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Educating Deal Lawyers for the Digital Age

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EDUCATING DEAL LAWYERS FOR THE DIGITAL AGE

*Heather Hughes**

Courses and programs that address law and emerging technologies are proliferating in U.S. law schools. Technology-related issues pervade the curriculum. This Essay presents two instances in which new technologies present challenges for deal lawyers. It explores how exposing students to closing opinions practice can prepare them to engage these challenges. Both examples involve common commercial contexts and lessons relevant to students of business associations and of the Uniform Commercial Code. The first, which deals with enforceability opinion letters, presents technical legal difficulties arising from recent developments in law and technology. The second, involving complex doctrines at the heart of financial markets, presents ethical questions for students, attorneys, and lawmakers to digest. These examples show how thoroughly emerging technologies such as artificial intelligence and distributed ledgers can implicate business law doctrine and practice and, consequently, how imperative it is that legal education prepare students for practice in the digital age.

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INTRODUCTION

Law schools across the United States are offering programs and courses tailored to address law and emerging technologies.¹ Technology-related

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1. Many law schools offer individual courses focusing on emerging technologies topics such as digital assets law, data privacy, regulation of emerging technologies, artificial

issues pervade legal curricula and the practice of law.² A robust discourse surrounds whether and how technologies such as artificial intelligence (AI), computational contracts, and automated transactions on distributed ledgers will obviate the need for human lawyers.³ Although some believe that new technologies may replace lawyers with respect to routine legal matters,⁴ even routinized or path-dependent attorney work products can warrant human attention and responsibility. In addition, emerging technologies can present ethical questions for lawyers to consider in matters that may appear routine.⁵

This Essay presents two examples of specific instances in which new technologies present challenges for deal lawyers and explores how the legal academy can educate students to engage these challenges. Specifically, it presents exposing students to opinions practice as a strategy for teaching how technology can complicate legal questions. Both examples involve common commercial contexts and lessons relevant to students of business associations and the Uniform Commercial Code (UCC).⁶ The first, surrounding

intelligence and the law, etc. In addition, many schools have projects, certificates, or degrees specialized around emerging technologies. *See, e.g., Digital Asset Law Project*, AM. UNIV. WASH. COLL. L., <https://www.wcl.american.edu/impact/initiatives-programs/digital-asset-law-project/> [<https://perma.cc/B834-WPZR>] (last visited Mar. 3, 2024); *LL.M. in Intellectual Property and Technology*, AM. UNIV. WASH. COLL. L., <https://www.wcl.american.edu/impact/initiatives-programs/pijip/llm/> [<https://perma.cc/F9GZ-ERBP>] (last visited Mar. 3, 2024); *Tech, Law & Security Program*, AM. UNIV. WASH. COLL. L., <https://www.wcl.american.edu/impact/initiatives-programs/techlaw/> [<https://perma.cc/853W-PQQ9>] (last visited Mar. 3, 2024); *Legal Analytics & Innovation Initiative*, GA. STATE UNIV., <https://law.gsu.edu/faculty-centers/legal-analytics-innovation/> [<https://perma.cc/7N3Z-V9TL>] (last visited Mar. 3, 2024); *Master of Law and Technology*, GEO. L., <https://curriculum.law.georgetown.edu/llm/llm-programs-non-lawyers/masters-law-technology/> [<https://perma.cc/APE5-QGGP>] (last visited Mar. 3, 2024); *Technology, Innovation Law, and Ethics (TILE) Program*, SEATTLE UNIV. SCH. L., <https://law.seattleu.edu/academics/degree-programs/jd/curriculum/tile/> [<https://perma.cc/WD87-JFCD>] (last visited Mar. 3, 2024); INST. FOR L., INNOVATION & TECH., <https://law.temple.edu/ilit/> [<https://perma.cc/VB33-BCDK>] (last visited Mar. 3, 2024).

2. *See* Kristen E. Murray, *Take Note: Teaching Law Students to Be Responsible Stewards of Technology*, 70 CATH. U. L. REV. 201, 202–04, 207–08 (2021); Tammy Pettinato Oltz, *Educating Robot-Proof Attorneys*, 97 N.D. L. REV. 185, 205 (2022). *See generally* Steven R. Smith, *The Fourth Industrial Revolution and Legal Education*, 39 GA. ST. L. REV. 337 (2023).

3. *See, e.g.,* RICHARD SUSSKIND, *TOMORROW'S LAWYERS* 262 (3d ed. 2023); HUGH LOGUE, *AUTOMATING LEGAL SERVICES: JUSTICE THROUGH TECHNOLOGY* (2019).

4. *See* Andrew Perlman, *The Implications of ChatGPT for Legal Services and Society* 1 (Dec. 5, 2022) (unpublished manuscript).

5. *See, e.g.,* Amy B. Cyphert, *A Human Being Wrote This Law Review Article: GPT-3 and the Practice of Law*, 55 U.C. DAVIS L. REV. 401, 436–37 (2021) (describing discriminatory outputs from AI used to power law firms' client chatbots); Taylor B. Schaefer, *The Ethical Implications of Artificial Intelligence in the Law*, 55 GONZ. L. REV. 221, 229 (2020) (suggesting that lawyers could face malpractice suits for overbilling if they fail to use AI when it would save clients money).

6. Note that Comment 8 to Model Rule of Professional Conduct 1.1 requires lawyers to “keep abreast of changes in the law and its practice, including the benefits and risks associated with relevant technology.” MODEL RULES OF PROFESSIONAL CONDUCT r. 1.1 cmt. 8 (AM. BAR ASS'N 2020). How this rule implicates transactional lawyers, however, has not been given widespread attention. *See* Lori D. Johnson, *Navigating Technology Competence in Transactional Practice*, 65 VILL. L. REV. 159, 162 (2020).

enforceability opinion letters, presents technical and legal difficulties arising from recent developments in law and technology. The second, involving lawyers' administration of complex doctrines at the heart of financial markets, presents ethical questions for attorneys and lawmakers to digest. These examples, considered together, show how thoroughly emerging technologies may saturate business law doctrine and practice. They also demonstrate how perhaps the most important skill that law students need to navigate the digital age is a strong understanding of foundational legal doctrines, especially those taught in students' first year and core upper-level classes.

Opinion letters—or third-party closing opinions—are central to deal lawyers' practices.⁷ Many types of transactions require opinions of counsel as a condition precedent to closing.⁸ Opinions practice is an inflection point at which attorneys attest to the legal status of a deal⁹ and, as such, can be an insightful lens through which to consider the implications of technology for deal lawyers and the markets they support.¹⁰ So much of law school pedagogy is litigation-focused.¹¹ Teaching law students about opinions practice as they learn the doctrines governing various business law matters can instill understanding of the relationship between law and markets. It can also further students' understanding of lawyers' roles in maintaining the legal integrity of transactions on which market actors rely.

Because opinion letters are a juncture at which lawyers take responsibility for the legal status of a deal, they are also useful for understanding the effects of emerging technologies on lawyers and on transactions themselves.¹² The first part of this Essay demonstrates this in the context of a closing opinion requiring what should be a simple application of statutory provisions to a deal's facts to assure enforceability. The second part illustrates this in the context of a complex, reasoned opinion, the issuance of which can raise policy concerns for emerging technology-enabled transactions.

7. See Heather Hughes, *Non-party Interests in Closing Opinion Letters*, 3 AM. U. BUS. L. REV. 183, 184–85 (2014).

8. See generally DONALD W. GLAZER, SCOTT FITZGIBBON & STEVEN O. WEISE, GLAZER & FITZGIBBON ON LEGAL OPINIONS 7–16 (2d ed. 2001); Thomas L. Ambro & Arthur Norman Field, *The Legal Opinion Risk Seminar Papers*, 62 BUS. LAW. 397, 397 (2007).

9. As deal lawyers know, opinion letters are often so qualified that they create no effective liability in the attorneys rendering them, undermining their reliability as an attestation of the legal status of a transaction. This Essay acknowledges this, while arguing that opinions practice is highly relevant pedagogically and could potentially be a site for reform of lawyers' roles going forward. See generally Heather Hughes, *Robots, Markets, and the Value of Deal Lawyers*, 49 J. CORP. L. (forthcoming 2024).

10. *Id.*

11. Adam N. Eckart, *Litigation Bias*, 101 OR. L. REV. 51, 55 (2022). Although reliable information on the issue is difficult to find, one 2007 study indicated that more students were interested in transactional law than litigation despite law schools' focus on litigation skills. Louis N. Schulze, Jr., *Transactional Law in the Required Legal Writing Curriculum: An Empirical Study of the Forgotten Future Business Lawyer*, 55 CLEV. ST. L. REV. 59, 70–71 (2007).

12. See Hughes, *supra* note 9 (manuscript at 24).

AI-generated contracts present concerns about the potential atrophy of deal lawyers' skills.¹³ If language models learn how to produce documents traditionally drafted by lawyers, will lawyers continue to learn how to draft contracts? If lawyers do not take responsibility for the legal enforceability and compliance of deals, how do we know that transactions are legally sound? Closing opinions are, in theory, the moment that atrophy creates professional liability.¹⁴ This is "in theory" because of the many qualifications and exceptions that lawyers embed in closing opinions to avoid professional liability.¹⁵

Lawyers render closing opinions at the request of investors; they are market-driven. Perhaps regulators should require closing opinions in some markets and perhaps the ABA should regulate them.¹⁶ Might a regulated opinions practice prevent lawyer atrophy? Vetting this question is beyond the scope of this Essay. The question has pedagogical value apart from its real-world traction. It is highly useful for educating law students about what deal lawyers do and how emerging technologies create questions that lawyers should identify and address.

Consider a classroom hypothetical in which students are given deal documents and a form of closing opinion. Ask the students to set aside the qualifications the opinion already contains. Can they render the opinion? What information do they need to establish to do so? How will they establish that information? What qualifications are essential and why? Who should account for uncertainties if the lawyers do not? If no one accounts for them, are they associated, potentially, with negative externalities that could fall on third parties or the public generally?¹⁷

Recently revised ABA standards for legal education contemplate additional emphasis in law school on lawyering skills and professional development.¹⁸ Only on the strongest of doctrinal foundations will students and lawyers successfully navigate the challenges that emerging technologies are presenting for law and lawyers. The skill of preparing an attorney work product like an opinion letter follows from a sophisticated understanding of the law on which the lawyer opines.¹⁹

13. Concerns about atrophy of human analytical capacities given the capabilities of AI pervade many fields, and law is no exception. *See, e.g.*, Bill Tomlinson, Andrew W. Torrance & Rebecca W. Black, *ChatGPT and Works Scholarly: Best Practices and Legal Pitfalls in Writing with AI*, 76 SMU L. REV. F. 108, 123, 125 (2023).

14. *See* Hughes, *supra* note 9 (manuscript at 25).

15. *See* Hughes, *supra* note 7, at 186–87.

16. *See* Hughes, *supra* note 9 (manuscript at 36).

17. *See id.* (manuscript at 37).

18. *See, e.g.*, Memorandum from Bridget Mary McCormack, Council Chair, Council of the Section of Legal Educ. & Admissions to the Bar, Am. Bar Ass'n, & William Adams, Managing Dir. of Accreditation & Legal Educ., Am. Bar Ass'n, Matters for Notice and Comment: Standards 304, 405, 701, and 702 (Dec. 1, 2023), https://www.americanbar.org/content/dam/aba/administrative/legal_education_and_admissions_to_the_bar/council_reports_and_resolutions/comments/2023/23_nov-notice-comment-memo-src-standards-304-405-701-702.pdf [<https://perma.cc/A42G-CK48>].

19. *See generally* JAMES J. WHITE, G. ERIC BRUNSTAD, JR. & HEATHER HUGHES, SECURED TRANSACTIONS TEACHING MATERIALS (5th ed. 2021).

I. ENFORCEABILITY AND PERFECTION OPINIONS

This example presents questions that technology can complicate in the context of a basic closing opinion on enforceability and perfection in a secured transaction. A closing opinion is a letter prepared by the attorneys that represent an issuer.²⁰ Attorneys issue the letter to, and for the benefit of, investors—their client’s contractual counterparties.²¹ Not all transactions involve closing opinion letters.²² Whether a deal requires a closing opinion turns on whether the investors require, as a condition precedent to closing, an opinion of counsel to their counterparty attesting to legal aspects of the deal.²³ Closing conditions contained in the deal documentation determine the scope of the opinion letter.²⁴ Opinions are often negotiated as a closing approaches, with investors seeking more expansive assurances about the deal and the issuer’s counsel seeking to limit its exposure to liability around any potential legal infirmities.²⁵

The example discussed here deals with an enforceability and perfection opinion for a secured transaction. Secured Transactions courses are foundational to business law curricula. A secured transaction is any deal in which an investor extends credit to a debtor and the debtor assigns an interest in assets to secure its obligation.²⁶ Lenders often require that counsel for the debtor render an opinion that the transaction is legally enforceable and that the investor’s security interest will be perfected under the statute (giving it whatever priority ensues in a contest with other claimants asserting interests in the same assets).²⁷ Enforceability refers to the enforceability of the contracts and enforceability, under UCC Article 9, of the security interest that a loan and security agreement creates. Enforceability opinions may also include due authorization and good standing—opinions that the debtor is an entity in legal existence with the capacity to transact and that the agents of the debtor negotiating and executing the documents have legal authority to do so.²⁸ Perfection refers to the method by which the investor gives notice

20. Hughes, *supra* note 7, at 185.

21. *Id.*

22. See, e.g., Committee on Legal Opinions, *Guidelines for the Preparation of Closing Opinions*, 57 BUS. LAW. 875, 875 (2002) (“The agreement for a business transaction will often condition a party’s obligation to close on [a legal opinion’s] receipt.”); Steven L. Schwarcz, *The Limits of Lawyering: Legal Opinions in Structured Finance*, 84 TEX. L. REV. 1, 2, 5, 12 (2005).

23. Jonathan M. Barnett, *Certification Drag: The Opinion Puzzle and Other Transactional Curiosities*, 33 J. CORP. L. 95, 106–07 (2007).

24. Hughes, *supra* note 7, at 186.

25. Alan Joel Robin & Edward M. Pollock, *An Approach to Opinion Letters—the Silverado Accord and Other Model Forms from a Recipient’s Perspective*, 29 REAL PROP., PROBATE AND TRUST J. 611, 613–14 (1994).

26. See U.C.C. § 9-109 (AM. L. INST. & UNIF. L. COMM’N 2022). Under UCC Article 9, some transactions that do not involve extensions of credit secured by personal property are nonetheless included within the scope of UCC Article 9 and deemed to create “security interests” as defined by UCC Article 1. See *id.* § 9-109(a)(3)–(4).

27. Schwarcz, *supra* note 22, at 9 n.45 (2005).

28. ALAN S. GUTTERMAN, BUSINESS TRANSACTIONS SOLUTIONS § 291:41, Westlaw (database updated Mar. 2024).

of its interest to secure priority, thus making its interest enforceable against third parties.²⁹

Enforceability and perfection opinions in secured transactions are commonplace.³⁰ They are often standardized attorney work products—part of the bread-and-butter of a commercial law practice.³¹ Lawyers prepared for practice in the digital age need mastery of legal doctrine to be able to identify when and how technologies disrupt doctrinal elements or assumptions.³²

Attachment or enforceability of a security interest is a prerequisite to perfection of the interest.³³ The attachment provision, Section 9-203 of the UCC, requires that the secured party have evidence of the debtor's intent to assign a security interest.³⁴ This often takes the form of a security agreement signed by the debtor containing a collateral description,³⁵ though other methods are possible.³⁶ How do we infer intent to assign an interest in assets, for these statutory purposes, if a contract is AI-generated? Is analyzing the prompts sufficient? New AI tools enable businesses to automate the drafting and negotiation of contracts from terms to completion.³⁷ How do such tools affect agency or due authorization of a transaction?³⁸

In order to issue a perfection opinion, lawyers must classify the collateral in which the debtor is assigning an interest, in terms defined in UCC Article 9.³⁹ Fortunately, the UCC Article 9 rules, along with the 2022 amendments to the UCC, enable classification with relative certainty even in cases involving assets developed with recent technologies.⁴⁰ That said, students must be willing to explore how assets are held and who or what controls them to opine on attachment and perfection.

29. See generally U.C.C. § 9-301.

30. William H. Widen, *Lord of the Liens: Towards Greater Efficiency in Secured Syndicated Lending*, 25 CARDOZO L. REV. 1577, 1597 (2004).

31. Jonathan C. Lipson, *Price, Path & Pride: Third-Party Closing Opinion Practice Among U.S. Lawyers (A Preliminary Investigation)*, 3 BERKELEY BUS. L.J. 59, 62, 71–72 (2005).

32. See Smith, *supra* note 2, at 374.

33. See U.C.C. § 9-308.

34. See *id.* § 9-203(b)(3).

35. See *id.* § 9-203(b)(3)(A).

36. See *id.* § 9-203(b)(3)(B)–(D).

37. For examples of AI-based contract drafting and review tools, see, e.g., MOTIONIZE, <https://motionize.io/> [<https://perma.cc/U7SX-WFKF>] (last visited Mar. 3, 2024) (AI software for lawyers that engages in contract drafting and review); *Document Intelligence*, THOMSON REUTERS, <https://legal.thomsonreuters.com/en/products/document-intelligence> [<https://perma.cc/B54K-VMD9>] (last visited Mar. 3, 2024) (Thomson Reuters' AI contract drafting and review service). See also Chris Chambers Goodman, *AI/Esq.: Impacts of Artificial Intelligence in Lawyer-Client Relationships*, 72 OKLA. L. REV. 149, 154 (2019) (explaining various ways lawyers use AI, including contract drafting, review, management, and due diligence).

38. See Carla L. Reyes, *Autonomous Business Reality*, 21 NEV. L.J. 437 (2021) (discussing how business entities are utilizing technologies that automate various aspects of entity organization, governance, and compliance).

39. See U.C.C. §§ 9-102(a), 9-308–9-314.

40. See generally UNIF. L. COMM'N & THE AM. L. INST., UNIFORM COMMERCIAL CODE AMENDMENTS (2022).

Emerging technologies now inspire fantastical hypotheticals with which students can test their skills in applying statutes and their knowledge of doctrine. For example, the new definition of “sign” in UCC Section 1-201(b)(37) contemplates signature by associating with a record, a sound, or process, with intent to authenticate the record.⁴¹ As discussed at this Symposium, scientists are currently using machine learning towards translating sperm whale sounds.⁴² Could a whale sign a contract under the revised UCC?⁴³

This hypothetical requires students to consider plain language approaches to statutes. It requires them to grapple with private-law conceptions of intent. Students must consider what constitutes intent to adopt a record. They must understand what, in other contexts, is evidence sufficient to satisfy statute of frauds concerns.⁴⁴ They must distinguish between intent for authentication purposes and intent that determines the scope of a conveyance, for example.

In practice, the standard response to an opinion complication is to make a qualification or exception to the opinion to the extent it is affected by uncertainties.⁴⁵ However, the complications that technologies present in opinions practice are opportunities to show students all that goes into taking

41. See U.C.C. § 1-201(b)(37) cmt. For the enactment and introduction information about this 2022 provision, see, *UCC, 2022 Amendments to*, UNIF. LAW COMM'N, <https://www.uniformlaws.org/committees/community-home?communitykey=1457c422-ddb7-40b0-8c76-39a1991651ac> [<https://perma.cc/WG2A-PRBX>] (last visited Mar. 3, 2024).

42. Dr. Andrew W. Torrance describes a project in which scientists are using machine learning toward translation of sperm whale sounds. See Andrew W. Torrance & Bill Tomlinson, *If We Could Talk to the Animals, How Should We Discuss Their Legal Rights?*, 92 *FORDHAM L. REV.* 1973 (2024). If translation of the whales' language and communication with them became possible, it could cause a fundamental shift in certain premises foundational to animal law. See generally Guy Gubnitsky & Roe Diamant, *Interpulse Estimation for Sperm Whale Click Detection*, in *IEEE ICASSP 2023 CONFERENCE PROCEEDINGS* 2148 (2023), <https://doi.org/10.1109/ICASSP49357.2023.10096004> [<https://perma.cc/6RQ7-YRQ4>]; Gasper Begus, Andrej Leban & Shane Gero, *Approaching an Unknown Communication System by Latent Space Exploration and Causal Inference* (Feb. 6, 2024) (unpublished manuscript), <https://doi.org/10.48550/arXiv.2303.10931> [<https://perma.cc/D2XE-EGXY>]; Jacob Andreas, Gašper Beguš Michael M. Bronstein, Roe Diamant, Denley Delaney, Shane Gero, Shafi Goldwasser, David F. Gruber, Sarah de Haas, Peter Malkin, Nikolay Pavlov, Roger Payne, Giovanni Petri, Daniela Rus, Pratyusha Sharma, Dan Tchernov, Pernille Tonnesen, Antonio Torralba, Daniel Vogt & Robert J. Wood, *Toward Understanding the Communication in Sperm Whales*, *iSCIENCE*, June 17, 2022, at 1; Shafi Goldwasser, David F. Gruber, Adam Tauman Kalai & Orr Paradise, *A Theory of Unsupervised Translation Motivated by Understanding Animal Communication* (Nov. 3, 2023) (unpublished manuscript), <https://doi.org/10.48550/arXiv.2211.11081> [<https://perma.cc/9R7A-JX7K>]; Peter C. Bermant, Michael M. Bronstein, Robert J. Wood, Shane Gero & David F. Gruber, *Deep Machine Learning Techniques for the Detection and Classification of Sperm Whale Bioacoustics*, *SCI. REPS.*, Aug. 29, 2019.

43. See Heather Hughes, *Innovation and Commercial Law* (Nov. 24, 2023) (unpublished manuscript), <https://ssrn.com/abstract=4643594> (discussing how lawmakers strive to make commercial statutes technology neutral, then neutralize unexpected scenarios plausible under the plain language of statutes and contracts, by advancing an overarching policy in favor of commercial law rules that ratify established market conventions).

44. See, e.g., U.C.C. § 9-203(b)(3)(B)–(D).

45. See Heather Hughes, *Property and the True-Sale Doctrine*, 19 *U. PENN. J. BUS. L.* 870, 895–96 (2017) (discussing opinion letter qualification in the context of true-sale opinions).

responsibility for the legal status of a deal that involves AI, blockchain technology, digital assets, or technologies to come.⁴⁶

II. DEALS INVOLVING CHARACTERIZATION RISK

The title of the Symposium session that originated this Essay references “decision-making and balance.”⁴⁷ Transactions that involve characterization risk are emblematic of this theme. Consider, for example, true-sale closing opinion letters in asset-backed issuances—another widely established attorney work product.⁴⁸ Asset-backed issuances balance investor and issuer rights; decisions about technology or deal platforms can affect that balance.⁴⁹ Market actors and their attorneys make decisions about whether and when to use various technologies.⁵⁰ These decisions can impact the balance of rights that these transactions traditionally strike.⁵¹

Investors require true-sale opinion letters to fund an issuance of asset-backed securities (ABS).⁵² In the multitrillion dollar ABS industry, companies raising capital make a decision to assign assets to a bankruptcy-remote subsidiary.⁵³ They do this to isolate the assets from the company’s liabilities and thereby get better pricing from investors.⁵⁴ The investors require that the company’s lawyers render a complex, potentially convoluted opinion stating that the securitized assets are being assigned in a sale transaction and thus are not reachable by creditors of the company (i.e. not being assigned as collateral for a loan).⁵⁵ The parties understand that if the issuer files for bankruptcy down the road, a court may revisit the

46. See Heather Hughes, *Blockchain and the Future of Secured Transactions Law*, 3 STAN. J. BLOCKCHAIN LAW & POL’Y 1 (2020) (discussing how blockchain technology implicates the legal status and consequences of common transactions).

47. Panel 2: AI’s Effect on Law, Legal Education and Neuroscience: Decision Making and Balance at the Fordham Law Review Symposium: The New AI: The Legal and Ethical Implications of ChatGPT and Other Emerging Technologies (Nov. 3, 2023), at 1:30:16, <https://vimeo.com/882909667> [<https://perma.cc/PFP6-KP7X>].

48. See generally Hughes, *supra* note 45; Heather Hughes, *Reforming the True-Sale Doctrine*, 36 YALE J. ON REGUL. BULLETIN 51, 57–58 (2018); WHITE, BRUNSTAD & HUGHES, *supra* note 19, at 364.

49. Heather Hughes, *Designing Effective Regulation for Blockchain-Based Markets*, 46 J. CORP. L. 899, 900 (2021).

50. Brett J. Trout, *The Ethical Lawyer and the Tao of Technology*, 48 CREIGHTON L. REV. 709 (2015) (stating that lawyers decide which technologies suit their goals). *But see* Tammy Pettinato Oltz, *supra* note 2, at 187 (2022) (arguing that lawyers have an affirmative duty to utilize new technologies).

51. See Hughes, *supra* note 49, at 904–06 (discussing how asset securitization using blockchain technology can affect investor claims in bankruptcy proceedings).

52. See Hughes, *supra* note 45.

53. See JAMES J. WHITE et al., *supra* note 19, at 360–64.

54. See Hughes, *supra* note 45, at 881 (explaining why special purpose entities in a securitization are bankruptcy-remote from the originator); Steven L. Schwarcz, *Securitization Post-Enron*, 25 CARDOZO L. REV. 1539 (2004) (discussing benefits of securitization).

55. See Hughes, *supra* note 45, at 895.

assignment's legal status so that employees or other claimants can access assets for support or recovery.⁵⁶

The balance of rights—the investors' rights and the company's creditors' rights—is preserved by the possibility that the creditors can challenge the “sale” characterization of the assignment.⁵⁷ Emerging technologies threaten this balance by potentially making immediate, through automation, an asset disposition to investors upon default.⁵⁸ Due to automation, such dispositions could be difficult to reverse. The ethical question is: Should lawyers rendering true-sale opinions consider or advise on third-party effects of transactions that they are structuring and closing?⁵⁹ The answer, under current rules of professional conduct, is no.⁶⁰ Legal scholars have, however, considered this question before.⁶¹ The example here suggests that technological developments warrant revisiting this ethical question now.

Law students prepared for practice in the digital age should understand the effects of a client's choice to use various emerging technology platforms.⁶² Students must know doctrine in order to recognize doctrinal ambiguity and how technology affects the consequences of such ambiguity. To understand characterization risk, students need strong comprehension of contracts and property. They also need a sophisticated sense of the distinction between private law and public welfare regulation.

CONCLUSION: NEXT GENERATION LAWYERS

The next generation of lawyers will be responsible for whether and how the legal profession continues to support collective societal expectations. Comments offered by others during this Symposium complement this Essay and illuminate challenges for future lawyers.⁶³ This conclusion contemplates how some other participants' comments complement the discussion above.

56. *See id.* at 908.

57. *Cf.* Hughes, *supra* note 45, at 885 (arguing that recharacterization challenges can protect parties and prevent negative externalities); Edward J. Janger, *The Death of Secured Lending*, 25 CARDOZO L. REV. 1759, 1775 (2004) (same).

58. For discussion of the dynamic between automated asset dispositions and the automatic stay in bankruptcy, see Carter D. Wietacha, Note, *The Impending Collision of Smart Contracts and the Automatic Stay*, 97 NOTRE DAME L. REV. 1351, 1360 (2022); Juliet M. Moringiello, *Automating Repossession*, 22 NEV. L.J. 563, 571 (2022); Danielle D'Onfro, *Smart Contracts and the Illusion of Automated Enforcement*, 61 WASH. U. J.L. & Pol'y 173, 186–87 (2020).

59. *See* Steven L. Schwarcz, *supra*, note 22, at 7; John C. Coffee, Jr., Comment, *Can Lawyers Wear Blinders?: Gatekeepers and Third-Party Opinions*, 84 TEXAS L. REV. 59, 62 (2005); Hughes, *Robots, Markets, and the Value of Deal Lawyers*, *supra* note 9, at Part IV.

60. *See* MODEL RULES OF PROFESSIONAL CONDUCT (AM. BAR ASS'N 2020) (showing that there are no Model Rules that address the effects that attorneys have in the markets they are facilitating); *cf. id.* r. 1.2(d) (establishing that “lawyer shall not counsel a client to engage, or assist a client, in conduct that the lawyer knows is criminal or fraudulent”).

61. *See* Schwarcz, *supra* note 22, at 12–13.

62. *See* Johnson, *supra* note 6; Reyes, *supra* note 38; Smith, *supra* note 2; Hughes, *supra* note 7; Oltz, *supra* note 2.

63. *See, e.g., infra* note 64–73 and accompanying text; Torrance, *supra* note 42.

How are lawyers crafting firm-wide policies around the use of emerging technologies? Daren Orzechowski, a global cohead of Allen & Overy LLP's technology practice, described how the firm is utilizing and developing high-tech practice tools such as Contract Matrix and Harvey.⁶⁴ These are exciting tools. A law firm involves many different practices for which technology has unique implications that only the attorneys specializing in a field may know. This is true even across practice areas that may appear to non-deal lawyers to be very similar. For example, the impact of the aforementioned technological issues for attorneys' opinions rendered in commercial finance may vary from those rendered in securities law compliance.

Although investors and their attorneys typically make choices around the use of tools and platforms, the consequences of these choices usually fall on the issuer-side—i.e., on issuers and their stakeholders. Zealous representation can certainly include utilization of a platform that most efficiently and completely assures an investor's legal rights. As lawyers navigate the implementation of new forms of work product and of transactions, hopefully issuer-side lawyers will understand how to respond to the possibilities for their clients that various platforms present. Moving forward, legal education is responsible for equipping the next generation of lawyers to identify potential concerns that a choice of platform presents.

Professor Harry Surden noted that “attention is all you need,”⁶⁵ referencing an influential paper by this name that describes “transformer” architecture in computer science.⁶⁶ A layperson might ask, “attention to what?” The second example above—regarding deals with characterization risk and potential stakeholder consequences—shows how transactional contexts present choices around where a lawyers' attention can lie. Are lawyers only tending to deal documents' technical conformity with statutory and common law requirements, regardless of how technology may alter the effects of a deal? Are they only tending to the replication of market-dominant forms of closing opinions that can sidestep liability for legal fault lines underlying a transaction (and a market)?⁶⁷ In contrast, are they turning attention to context, policy implications, and stakeholder concerns in addition to

64. Daren Orzechowski, Partner & Glob. Cohead of Tech. Pract., Remarks at the Fordham Law Review Symposium: The New AI: The Legal and Ethical Implications of ChatGPT and Other Emerging Technologies (Nov. 3, 2023), at 29:02, <https://vimeo.com/882909667> [<https://perma.cc/PFP6-KP7X>].

65. Harry Surden, Prof. of L., Univ. of Colorado, Remarks at the Fordham Law Review Symposium: The New AI: The Legal and Ethical Implications of ChatGPT and Other Emerging Technologies (Nov. 3, 2023), at 51:12, <https://vimeo.com/882909667> [<https://perma.cc/PFP6-KP7X>].

66. See Ashish Vaswani, Noam Shazeer, Niki Parmar, Jakob Uszkoreit, Llion Jones, Aidan N. Gomez, Lukasz Kaiser & Illia Polosukhin, Attention Is All You Need (Aug. 2, 2023) (unpublished manuscript), https://proceedings.neurips.cc/paper_files/paper/2017/file/3f5ee243547dee91fbd053c1c4a845aa-Paper.pdf [<https://perma.cc/P5PU-4CE6>]; Zain ul Abideen, *Attention Is All You Need: The Core Idea of the Transformer*, MEDIUM (June 26, 2023), <https://medium.com/@zaiinn440/attention-is-all-you-need-the-core-idea-of-the-transformer-bbfa9a749937> [<https://perma.cc/5NNR-RFFK>].

67. See Hughes, *supra* note 7.

immediate client interests? Can they and should they cultivate attention to such things?⁶⁸ The level and quality of attention that the next generation of lawyers pays to various aspects of their practices and the matters that they undertake can affect how technologies evolve to advance those practices and matters.⁶⁹

At the Symposium, Professor Daniel W. Linna Jr. posited that the automation of contracts requires that we articulate a baseline.⁷⁰ For example, one could ask questions such as: What is the ideal contract? What is the baseline to which we are optimizing?⁷¹ The next generation of lawyers will need to cultivate sensitivity to these questions. Contracts in commercial finance—in both of the sample contexts described above—are derived from standardized forms.⁷² Transaction costs associated with switching forms is itself a deterrent to revisiting the forms of contract operative in major markets.⁷³ If we digitize forms that preexist technologies and that present the kinds of questions discussed above, how do lawyers have agency around ideal baselines for contracts in technology-enabled markets? If law schools fail to educate lawyers about possibilities for ideal contracts, the next generation of lawyers may not have the capacity to understand, let alone take responsibility for, this issue.

Educating deal lawyers for the digital age must involve keen attention to how technology implicates different practice areas and subjects in unique ways. This Essay's discussion of opinions practice shows one way that legal educators can link, for students, the doctrines that they must master and new technologies that are affecting transactional law practice.

68. *Id.*

69. See Dyane L. O'Leary, "Smart" Lawyering: Integrating Technology Competence into the Legal Practice Curriculum, 19 U.N.H. L. Rev. 197, 204, 211, 215 (2021) (discussing the importance of law students remaining aware of emerging technologies).

70. Daniel W. Linna, Jr., Senior Lecturer & Dir. of L. & Tech. Initiatives, Nw. Pritzker Sch. of L. & McCormick Sch. of Eng'g, Remarks at the Fordham Law Review Symposium: The New AI: The Legal and Ethical Implications of ChatGPT and Other Emerging Technologies (Nov. 3, 2023), at 4:37:01, <https://vimeo.com/882909667> [<https://perma.cc/PFP6-KP7X>].

71. *Id.*

72. See Heather Hughes, *Derivatives Traders Do What, Again?*, 30 J.L. & Com. 203, 216–17 (2012) (reviewing ANNELESE RILES, *COLLATERAL KNOWLEDGE: LEGAL REASONING IN THE GLOBAL FINANCIAL MARKETS* (2011)).

73. Ryan Clements, *Evaluating the Costs and Benefits of a Smart Contract Blockchain Framework for Credit Default Swaps*, 10 WM. & MARY BUS. L. REV. 369, 405–06 (2019) (describing transitional costs associated with blockchain technologies).