

Technology Law

Chapter 1: Technology Law

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PART ONE: INTRODUCING TECHLAW UNCERTAINTIES

1. Technology Law

Technology law (“techlaw”) is the study of how law and technology foster, restrict, and otherwise shape each other’s evolution.

While it’s tempting to focus on the legal quandaries posed by agentic AI, quantum computing, genetic modification, or whatever technological innovation has most recently captured the public’s attention, the fundamental challenge of techlaw is not how to best regulate novel technologies. Rather, it’s how to best address familiar legal uncertainties in new contexts.

Certainly, the specifics change. Technological developments raise exciting legal questions precisely because existing law does not anticipate something about the technology or its use—possibly the item itself, the conduct it makes possible, the actors it enables or disempowers, or the relationships it fosters. If someone invents a teleporter, it makes moving troops or refugees easier; it creates new gatekeepers while destroying the gas station industry and border enforcement; and it enables international or interstellar personal relationships. But focusing primarily on what is novel about each particular technology may obscure what is familiar. A broader perspective helps identify what concepts are relevant across time and legal contexts. In regulating teleporters, for example, there might be much to learn from 16th century shipping (regarding controlling the spread of disease) or 3D printers (for guidance on a technology that undermines regulatory systems that depend on point of sale).

But while the technologies change, the form and content of techlaw questions repeat. Consider the following in light of the invention of teleporters. Has an innovation undermined a foundational assumption about what is or isn’t possible? How has it altered power relations? On balance, are these changes beneficial or problematic? And while it’s fun to think about teleporters, already existing technologies also raise these questions as later social developments alter usage and custom.

Regulatory questions also fall into familiar categories. Again imagine a teleporter was just invented. When should we regulate its development, distribution, or use? If we determine that regulation is needed now, should we focus on regulating the technology itself? The actors who use it? The activity it is used for? Might we need to stretch or clarify old law? Or do we need to create new law, or possibly even a new regulatory institution?

Recognizing these recurring patterns allows us to compare different means of responding to similar changes, carry lessons learned in one area of law to new contexts, and develop a toolbox of considerations and strategies for using law to shape and respond to technological change. This text provides a framework for how to learn from past interactions between law and technology to inform our decisions going forward.

Are Certain Technologies “Exceptional”?

Some techlaw writers attempt to identify whether a new technology is “exceptional,” meaning that its features or uses require new law or even a new legal regime.¹ Others have focused on identifying “disruptive” technologies that pose distinctly challenging legal questions.² The implicit converse to these characterizations is that “unexceptional” or “non-disruptive” technologies can be governed adequately by extant legal rules.³

That may be true, but we take a different approach. Rather than attempting to draw a line in the sand between technologies that require major legal changes and those that do not, we focus on the legal uncertainties raised by *all* technologies. All technologies raise legal uncertainties, though some may be resolved so quickly as to seem nonexistent. Should the latest Honda Civic be subject to the same speed limits that govern the prior year’s model? Of course!

Broadening the scope of our methodology to include the “unexceptional”

¹ For perspectives on technological exceptionalism, see Ryan Calo, [Robotics and the Lessons of Cyberlaw](#), 103 Calif. L. Rev. 513, 516 (2015), arguing the exceptional features of robotics account for its legal impact, and Meg Leta Jones, [Does Technology Drive Law? The Dilemma of Technological Exceptionalism in Cyberlaw](#), 2018 J.L. Tech. & Pol’y 249, 251, critiquing the exceptionalist approach for emphasizing a technology’s design features to the exclusion of its social dimensions.

² See Margot E. Kaminski, [Authorship, Disrupted: AI Authors in Copyright and First Amendment Law](#), 51 U.C. Davis L. Rev. 589, 589–90 (2017).

³ See BJ Ard, [Making Sense of Legal Disruption](#), 2022 Wis. L. Rev. Forward 42, 43.

technologies—the ones the legal system easily governs—allows us to identify the features of a legal system that enable it to handle technological change. The seeming obviousness of the Honda Civic question obscures the analysis behind the answer—and unpacking that process of when and why analogical reasoning produces a legitimate conclusion can help us more fully understand the relationship between law and technology. The obviousness of the answer is also due in part to the fact that we have a complex regulatory structure—incorporating administrative law, tort law, and products liability law—that establish a stable regulatory backdrop through safety standards for cars and enforcement mechanisms for traffic laws.

Emphasizing what is familiar as well as what is novel about a technological development makes it easier to recognize common challenges and strategies for responding to them. Our approach highlights the many situations where law comfortably accommodates innovations, belying the false trope that “law cannot keep up with technology.” A framework focused on legal uncertainties—rather than novelty—enables us to better categorize and grapple with the full range of techlaw challenges.

A. The Techlaw Uncertainties Methodology

A techlaw approach highlights the similar questions that different technologies raise. The Techlaw Uncertainties methodology systematically resolves (or re-solves) them. It has three main moves: identifying relevant legal uncertainties, considering the benefits of a more permissive or precautionary stance, and evaluating which legal action is preferable.

1. Motivations and Context

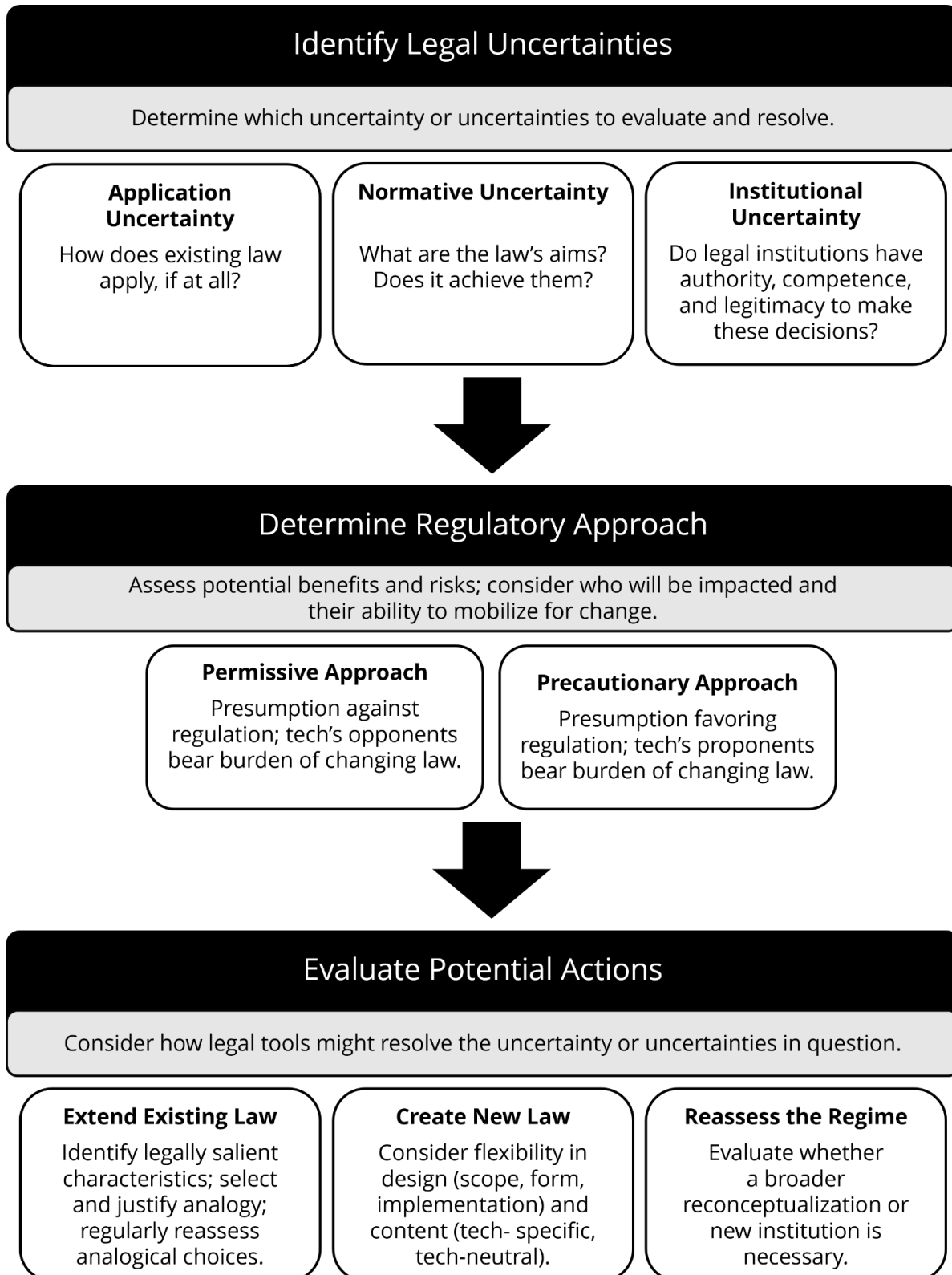
Ideally, regulation would promote or preserve the benefits of a technological development while also preventing or mitigating the associated harms. Accordingly, in determining whether and how to regulate technology, one must attempt to identify the likely legal, social, economic, political, and other changes associated with a technology and evaluate which of those changes are “good” or “bad.” (Of course, what is “good” or “bad” will depend on the assessor’s priors and interests.)

It will never be possible to accurately predict all of the social changes that will be likely fostered by a technology, regardless of how new or how familiar it is. As the great philosopher Yogi Berra quipped, “It’s tough to make predictions, especially about the future.” But that’s hardly reason to forego trying to identify extent and foreseeable future opportunities and risks. Law is a wonderful tool for shaping human behavior, and used thoughtfully, it can direct the direction of technological development, adoption, and use towards a desired social outcome.

Nor is this work ever done. Legal actors regularly re-evaluate whether the current regulatory regime is achieving the desired goals. The goal of our methodology is not to find the best answer for all time; rather, it is to identify a viable solution for now, with the awareness that there’s a lot of room to disagree over which solution might be the best. Thus, while we characterize our methodology as one that enables “resolving” tech-fostered legal uncertainties, it might be more accurately described as one that enables “re-solving” (and re-solving, and re-solving) such questions.

With this context in mind, we briefly outline the main steps of the methodology; we will unpack them in detail over the course of the text.

The Techlaw Uncertainties Methodology



2. Identify Legal Uncertainties

The first step is identifying which legal uncertainties are implicated. There are three main kinds of tech-fostered legal uncertainties: (1) **application uncertainties** raise the question of whether and how extant law applies; (2) **normative uncertainties** arise when there is a question of what the law should do as a matter of values or policy; and (3) **institutional uncertainties** exist when there are questions about different regulatory entities' relative authority, competence, and legitimacy to apply and update the law.⁴ A given technology can raise all three types of legal uncertainties, especially as the technology and its use evolves in the context of other societal changes.

3. Assess the Preferable Regulatory Approach

After identifying the legal uncertainties, we can move to step two: evaluating which regulatory approach is preferable.⁵ This step often goes unexamined, but it has critical distributive and path-setting consequences.

There is a spectrum of approaches to tech-fostered legal uncertainties, ranging from a more **permissive**, “wait and see” stance to a more **precautionary** stance that favors proactive regulation. Deciding between these approaches is partly an exercise in balancing innovation, risk, and the public interest in the face of the unknown.

We also emphasize these approaches' implications for whether those who benefit from a technology or those who are harmed by it bear the burden of agitating for legal change. These implications highlight the importance of considering the size, concentration, access to information, and political power of these respective groups, as their ability to mobilize for legal change will affect the likelihood that initial regulatory missteps will be corrected. By explicating this step, we encourage legal actors to engage in thoughtful evaluation of the associated tradeoffs and consequences.

4. Evaluate Possible Regulatory Actions

The third step requires weighing the strengths and limitations of the three traditional regulatory actions—(1) **stretching existing law**, (2) **creating new law**,

⁴ Distinctions between these types of uncertainties are explored more fully in [Chapter 2](#).

⁵ Relevant considerations are detailed in Chapters 10–11.

and (3) **reassessing the regulatory regime**—with an awareness of their attendant techlaw considerations and issues.⁶

The most common action may appear to be inaction: not creating new rules entails assuming that legal actors will find ways to apply existing ones to new situations. When this occurs or is deemed the preferable action, legal actors must understand, articulate, and regularly reexamine those choices to avoid inadvertently entrenching inappropriate rules. When new law is warranted, lawmakers will need to balance stability and flexibility both in how a rule is designed and in what it governs, especially in the selection between relatively tech-neutral (regulating actors or activities) or tech-specific (regulating artifacts) formulations. And when tech-fostered changes introduce complexities, blur categories, and pose questions that expose the limits of existing modes of regulation, we may need to reassess the wider regulatory regime.

B. Methodological Payoffs

In some ways, this methodology is descriptive: we've created it based on our review of the growing body of techlaw literature and the various steps that policymakers, legal scholars, and other commentators often consider. By outlining it, we make what has long been implicit and unconscious more explicit and purposeful.

But we also seek to shift how people approach techlaw questions. Namely, we exclude the question of “What is new?” about a given technology from our methodology. Focusing on radically new technologies that present the most intractable problems for the law makes for exciting reading, but it captures only the times when the law falls short. This framing leads to the conclusion that techlaw is ultimately about managing the pacing problem—the idea that law cannot “keep up” with new technological developments.⁷ But the legal system accommodates the great majority of innovations with little fuss, and older technologies may also raise issues as their societal use changes.

⁶ See Chapters 13–16.

⁷ For the canonical account of the pacing problem, see Gary Marchant, *The Growing Gap Between Emerging Technologies and the Law*, in *The Growing Gap Between Emerging Technologies and Legal-Ethical Oversight: The Pacing Problem* 19 (Gary E. Marchant, Braden R. Allenby & Joseph R. Herkert eds., 2011).

A techlaw perspective that encompasses *all* legal uncertainties, ranging from the most intuitive to the most complicated and including those raised by both old and new technologies, better models how the legal system actually operates and interacts with technology. Accordingly, rather than asking what is new, our methodology begins with an invitation to consider which uncertainties are worth exploring.

Beyond fostering a more accurate understanding of the relationship between the legal system and technology, our methodology has a number of additional payoffs.

Improves Legal Analysis. Following a structured methodology carries several analytical benefits. It surfaces techlaw considerations that someone evaluating the issues might otherwise miss. And, because the framework lays out the relevant considerations, it also spares the evaluator from reinventing the wheel and enables a more comprehensive and expedited evaluation.

For example, in *Remote Repossession*, I (Rebecca) intentionally employed the techlaw uncertainties methodology. I began by evaluating how law should handle the possibility of car companies using a car's autonomous capabilities and ongoing connections to drive itself away after a missed payment.⁸ I first engaged in one of the main academic approaches to evaluating if extant law should apply to a new technological capability: I looked to the underlying goal of repossession law—protecting public safety—and considered how it would be best preserved. My familiarity with techlaw concepts improved the analysis, as technology's tendency to misdirect responsibility from those most able to avoid an accident to those more proximately involved was highly relevant.

The usual legal analysis would end there, with recommendations for how judges should interpret the law when faced with suits for harms caused by this activity. But taking time to identify a broader range of legal uncertainties (the first step in the methodology) highlighted that this technological capability threatened interests other than public safety, including now-implicit rights to a certain amount of due process, human engagement, and freedom from harms associated with remote corporate interference. And considering whether a permissive or precautionary approach was preferable (the second step) led me to the conclusion that proactive legal codification of these now-threatened rights was critical, given that conventional judicial decisionmaking is not structurally suited to consider the full range of impacted rights.

⁸ Rebecca Crotoft, [Remote Repossession](#), 73 DePaul L. Rev. 369 (2024).

Certainly, someone unfamiliar with this methodology could reach these same conclusions. After all, it reflects the collected insights of multiple judges, policymakers, practitioners, techlaw scholars, and other legal actors who have already wrestled with their own versions of these questions while focusing on particular technologies or legal subjects. But instead of needing to come up with regulatory strategies whole cloth for every new technology, applying this methodology allows us to learn and extrapolate from how the legal system addressed the legal, economic, social, and political challenges raised by previous ones.

Ultimately, the methodology fosters better understanding of the fundamental issues, better evaluation of the likely effectiveness of different legal actions, and better tech-specific and subject-specific analysis.

Fosters Communication Across Time and Silos. By outlining a taxonomy of tech-fostered legal uncertainties, regulatory approaches, and responsive legal strategies, the methodology provides a shared language and common structure for intra- and cross-subject discussion. Too often, people working on techlaw issues talk past each other. We have all seen the communication failures that occur when one conversant is focused on an application uncertainty (“Are gig workers better classified as ‘independent contractors’ or ‘employees’ under the law as written?”) and the other is focused on a normative uncertainty (“Does classifying gig workers as ‘independent contractors’ instead of ‘employees’ make the labor market less fair for workers?”). Recognizing that these questions operate at different levels helps avoid miscommunications that might derail otherwise productive conversations and alliances.

Additionally, being able to situate a techlaw question within a broader framework helps us better talk across subject matter siloes within legal academia. For example, there are obviously different concerns associated with having human beings in the loop when considering which content moderation, medical, and military decision-making processes should be delegated to artificial intelligence. But there is also much to be gained by considering the shared application, normative, and institutional uncertainties that arise in all three contexts. Stepping back makes it easier to learn from the rich history of prior dilemmas and anticipate future issues, allowing us to learn from the past and each other and to make more just and effective decisions going forward.

Emphasizes Opportunities for Action. This framework also emphasizes the possibility of purposeful engagement in the iterative and co-constructive relationship between law and technology. Each legal uncertainty presents an opportunity for legal actors to shape the further development of the law, and the resolution of every uncertainty—regardless of how apparently simple a resolution may appear to be—impacts how the law evolves. While a legal actor’s influence is most apparent when a new law is created or an older one invalidated, the decision to maintain the status quo can be just as consequential.

Admittedly, every opportunity to shift the path of legal evolution is bounded.⁹ The known unknowns of a technology’s possible impacts may chill regulatory action; the technology’s architecture, the established legal structures, and the procedural and institutional constraints on different legal actors limit the range of possible action. Meanwhile, due in part to the speed of technological development and its impact on social norms, legal actors may have only a short period to make determinative regulatory moves. Path dependence, lock-in, and stabilization make shifting the course of law and future technological development more difficult over time.

Notwithstanding these constraints, the history of law’s intersections with technology demonstrates that law is not doomed to constantly scramble to keep up with technological change. Nor are techlaw practitioners and scholars confined to a reactive posture. Law shapes and is shaped by technology, and this methodology highlights our opportunities to purposely engage in this process.

C. The Obligatory “Law of the Horse” Section

There is no denying that technological change has had tremendous impact on the law and its evolution. But why study Technology Law as its own field, when one could instead study the effects of technology on more traditional legal subjects? You’ve doubtless already noticed how the impacts of some new technologies—automobiles, trains, and the internet—are showcased across landmark cases in your blackletter courses.

⁹ See Gaia Bernstein, [*When New Technologies Are Still New: Windows of Opportunity for Privacy Protection*](#), 51 Vill. L. Rev. 921 (2006).

The most enduring argument *against* developing a Technology Law course was articulated almost thirty years ago, in Frank Easterbrook's famous *Law of the Horse* address at a 1996 conference on cyberlaw.¹⁰

Excerpt From

Frank H. Easterbrook, [*Cyberspace and the Law of the Horse*](#), 1996 Chi. Legal F. 207, 207–208.

When he was dean of this law school, Gerhard Casper was proud that the University of Chicago did not offer a course in “The Law of the Horse.” He did not mean by this that Illinois specializes in grain rather than livestock. His point, rather, was that “Law and ...” courses should be limited to subjects that could illuminate the entire law. Instead of offering courses suited to dilettantes, the University of Chicago offered courses in Law and Economics, and Law and Literature, taught by people who could be appointed to the world’s top economics and literature departments—even win the Nobel Prize in economics, as Ronald Coase has done.

I regret to report that no one at this Symposium is going to win a Nobel Prize any time soon for advances in computer science. We are at risk of multidisciplinary dilettantism, or, as one of my mentors called it, the cross-sterilization of ideas. Put together two fields about which you know little and get the worst of both worlds. Well, let me be modest. I am at risk of dilettantism, and I suspect that I am not alone. Beliefs lawyers hold about computers, and predictions they make about new technology, are highly likely to be false. This should make us hesitate to prescribe legal adaptations for cyberspace. The blind are not good trailblazers.

Dean Casper’s remark had a second meaning—that the best way to learn the law applicable to specialized endeavors is to study general rules. Lots of cases deal with sales of horses; others deal with people kicked by horses; still more deal with the licensing and racing of horses, or with the care veterinarians give to horses, or with prizes at horse shows. Any effort to collect these strands into a course on “The Law of the Horse” is doomed to be shallow and to miss unifying

¹⁰ “Cyberlaw” roughly encompasses the law of the internet, particularly from the perspective of scholars working from the mid-1990s onward to address the common and overlapping challenges the internet posed for law. See Ryan Calo, [*Robotics and the Lessons of Cyberlaw*](#), 103 Calif. L. Rev. 513, 514 (2015).

principles. Teaching 100 percent of the cases on people kicked by horses will not convey the law of torts very well. Far better for most students—better, even, for those who plan to go into the horse trade—to take courses in property, torts, commercial transactions, and the like, adding to the diet of horse cases a smattering of transactions in cucumbers, cats, coal, and cribs. Only by putting the law of the horse in the context of broader rules about commercial endeavors could one really understand the *law* about horses.

Now you can see the meaning of my title. When asked to talk about “Property in Cyberspace,” my immediate reaction was, “Isn’t this just the law of the horse?” I don’t know much about cyberspace; what I do know will be outdated in five years (if not five months!); and my predictions about the direction of change are worthless, making any effort to tailor the law to the subject futile. And if I did know something about computer networks, all I could do in discussing “Property in Cyberspace” would be to isolate the subject from the rest of the law of intellectual property, making the assessment weaker.

Even in an age where the dramatic social changes fostered by technology are in the news daily, Easterbrook’s argument against specialized legal courses has staying power. After all, black letter legal subjects owe much of their utility to the fact that their tech-neutral maxims generalize to a host of unforeseen scenarios.

Pushing back, Larry Lessig’s [*The Law of the Horse: What Cyberlaw Might Teach*](#), argues that understanding how technology constrains what one can do in cyberspace teaches us that law is just one of many tools for regulating behavior.¹¹ Specifically, Lessig credits cyberspace for highlighting the import and side effects of how architecture constrains us and, by extension, impact which laws we deem necessary. He notes, as an example, that there is no prohibition on stealing skyscrapers: “The architecture of real space, or more suggestively, its real-space code, protects skyscrapers much more effectively than law.”¹² And, to the extent we can influence physical and digital architecture through design choices, we regulate.¹³

Lessig further maintains that his claim is “specific to cyberspace,” in that “[w]e see something when we think about the regulation of cyberspace that other areas

¹¹ 113 Harv. L. Rev. 501, 502 (1999).

¹² *Id.* at 523.

¹³ *Id.* at 514–515.

would not show us.”¹⁴ However, he also advances the deeper point that regulation through architecture carries into other contexts, thereby justifying the study of cyberlaw “for reasons beyond the particulars of cyberspace.”¹⁵

Comprehension Check 1

1. What is Easterbrook’s main claim? What is the most persuasive argument in favor of Easterbrook’s stance?
2. What is Lessig’s main claim? What is the most persuasive argument in favor of Lessig’s stance?
3. What could be gained from the study of the law’s interaction with a particular technology? What drawbacks or limitations can you identify for this approach?
4. What could be gained from the study of the law’s interaction with technologies across traditional blackletter areas of law? What drawbacks or limitations can you identify for this approach?

We agree with Easterbrook’s point that there is limited value to recognizing a “Law of [X]” every time there is a furor about a new technology. We don’t *need* a “Law of the Horse,” or a “Law of Automobiles,” or a “Law of Autonomous Vehicles.” (Though wouldn’t a seminar in any of them be fun?) We also agree with Lessig that a particular technology may be worth studying in part because it raises unique questions and in part because it illuminates how law as a whole operates.

But in debating whether the law of cyberspace was a distinctive subject, both Easterbrook and Lessig missed the middle ground: Technology Law. Rather than studying the law of one technology, or studying each doctrinal area in isolation, there is much to be learned from studying the relationship between technologies and law more generally.

Easterbrook’s critique assumes that technological shifts can be addressed within traditional subjects, but at times this fosters a different kind of detrimental

¹⁴ *Id.* at 502.

¹⁵ *Id.* at 503.

compartmentalization.¹⁶ New technologies challenge established legal paradigms across the board, and adaptive interpretations frequently render classic doctrinal standards unclear or laughably ineffective. But those attempting to resolve these recurring uncertainties within a siloed subject are doomed to start at square one with each new analysis. Take the challenges posed by artificial intelligence. Although progress can be made by confronting technological change within traditional domains of law—for example, sentencing algorithms in the context of criminal law, AI inventions in the context of patent law, and autonomous weapons systems in the context of the law of armed conflict—looking for common patterns across these doctrinal silos allows for a broader perspective on the challenges these technologies pose and the solutions that might be brought to bear.

Relatedly, recent attempts to articulate a research agenda for the legal issues associated with AI include both familiar techlaw questions and subject-specific inquiries.¹⁷ Familiar techlaw questions include which entity should be the subject of new regulations,¹⁸ when regulation should be enacted,¹⁹ whether certain technologies or uses can or should be banned,²⁰ and how to design “future proof” regulations.²¹ These broader questions are relevant across legal subjects. In parallel, the subject-specific inquiries apply the lens of administrative law, international law, intellectual property, torts, data and privacy regulation, and other legal subjects to focus on uncertainties pertinent to those domains. For example, a tax law lens helps identify the question of how to update a system reliant on payroll tax for firms that replace human workers with AI systems, while an antitrust lens highlights the concerns associated with making data sets more or less public. Applying different subject-based lenses highlight equally important but more focused questions than a techlaw lens.

Easterbrook observed, correctly, that classic blackletter courses provide insight into the legal treatment of new technologies. But he did not appreciate the corollary: training in Technology Law is also useful in understanding and

¹⁶ See James Grimmelman, [Internet Law: Cases & Problems](#) 12 (10th ed. 2020) (arguing Easterbrook is wrong about internet law, given the many overlapping and recurring issues the internet raises across traditional doctrinal lines).

¹⁷ See, e.g., Yonathan A. Arbel, Ryan Copus, Kevin Frazier, Noam Kolt, Alan Z. Rozenshtein, Peter N. Salib, Chinmayi Sharma & Matthew Tokson, [Open Questions in Law and AI Safety: An Emerging Research Agenda](#), Lawfare, Mar. 11, 2024.

¹⁸ See Chapter 14.

¹⁹ See Chapter 12.

²⁰ See Chapter 11.

²¹ See Chapter 14.

considering how to best resolve the legal uncertainties that constantly arise in classic blackletter courses. When should flying a drone over a neighbor's property constitute "trespass"? If an autonomous vehicle harms someone, who should be held liable? What constitutes a contract in an age of shrinkwrap and clickwrap? Should facial recognition results be used to identify criminal suspects? What constitutes "due process" when agencies rely on algorithmic decisions to grant or remove benefits? Our Techlaw Uncertainties methodology provides a means for more thoughtfully engaging with these subject-specific inquiries by situating them within a framework of recurring questions and broader considerations.

Technology Law is a conglomerate course that is more than the sum of its parts. It sits comfortably alongside other legal fields that warrant focused study despite straddling various blackletter subjects, like business law, health law, and environmental law.²² As with these other courses, considering different types of tech-fostered changes in conversation yields productive results because we can see patterns that we otherwise might not, with payoffs for both scholarship and legal education. We may find further illumination by looking to prior episodes of legal change involving other technologies.²³ Comparing "horseless carriages" and "driverless cars," for example, highlights how techlaw analogies are used to simultaneously make new technologies comprehensible and advance regulatory narratives²⁴—an insight that is useful in understanding, say, jurisprudence regarding new communications technologies and First Amendment rights.²⁵

Simultaneously, Technology Law offers a big-picture, theoretical perspective on the relationship between law and technology, in a more expansive manner than courses focused on any given tech-enabled activity. As such, it arguably encompasses a number of recognized legal subjects, like internet law, privacy law, and intellectual property. A techlaw course cannot get into the doctrinal and technical fine points of all of these subjects—there's a reason they are standalone courses!—but it provides insights that cut across and are useful in all of them.

²² Michael Guihot, [Coherence in Technology Law](#), 11(2) Law Innovation & Tech. 311 (2019).

²³ See Ryan Calo, [Robotics and the Lessons of Cyberlaw](#), 103 Calif. L. Rev. 513, 516 (2015) (drawing on insights from cyberlaw to address legal questions posed by robotics).

²⁴ Rebecca Crootof & BJ Ard, [Structuring Techlaw](#), 34 Harv. J.L. & Tech. 343, 389-91 (2021).

²⁵ See, e.g., Genevieve Lakier, [The Problem Isn't the Use of Analogies but the Analogies Courts Use](#), Knight First Amendment Inst. (Feb 27, 2018).

A techlaw training will be useful to all law school graduates, as familiarity with the common questions and responsive strategies will be relevant to every legal subject that is shaped by technological developments—which is to say, all of law.

Undermining Assumptions About Technology and Regulation

Rhetorical arguments about regulation and technology permeate techlaw conversations. These arguments often depend on one of several assumptions, the meaning and validity of which are often taken for granted rather than scrutinized and unpacked. Consider each of the following:

1. What does it mean to say that law cannot “keep up” with technology?²⁶ Will this be the case for most technologies? Is it always problematic for law to not be updated for each new technology?
2. Some assert that certain technological developments or their social impacts are inevitable and that law cannot (or should not) interfere.²⁷ When is that true? Which entities have a vested interest in making this argument?
3. Critics of regulation often argue that it will burden, slow, or eliminate innovation.²⁸ Will this always be the case? Can regulation foster, speed up, or ensure innovation?²⁹
4. Is regulation that “chills” innovation a problem to be avoided?³⁰ Why? What are the counterarguments?
5. Some assert that technology is value-neutral.³¹ In other words, whether a

²⁶ For the canonical account of the pacing problem, see Gary Marchant, *The Growing Gap Between Emerging Technologies and the Law*, in *The Growing Gap Between Emerging Technologies and Legal-Ethical Oversight: The Pacing Problem* 19 (Gary E. Marchant, Braden R. Allenby & Joseph R. Herkert eds., 2011). For discussion of how law may be stretched or designed to account for future developments, see Chapters 13 & 14.

²⁷ For discussion of technological determinism and alternatives, see [Chapter 4](#).

²⁸ For discussion of the permissive approach to technology regulation, see Chapter 10.

²⁹ To further explore the different ways a law may be designed, see Chapter 14.

³⁰ For discussion of the precautionary approach to technology regulation, see Chapter 11.

³¹ For a foundational critique of this position, see Langdon Winner, *Do Artifacts Have Politics?*, 109 *Daedalus* 121 (1980). Further discussion of how technology impacts law and society, and vice versa, continues throughout the following chapters.

given technology is “good” or “bad” depends entirely on whether people use it for “good” or “bad” acts. Is that accurate? Or do certain technologies encourage certain types of “good” or “bad” acts? How can law be used to direct the development or use of a technology to encourage certain types of uses and discourage others?

6. What does it mean to say an innovation is merely a “difference in degree” versus a more groundbreaking “difference in kind”?³² What does this distinction turn on? What regulatory responses does each characterization foster?

³² For discussion of these points, see [Chapter 3](#).