a course of action adverse to that goal. Besides, few would agree that something as important as justice should be left to assumptions.²²¹

The essay suggests that while the language of “public citizenry” means more than trusting in the advocacy system or seeking greater access for the poor, there is little content to the Rules, and little guidance in the law review literature.²²²

The Carnegie Report calls attention to the need to educate law students for the special role of lawyers as citizens, even while the meaning of this term is under-theorized in the legal academy.²²³ It seems clear that the economics of legal education, the rising cost of tuition, and the declining applicant pools that law school deans and administrators must face in the current market are outcomes, in part, of technological change that is putting pressure on law schools to change the value propositions of their educational programs.²²⁴ Law schools are pressured to show the immediate commercial exploitability of their students, whom they place into the market as legal service providers.²²⁵ The need for *immediate* commercial viability is, of course, determined by the need for students to begin to repay their student loans.²²⁶ As Campos and Tamanaha argue, faced with growing debt

221. Meany, *supra* note 219, at 123.

222. *See id.* at 120.

223. *See* SULLIVAN ET AL., *supra* note 213, at 21-22.

224. *See* Kyle McEntee, *What's Driving the Change in Legal Education and Why You Should Care*, A.B.A. J. (May 30, 2013), http://www.abajournal.com/legalrebels/article/whats_driving_change_in_legal_education_and_why_you_should_care.

225. *See, e.g.*, Martin J. Katz, *Why Now is the Time to Apply to Denver Law*, UNIV. OF DENVER, STRUM COLL. OF LAW, <http://www.law.du.edu/index.php/admissions/learn/choosing-denver-law-myths-v.-facts> (last visited Nov. 10, 2013).

226. *See* ABA COMM'N ON THE IMPACT OF THE ECON. CRISES ON THE PROFESSION & LEGAL NEEDS, *The Value Proposition of Attending Law School* (Nov. 2009), available at <http://www.americanbar.org/content/dam/aba/migrated/lcd/legaled/value.authcheckdam.pdf>.

loads, the students have little choice but to focus on their immediate income potential.²²⁷

The Carnegie Report suggests that lawyers also need to be formed with civic virtues and ideals of democratic citizenship.²²⁸ The ideals of citizenship, while surely diverse and multifaceted in the present polity, are also saturated with meanings that exceed commercial value.²²⁹ Justice, the goal to be sought by lawyers in the MRPC,²³⁰ has provoked a long history in philosophical thought.²³¹ The notion that justice matters is embedded in the rule of law, and the pursuit of justice by lawyers matters to the quality of a democratic polity.²³² While legal scholars no longer widely endorse high theories of natural law,²³³ there are many conservative and liberal theorists who seek to reinvigorate normativity in legal thought.²³⁴ Thinkers as different as Robert P. George and Harold Koh share this much in common: both believe that law must make moral claims (although they differ substantially on the claims that must be made).²³⁵ They each seek to make law serve some conception of justice and the common good.²³⁶ It seems that in the current period, many legal theorists are rejecting strictly positivist accounts of law.²³⁷

It follows from a commitment to justice that, as responsible citizens of the democracy, lawyers must be morally engaged with their communities.²³⁸ It is fundamental to the rule of law in a democracy that the majority be constrained by the law when enacting the popular will would act against the

227. See CAMPOS, *supra* note 17, at 49-50; see also Brian Z. Tamanaha, *The Failure of Critics and Leftist Law Professors to Defend Progressive Causes*, 24 STAN. L. & POL'Y REV. 309, 315 (2013) [hereinafter Tamanaha, *The Failure of Critics*].

228. See SULLIVAN ET AL., *supra* note 213, at 21-22.

229. See MODEL RULES OF PROF'L CONDUCT R. 6.1.

230. *Id.* at pmb1.

231. See, e.g., JOHN RAWLS, *A THEORY OF JUSTICE* 11 (1971); see also JEAN-JACQUES ROUSSEAU, *THE SOCIAL CONTRACT AND THE FIRST AND SECOND DISCOURSES* 178 (Susan Dunn trans. & ed., Yale University Press 2002); MICHAEL J. SANDEL, *JUSTICE: WHAT'S THE RIGHT THING TO DO?* 59-60 (2009) (explaining that libertarianism sees economic freedom as being inseparably linked with justice).

232. See MODEL RULES OF PROF'L CONDUCT pmb1.

233. See Lee J. Strang, *The Role of the Christian Legal Scholar: The Call for a Modern St. Benedict*, 20 NOTRE DAME J.L. ETHICS & PUB. POL'Y 59, 75, 82 (2006).

234. See, e.g., Dennis Patterson, *Normativity and Objectivity in Law*, 43 WM. & MARY L. REV. 325, 350 (2001); see also *infra* note 235 and accompanying text.

235. See Robert P. George, *Law and Moral Purpose* (Jan. 2008), <http://www.firstthings.com/article/2007/12/001-law-and-moral-purpose-16>; Harold Hongju Koh, *The Case Against Military Commissions*, 96 AM. J. INT'L L. 337, 342 (2002).

236. See George, *supra* note 235.

237. See, e.g., Kent Greenawalt, *Too Thin and Too Rich: Distinguishing Features of Legal Positivism*, in *THE AUTONOMY OF LAW: ESSAYS OF LEGAL POSITIVISM* 1, 4 (Robert P. George ed., 1996); Jason C. Glahn, *Is Hard Positivism Too Hard to Swallow?*, 81 N.D. L. REV. 499, 500, 523-24 (2005) (discussing "hard positivism," a philosophy holding that the law is without moral criteria).

238. See MODEL RULES OF PROF'L CONDUCT R. 1.16.

legal interests of the minority.²³⁹ The rule of law thus is rooted in a prior restraint on the will of the majority.²⁴⁰ It is, in its essence, an anti-democratic commitment, which allows the space for an enduring democratic polity.²⁴¹ It is a duty of lawyers to maintain and honor the rule of law, to respect the integrity of the legal process and the institutions of law.²⁴² A commitment to be concerned with justice, particularly of persons at the margins of society, is rooted in this responsibility for maintaining the rule of law.²⁴³ Pointing out the injustice done to the minority at the hands of the majority is essential to maintaining a societal commitment to law's constraint on will of the majority.²⁴⁴ Insightful and well-articulated explanations of the demands of justice are essential to law.²⁴⁵

Moreover, as responsible citizens, lawyers must be concerned with public discourse about the ends and purposes of their communities.²⁴⁶ Lawyers serve on planning commissions, institutional boards, in city, state, and national legislative bodies, and other places where participants discuss public policy and determine the goals of a community.²⁴⁷ As members of a profession called to have a special concern for justice, lawyers have a responsibility to shape the moral integrity of a community.²⁴⁸ When public policy makers seek unjust ends, it is the responsibility of those who are concerned with justice to speak out, not only in the interest of justice for the oppressed, but also for the moral integrity of the polity.²⁴⁹ Justice matters not only to those treated unjustly, but also to the integrity, vitality, and

239. See *Majority Rule/Minority Rights: Essential Principles*, DEMOCRACY WEB: COMPARATIVE STUDIES IN FREEDOM, <http://www.democracyweb.org/majority/principles.php> (last visited Nov. 11, 2013).

240. See *id.*

241. See *id.*

242. See MODEL RULES OF PROF'L CONDUCT R. 8.3.

243. See *id.* at R. 6.1.

244. See Fareed Zakaria, *The Rise of Illiberal Democracy*, 76 FOREIGN AFFAIRS 22, 25-26 (1997).

245. See MODEL RULES OF PROF'L CONDUCT pmbl. (emphasizing the importance that responsibility for the quality of justice has for legal practitioners).

246. See *id.*; see also *infra* note 247 and accompanying text.

247. See, e.g., Wendy Angel, *Attorney David H. Keller Appointed to Greenville City Planning Commission*, CONSTANGY, BROOKS & SMITH, LLP (Aug. 30, 2012), <http://www.constangy.com/firm-news-243.html>; *Board of Directors*, CLEVELAND CLINIC, <http://my.clevelandclinic.org/about-cleveland-clinic/overview/leadership/board-of-directors.aspx> (last visited Nov. 12, 2013); *Zachary M. Klein*, COLUMBUS CITY COUNCIL, <http://council.ci.columbus.oh.us/klein/> (last visited Nov. 12, 2013); *Senator Keith Faber*, OHIO SENATE, <http://www.ohiosenate.gov/faber/biography> (last visited Nov. 12, 2013); *Elizabeth Warren*, UNITED STATES SENATE, http://www.warren.senate.gov/?p=about_senator (last visited Nov. 12, 2013).

248. See MODEL RULES OF PROF'L CONDUCT pmbl.

249. See Rex Martin, *Civil Disobedience*, 80 ETHICS 123, 129 (1970); see also MODEL RULES OF PROF'L CONDUCT R. 8.3.

longevity of a democratic polity that seeks self-worth in its collective action.²⁵⁰

B. Technology and the Citizen Lawyer

The coming technological revolution poses several threats to the moral ambitions of the profession. First, it is not clear that moral judgment can be ever automated, and it is fairly certain that it cannot be done today.²⁵¹ There are two aspects to consider. First, there is an epistemological concern.²⁵² It is not clear that moral meaning can be discerned by an automated system.²⁵³ The types of phenomena in which human persons find moral meaning are not necessarily predictable in advance. There is no reason to believe that the structure of a morally significant experience is limited to the sorts of features that can be predicted. A moral experience is more than objectively observable content, logic, and pattern of behavior.²⁵⁴ It has psychological complexity and nuance that are saturated with meaning.²⁵⁵ It is, as Husserl would say, a phenomenon with objective and subjective aspects that cannot be determined *a priori*.²⁵⁶ Moral knowledge is a distinctly human phenomenon because it is an artifact of the human cognition in its most idiosyncratically human domain.²⁵⁷ In this respect, moral reasoning poses significant epistemological challenges for cognitive systems.²⁵⁸ It is unlikely that a moral “calculator” could be built (at least with current technology).²⁵⁹ At best, a library of moral scenarios, like the medieval

250. See Martin Böhmer, *Equalizers and Translators: Lawyers’ Ethics in a Constitutional Democracy*, 77 *FORDHAM L. REV.* 1363, 1381-82 (2009); see also Martin, *supra* note 249, at 129 (casting justice as so important a goal as to, at times, require disobedience of democratically enacted laws).

251. See Colin Allen, *The Future of Moral Machines*, N.Y. TIMES OPINIONATOR BLOG (Dec. 25, 2011, 5:30 PM), http://opinionator.blogs.nytimes.com/2011/12/25/the-future-of-moral-machines/?_r=2.

252. See *id.*

253. See *id.*

254. See Ben Brumfield, “*Afterlife*” Feels “*Even More Real than Real*,” *Researcher Says*, CNN (Apr. 10, 2013), <http://www.cnn.com/2013/04/09/health/belgium-near-death-experiences/>; see also Meeri Kim, *Shining Light on “Near-Death” Experiences: Surge of Brain Activity May Explain Claims of Movement, Bright Lights*, CHICAGO TRIBUNE (Oct. 9, 2013), http://articles.chicagotribune.com/2013-10-09/health/sc-health-1009-senior-health-near-death-20131009_1_brain-activity-cardiac-arrest-jimo-borjigin.

255. See *supra* note 254.

256. See 3 EDMUND HUSSERL, *IDEAS PERTAINING TO A PURE PHENOMENOLOGY AND TO A PHENOMENOLOGICAL PHILOSOPHY: STUDIES IN THE PHENOMENOLOGY OF CONSTITUTION* 377 (Richard Rojcewicz & Andre Schuwer trans., Kluwer Academic Publishers 1989).

257. See WENDELL WALLACH & COLIN ALLEN, *MORAL MACHINES: TEACHING ROBOTS RIGHT FROM WRONG* 56 (2008).

258. See *id.* at 56-60.

259. See Allen, *supra* note 251.

Catholic penitential manuals,²⁶⁰ could be developed that would approximate moral reasoning for particular occasions.

There is a second sort of challenge to moral cognition that might be called the anthropological challenge.²⁶¹ It seems that moral reasoning might be less than moral simply by the fact that a machine rather than a person is doing it.²⁶² That is to say, it matters to the moral integrity and meaning of a moral judgment that a moral agent makes it.²⁶³ Human beings are unique inasmuch as they are morally responsible.²⁶⁴ No machine could be a morally responsible agent as long as it is an agent or servant of a human being who controls its operation.²⁶⁵ Machines are not unjust or depraved or tyrannical or criminal or negligent.²⁶⁶ While they may be flawed in their designs or functions, they are not morally responsible creatures.²⁶⁷ Nor are they morally praiseworthy.²⁶⁸ No one would call a machine morally just or good, but one might call its operator morally just or good based on its operation.²⁶⁹ Flesh and blood matters to the ability to make moral judgments, because it is significant that a moral agent itself be open to moral assessment.²⁷⁰ While it is possible to imagine sentient machines to which moral responsibility is attributed, it is, for now, merely the stuff of science fiction.²⁷¹ It is reasonable to conclude that this aspect of the lawyer's work must be done by human minds, living lives rich in moral awareness.

Education in the humanities might be essential for this moral discernment, which is, as is suggested here, essential to the rule of law.²⁷² This was the conclusion reached by the report of the American Academy of Arts and Sciences' Commission on the Humanities and Social Sciences, entitled *The Heart of the Matter* ("Humanities Commission Report").²⁷³

260. A penitential manual is a pamphlet previously used by Catholic priests; it listed sins churchgoers might confess and listed the appropriate penance for each. See *Penitential Book (Religious Manual)*, ENCYC. BRITANNICA ONLINE, <http://www.britannica.com/EBchecked/topic/449975/penitential-book> (last visited Sept. 21, 2013).

261. See WALLACH & ALLEN, *supra* note 257, at 63.

262. See *id.*

263. See *id.*

264. See *id.* at 8.

265. See *supra* notes 262-264 and accompanying text.

266. See WALLACH & ALLEN, *supra* note 257, at 14.

267. See *supra* notes 262-266 and accompanying text.

268. See *supra* notes 262-266 and accompanying text.

269. See *supra* notes 262-265 and accompanying text.

270. See *supra* notes 262-265 and accompanying text; see also *supra* note 269 and accompanying text.

271. See Allen, *supra* note 251.

272. See generally AM. ACAD. OF ARTS & SCI., THE HEART OF THE MATTER: THE HUMANITIES AND SOCIAL SCIENCES 61 (2013), available at http://www.humanitiescommission.org/_pdf/hss_report.pdf.

273. See *id.*

This report seeks to understand the role of the humanities in the education of engaged citizens.²⁷⁴ It contends that:

Today, our need for a broadly literate population is more urgent than ever. As citizens, we need to absorb an ever-growing body of information and to assess the sources of that information. As workers, we need to adapt to an ever-accelerating rate of technological change and to reflect on the implications of these changes. As members of a global community, we need to look beyond our borders to communicate and interact with individuals from societies and cultures different from our own. As a nation, we need to provide an educational foundation for our future stability and prosperity—drawing on all areas of knowledge.²⁷⁵

There is a broad recognition in the report of the significance of humanities education for developing responsible citizens for the coming era of technological change and globalization.²⁷⁶ The challenges posed by the evolving networked society require the skills, knowledge, attitudes, modes of awareness, and so on that a humanities education cultivates.²⁷⁷

C. Humanizing Legal Education

What might this mean for reforming legal education? First, Elizabeth Mertz's interesting linguistic anthropological study of the language of first-year legal education, published as *The Language of Law School: Learning to "Think Like a Lawyer,"* gives shape to the full nature of the challenge.²⁷⁸ Using the methods and insights of linguistic anthropology, Mertz examined recordings of 1L classrooms.²⁷⁹ In a detailed analysis of these recordings, she identified the key linguistic concepts that are involved in the emergent formation of meaning that unfolds for the students.²⁸⁰ She explores the way lawyers and judges use texts to define context, to express value, and to promote a nearly mystical attitude toward precedential authority.²⁸¹ Lacking in the "language of law school," however, is discourse on moral meaning and moral awareness, of the very sort that lawyers need to fully

274. *See generally id.*

275. *Id.* at 18.

276. *See id.*

277. AM. ACAD. OF ARTS & SCI., *supra* note 272, at 6.

278. *See generally* ELIZABETH MERTZ, *THE LANGUAGE OF LAW SCHOOL: LEARNING TO "THINK LIKE A LAWYER"* (2007).

279. *See id.* at 31-32, 34.

280. *See id.* at 82-83.

281. *See id.* at 83.

apprehend their roles as citizens of the democracy.²⁸² Legal education forms students in the language of law, she argues, and the technical language of law is essential to the modes of rationality that lawyers and judges use.²⁸³ But, it is no replacement for other forms of reasoning that lawyers, as citizens and also as family partners, parents, friends, neighbors, and so on, need to function as human beings.²⁸⁴ Legal language, she writes, is “a shift into a very particular, culturally laden *kind* of thinking and talking.”²⁸⁵ While we might find this shift to require rigorous thinking and careful reasoning, this is not to say that legal reasoning is capacious in many areas of human endeavor.²⁸⁶ Mertz continues, “This *kind* of approach may indeed be more demanding than others as to some parts of the problem put before attorneys, but, as we are seeing, it is most certainly less demanding as to other parts.”²⁸⁷ Conley, in reviewing Mertz’s book, explains that:

As Mertz puts it, “language operates as more than a filter here; it not only mediates the shift in students’ perceptions, it is the stuff of which the change is made” This “stuff” is powerful, since “the regular use of the categories and ways of talking in a particular language-and-culture broadly shape speakers’ habitual understandings of the world” Moreover, “these habitual understandings can be amended or shifted” So when we teach students to speak, and then to think, like lawyers, we may hope to be simply imparting a skill, but we may be succeeding at a deeper level, for better or worse.²⁸⁸

Mertz and Conley fear that on a deep level the dispassionate and amoral language of the 1L classroom displaces the moral reasoning and the emotional self-awareness that students need to function in society.²⁸⁹ The denuding of students’ ability to be morally aware and to engage in moral discourse with others with whom they disagree would have sweeping consequences for the individual student and for society.

Mertz’s work suggests that the pedagogical practices of legal education may already be denuding law students of their moral perspicacity.²⁹⁰ Given the pace and direction of technological change, this is particularly

282. *See id.* at 212.

283. *See* MERTZ, *supra* note 278, at 3.

284. *See id.* at 98.

285. *Id.*

286. *See id.*

287. *Id.* at 98 (emphasis in original).

288. John M. Conley, *Can You Talk Like a Lawyer and Still Think Like a Human Being? Mertz’s The Language of Law School*, 34 LAW & SOC. INQUIRY 983, 1011 (2009) (book review).

289. *See* MERTZ, *supra* note 278, at 212; Conley, *supra* note 288, at 1003.

290. *See* MERTZ, *supra* note 278, at 26-27, 83.

disturbing. Moral issues abound in the implementation of new technologies.²⁹¹ One of the useful insights of the Frankfurt School was the awareness of the role that technology can play in oppressing persons, as it seeks to shape individuals to its needs and the social structures that created and maintain it.²⁹² To illustrate this point, consider the contemporary Transnational Corporation (“TNC”). It is a creature of technology that is maintained through complex global communications networks, which that allow it not only to structure itself and communicate internally, but enable the financial markets that are its lifeblood.²⁹³ By leveraging the technology, TNCs have achieved unprecedented wealth and power, which they use to protect the legal, social, and technological systems on which they depend.²⁹⁴ At least sometimes, they act in ways that are contrary to human rights and the common good.²⁹⁵

To create responsible citizen lawyers who can function as advocates for justice and the common good, the pedagogy must be reformed. Martha Nussbaum has long advocated the integration of the humanities in legal education.²⁹⁶ As early as 1995, in her book, *Poetic Justice: The Literary Imagination and Public Life*, Nussbaum argued that moral sensitivity can be developed through the reading of fiction, and may be applied to moral and judicial reasoning.²⁹⁷ More recently, she has argued in *Political Emotions, Why Love Matters for Justice*,²⁹⁸ for the recovery of a tradition in Western political thought that recognizes the connection between the cultivation of emotional sensitivity and awareness and effective political leadership.²⁹⁹ To Nussbaum’s insightful work can be added a trove of works by conservative authors who have long maintained that emotions are deeply tied to

291. See Douglas Kellner, *The Frankfurt School and British Cultural Studies: The Missed Articulation*, ILLUMINATIONS, <http://www.uta.edu/huma/illuminations/kell116.htm> (last visited Sept. 22, 2013).

292. See *id.*

293. See Marc T. Jones, *Blade Runner Capitalism, the Transnational Corporation, and Commodification: Implications for Cultural Integrity*, 10 CULTURAL DYNAMICS 287, 288 (1998).

294. See JOSHUA KARLINER, *THE CORPORATE PLANET: ECOLOGY AND POLITICS IN THE AGE OF GLOBALIZATION* xiii, 1-3, 13 (1997); see also Susan L. Smith, *Chartering Sustainable Transnational Corporations*, http://webcache.googleusercontent.com/search?q=cache:Rm2HvDjreFoJ:www.iucnael.org/en/document/s/doc_download/272-smith-susan-chartering-sustainable-transnational-corporations-.html+%&cd=2&hl=en&ct=clnk&gl=us (last visited Nov. 13, 2013).

295. See Jones, *supra* note 293, at 292.

296. See MARTHA C. NUSSBAUM, *POETIC JUSTICE: THE LITERARY IMAGINATION AND PUBLIC LIFE* 2 (1995).

297. See *id.*

298. MARTHA C. NUSSBAUM, *POLITICAL EMOTIONS: WHY LOVE MATTERS FOR JUSTICE* (2013) [hereinafter NUSSBAUM, *POLITICAL EMOTIONS*].

299. See *id.* at 6.

theoretical and practical reasoning.³⁰⁰ Nussbaum proposes in *Poetic Justice* that literature, particularly realistic fiction, might help to form lawyers for engaged cosmopolitan citizenship.³⁰¹

The Humanities Commission report makes note of the need for humanities training to support national security and prosperity:

Participation in a global economy requires understanding of diverse cultures and awareness of different perspectives. The humanities and social sciences teach us how to understand, interpret, and respect our commonalities and our differences. That mutual respect makes it possible for people around the world to work together to address issues such as environmental sustainability and global health challenges. Now more than ever, the spirit of international cooperation, the promotion of trade and foreign investment, the requirements of international diplomacy, and even the enhancement of national security depend in some measure on an American citizenry trained in humanistic and social scientific disciplines, including languages, transnational studies, moral and political philosophy, global ethics, and international relations.³⁰²

Given the decline that humanities education has experienced in the past thirty or forty years,³⁰³ it seems unlikely that first-year law students will arrive well-formed in the humanities, and, even if they were, Mertz's work suggests that they might lose considerable ground during the first year of law school.³⁰⁴

One can imagine critics arguing that including humanities education in the law school curriculum would merely encourage waste, because employers will not be interested in hiring students with this background, no matter how useful it might be to society in general. Given the critical need that our society has for lawyers who have the skills acquired in liberal arts studies, two responses are evident.³⁰⁵ First, one might argue that given the importance of lawyers to the health of the democracy, and given the importance of the law, it might be a legitimate cost of the education, which

300. See, e.g., EVA BRANN, *FEELING OUR FEELINGS: WHAT PHILOSOPHERS THINK AND PEOPLE KNOW* xviii (2008).

301. See NUSSBAUM, *supra* note 296, at 2.

302. See AM. ACAD. OF ARTS & SCI., *supra* note 272, at 57.

303. See Tamar Lewin, *As Interest Fades in the Humanities, Colleges Worry*, N.Y. TIMES (Oct. 30, 2013),

<http://www.nytimes.com/2013/10/31/education/as-interest-fades-in-the-humanities-colleges-worry.html>.

304. See MERTZ, *supra* note 278, at 98.

305. See AM. ACAD. OF ARTS & SCI., *supra* note 272, at 33 (defining "liberal education" by listing the skills acquired therefrom).

we expect students to bear.³⁰⁶ It is, in effect, the cost of being an educated professional, and its value exceeds what can be compensated through immediate commercial exploitation.³⁰⁷ We might call this an “idealist’s argument.”

Another response to this criticism would argue that, given the importance to society, the critique must be verified and not left to stand as a mere presupposition.³⁰⁸ The Humanities Commission report gives some weight to this response.³⁰⁹ One of its central claims is that education in the humanities is essential to the security and prosperity of the nation.³¹⁰ For example, it claims:

At a time when economic anxiety is driving the public toward a narrow concept of education focused on short-term payoffs, it is imperative that colleges, universities, and their supporters make a clear and convincing case for the value of liberal arts education. This case needs to be made to every relevant audience: students, parents, governors and legislators, and the public at large. These audiences need to be reminded that the most successful Americans have typically benefited from such broad-based training, with early experiences often paying off in surprising ways; and that the ability to adapt and thrive in a world certain to keep changing is based not on instruction in the specific jobs of today but in the developing of long-term qualities of mind: inquisitiveness, perceptiveness, the ability to put a received idea to a new purpose, and the ability to share and build ideas with a diverse world of others.³¹¹

In particular, it looks to the benefits of developing intercultural skills and deepened awareness of other cultures as significant for competitiveness and national security.³¹²

Humanities education imparts critical skills for law students.³¹³ Rather than presumptively concluding that it is irrelevant to the students’ marketability,³¹⁴ legal educators should, as William Henderson suggests,

306. *See id.* at 17, 19.

307. *See id.* at 32.

308. *See id.*

309. *See id.*

310. *See* AM. ACAD. OF ARTS & SCI., *supra* note 272, at 32, 57.

311. *Id.* at 32.

312. *See id.* at 32, 57.

313. *See* Mark Edmundson, *Humanities for Humanity’s Sake*, WASHINGTON POST, Aug. 11, 2013, at B04.

314. *See* AM. ACAD. OF ARTS & SCI., *supra* note 272, at 32.

work with industry leaders and academics from many fields to determine the value of humanities education in the law school curriculum.³¹⁵

The Humanities Commission polled employers regarding the value of liberal arts education.³¹⁶ It reported that a majority of employers found that [a humanities education]

provides both broad knowledge in a variety of areas of study and knowledge in a specific major or field of interest. It also helps students develop a sense of social responsibility, as well as intellectual and practical skills that span all areas of study, such as communication, analytical and problem-solving skills, and a demonstrated ability to apply knowledge and skills in real-world settings.³¹⁷

These results might well apply to legal education as well, at least in some contexts.³¹⁸ The belief is that the humanities and the liberal arts provide the necessary skills for understanding one's place in the world and in human history, to read difficult texts, to analyze complex social situations, and to understand subtle nuances of social meaning.³¹⁹ There is no reason to believe that technology will render these skills useless, or that they will be automated.

Ben Heineman, the former Chief General Counsel for General Electric Corporation and now a professor at Harvard Law School, has become an advocate of the view that the General Counsel need to be lawyer-statesmen.³²⁰ In this passage, he describes the skills of such a person:

In aspiring to be a lawyer-statesman, the General Counsel, and inside lawyers, must be skilled in asking “what ought to be” questions; in articulating systematic and constructive options that expose and explore the value tensions inherent in most decisions; in assessing risk, but not being paralyzed by its existence; in understanding how to make rules realities and develop strategies for meaningful implementation of policies; in understanding the hurly burly world of politics, media and power outside the corporation

315. See Henderson, *supra* note 20, at 491.

316. See AM. ACAD. OF ARTS & SCI., *supra* note 272, at 33.

317. See *id.*

318. See Edmundson, *supra* note 313, at B04; see also *Pre-Law*, AM. BAR ASSOC., http://www.americanbar.org/groups/legal_education/resources/pre_law.html (last visited Nov. 13, 2013).

319. See Edmundson, *supra* note 313, at B04.

320. See Ben W. Heineman, Jr., *The General Counsel as Lawyer-Statesman: A Blue Paper*, HARVARD LAW SCH. PROGRAM ON THE LEGAL PROFESSION, 7, available at http://www.law.harvard.edu/programs/plp/pdf/General_Counsel_as_Lawyer-Statesman.pdf (last visited Nov. 18, 2013).

and how to navigate with principle and purpose in that domain; in leading and building organizations, creating the vision, the values, the priorities, the strategies, the people, the systems, the resources and the motivation; in having understanding, intuition, perspective and respect relating to different cultures around the globe; in, ultimately, having the quintessential quality of the great generalist to envision and understand the multiple dimensions of issues—to define the problem properly—and the ability to comprehensively integrate those dimensions in decision-making.³²¹

The skills of the lawyer as statesman are roughly the same as the skills of a lawyer as citizen.³²² And they are precisely the sorts of skills that advocates of the humanities, like the Humanities Commission, view as the contribution that liberal arts education can make to students.³²³ Given this, it seems a rush to judgment to conclude *without evidence* that education in the humanities has no place in the utilitarian calculus of the contemporary law school. Ideas still matter.

The Humanities Commission Report includes a quote from Roger W. Ferguson, Jr., the president and chief executive officer of the Teachers Insurance and Annuity Association–College Retirement Equities Fund, which might serve as a credo for this essay:

Business leaders today are looking for a diversity of skills, and not just technical knowledge. Pivotal right now in financial services—a relationship business—is trust built around empathy, understanding, listening skills, critical thinking. It's not enough in financial services to simply be able to work with a spreadsheet. You need to convince your individual or institutional clients to take the right set of actions. The skills that come out of the humanities, the softer relationship skills—listening, empathy, an appreciation for context—are incredibly important.³²⁴

VI. CONCLUSION

Plato identified the problem that this essay addresses in an early dialogue, the *Statesman*,³²⁵ which he wrote prior to the *Republic*.³²⁶ The

321. *Id.*

322. *See* Meany, *supra* note 219, at 134.

323. *See id.*

324. AM. ACAD. OF ARTS & SCI., *supra* note 272, at 34.

325. *See, e.g.,* Hope M. Babcock, *Democracy's Discontent in a Complex World: Can Avalanches, Sandpiles, and Finches Optimize Michael Sandel's Civic Republican Community?*, 85 GEO. L. J. 2085 (1997) (critiquing civic republican political theory using complex systems principles).

326. *See* D. S. Mackay, *On the Order of Plato's Writings*, 25 J. PHIL. 5, 18 (1928).

Statesman sets out a view of the *polis*³²⁷ that is not as fully developed and perhaps not as cynical. The dialogue occurs between a mysterious professor of wisdom, a “Stranger” from Elea, and a young Socrates.³²⁸ They engage in a discussion of the nature of the king and conclude that the true king is “naked and alone by itself.”³²⁹ He develops an account of the “magisterial form” (*eidōs*)³³⁰ of the true king by investigating it through the paradigm of “weaving.”³³¹ The *Statesman* develops a view of politics as the “master-art” in which the statesman weaves together all of the lesser arts into the high purpose of governing the polity.³³² Politics has a feminine dimension, because weaving is a domestic art of production practiced by women in ancient Athens.³³³ The metaphor of politics as feminine art opens the *Statesman* to intriguing feminist readings.³³⁴

The analogy of the *Statesman* as weaver holds some insights for thinking about the role of the lawyer in the polity. The skilled weaver is both technician and artist. Knowing the technical skill to weave, to blend the fibers into harmonious union, is the foundational skill of the weaver.³³⁵ In Plato’s metaphor, the *Statesman* bends the warp of courage to accommodate the woof of grace.³³⁶ The *Statesman* bends and blends these into a cloth that is worthy of the *polis* and worn by it as a protection, but the garment is also an adornment.³³⁷ The skilled weaver is more than a technician. She is an artist whose art lies in the creation of a splendid cloth. So, too, the skilled *Statesman* must fashion a cloth that is splendid to behold—a polity that is whole and just, but also one that seeks ends that are worthy and honorable. The great tragedy of Athens’s defeat by Sparta that the young Socrates witnessed was, perhaps, as Thucydides suggests, caused in equal measure by the post-Periclean leaders’ skill in the technique of statecraft, artistic sense of the aims and goals of their rule.³³⁸

327. See Ruth Westgate, *The Greek House and the Ideology of Citizenship*, 39 *ARCHAEOLOGY EQUAL.* 229, 245 (2007).

328. See generally PLATO, *STATESMAN* (Eva Brann, Peter Kalkavage & Eric Salem, trans., Focus Publ’g/R. Pullins Co. 2012).

329. See generally *id.* at 90-91.

330. See Arlene W. Saxonhouse, *Democracy, Equality, and Eidē: A Radical View from Book 8 of Plato’s Republic*, 92 *AM. POLITICAL SCI. REVIEW* 273, 273 n.1 (1998).

331. PLATO, *supra* note 328, at 51-52, 103-04.

332. See *id.* at 103-04.

333. See Evy Johanne Håland, *Athena’s Peplos: Weaving as a Core Female Activity in Ancient and Modern Greece*, 20 *COSMOS* 155, 155 (2004).

334. See, e.g., M. S. LANE, *METHOD AND POLITICS IN PLATO’S STATESMAN* 167-68 (1998).

335. See PLATO, *supra* note 328, at 54-55.

336. See generally *id.* at 55, 57-58, 102-04.

337. See *id.* at 93-94.

338. See George Kateb, *Thucydides’ History: A Manual of Statecraft*, 79 *POLITICAL SCI. QUARTERLY* 481, 491-94, 502-03 (1964).

Plato's analogy holds insights for the American democracy, and the lawyer's role in it—the topic of this essay. In the American democracy, lawyers are supporting actors in the drama of a sovereign people.³³⁹ They are the statesmen and stateswomen of both private social interactions, and state power directed toward individuals and small groups. Lawyers bend the warp and woof of society by stretching and pulling at the law. Like Plato's Statesman, they help to create a weaving that shelters the state and preserves its dignity.³⁴⁰ It is a technical skill that the lawyer, like the weaver, applies to her craft. And like the weaver, the lawyer's craft is not complete with the technical skill. Lawyers must also seek the artistry, which demands that lawyers be, in the words of the MRPC, "public citizen(s)."³⁴¹ It is the art of democratic citizenship that Plato's statesmen would recognize and honor.³⁴²

As we move into the new age of the globally networked society, equipped with Big Data and the cognitive systems to exploit it, we are left wondering about the viability of Plato's Statesman. Will lawyers continue to engage in statecraft and seek justice? We might hope that they will. There is much at stake if the profession loses the capacity to ask probing questions that challenge established norms and hold the powerful to the truth of their arguments.³⁴³ Justice depends in no small measure on the moral meaning that lawyers assign to their clients' problems, to the pursuit of justice, and to the hopes that they have for their own lives in the polity.³⁴⁴ Technological change will do little to affect that need, but it might so cloud the culture with its own demands and values that it becomes difficult or impossible to form morally sensitive and engaged citizens.³⁴⁵

339. *See generally* PLATO, *supra* note 328, at 103-04.

340. *Cf. id.* at 103.

341. MODEL RULES OF PROF'L CONDUCT pmb1.

342. *See* PLATO, *supra* note 328, at 80.

343. *See* Meany, *supra* note 219, at 138-39.

344. *See id.* at 148.

345. *See supra* Part V.B.