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Response, Bridges II: The Law--STEM Alliance & Next Generation Innovation

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Bridges II: The Law–STEM Alliance & Next Generation Innovation

Harry Surden[*]

Technological change recently has altered business models in the legal field, and these changes will continue to affect the practice of law itself. How can we, as educators, prepare law students to meet the challenges of new technology throughout their careers?

It is helpful to provide law students with a basic understanding of the current state of artificial intelligence (AI) and its likely near-term impact on law. With this knowledge, students can orient their careers to avoid those legal positions that are most vulnerable to automation and focus instead on activities for which their legal training and cognitive abilities provide the most value for clients.

Overall, the trend in AI has been toward automating tasks that that are highly structured and repetitive, or that have discernible underlying patterns. For example, the field of machine learning focuses on algorithms that are able to detect patterns in large amounts of data to automate various tasks, ranging from automated product recommendations to credit card fraud detection.

[1] Notably however, current AI technology has been unable to replicate higher-order human cognitive tasks, such as abstract reasoning and open-ended problem solving. [2]. This distinction is important for students to appreciate, because lawyers engage in a wide range of activities, some of which demand higher order cognitive skills—such as legal analysis, judgment, advising clients, constructing novel legal and policy arguments, and complex brief writing—and others of which are more mechanical, repetitive, and routine.[3]

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[1] *See,* Harry Surden, *Machine Learning and Law*, 89 WASH. L. REV. 87 (2014).

[2] *See, e.g.*, Will Knight, *AI's Language Problem*, MIT TECHNOLOGY REVIEW, 2016, https://www.technologyreview.com/s/602094/ais-language-problem/ [https://perma.cc/ZH22-3GRF] (last visited Jun 28, 2017), MICHIO KAKU, THE FUTURE OF THE MIND: THE SCIENTIFIC QUEST TO UNDERSTAND, ENHANCE, AND EMPOWER THE MIND (2015), 220 ("Although CYC can process hundreds of thousands of facts and millions of statements, it still cannot reproduce the level of thought of a four-year-old human").

[3] Some legal tasks can be mix of both, such as corporate contract writing, with some aspects routine and structured (e.g., document assembly), and other aspects demanding complex legal and policy comprehension (e.g., customizing terms for a deal).

With this framework in mind, students can understand some general currents concerning the impact of AI on legal practice. Historically lawyers have been able to charge similar rates for both mechanical and less mechanical legal tasks. However, legal activities that are relatively repetitive or have underlying structural patterns will be most susceptible to automation. Discovery document review provides a good example—large aspects of the process involve routine, patterned work (e.g., excluding emails outside the timeline of consideration as likely irrelevant). Today, this activity is already being automated through machine learning[4]. In the not-too-distant past, however, document review was a lucrative task performed solely by attorneys. We can thus aid our students by focusing their career skill development on the higher value-added, cognitive legal tasks that are unlikely to be automated away in the near future. I summarize this idea to my students with the following phrase: "Where today lawyers are acting like computers, tomorrow they will be replaced by computers." Although it is likely that AI technology will displace some activities that are today conducted by lawyers, I am largely optimistic about the impact of AI on the practice of law. Overall, I believe that AI will primarily act as a complement to, rather than a substitute for, legal practice, creating new sets of skills for the attorneys of tomorrow (e.g., legal data analysis), and providing new tools that attorneys can leverage to improve their overall lawyering for clients.

Provide an example of a situation in which a Law–STEM collaboration aided a project or where the lack of collaboration between these two disciplines impeded a project.

A good example of a useful interdisciplinary law–STEM collaboration comes from my own recent experience in autonomous vehicle law and policy. In 2016, I co-authored a law review article with Mary-Anne Williams, a professor of engineering and robotics, on self-driving vehicle policy[5].

Cross-disciplinary collaboration was crucial to the success of the project. In order to make useful law and policy recommendations in technological areas, I believe it is crucial to have a deep understanding of the underlying technology. To this end, I was able to spend several months in Professor Williams' robotics laboratory, studying the underlying technology that allows autonomous vehicles to drive themselves. Professor Williams,

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[4] *See, e.g.*, Daniel W. Linna, *What We Know and Need to Know About Legal Startups*, 67 S.C. L. REV. 389, 412–13 (2016).

[5] Harry Surden & Mary-Anne Williams, *Technological Opacity, Predictability, and Self-Driving Cars*, 38 CARDOZO L. REV. 121 (2016).

and her engineering graduate students, made critical contributions to the technological aspects of our law review article. Similarly, I was able to help the engineering team understand some of the most important dimensions of self-driving vehicle law and policy. This interdisciplinary collaboration sharpened not only our technical contributions, but also our overall legal and policy suggestions in ways that would not have been possible absent a deep cross-disciplinary interaction between the legal and STEM fields.