Symposium

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TECHNOLOGICAL CHANGE, CONSTITUTIONAL FLEXIBILITY,
AND REGIME STABILITY

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The generation responsible for the Constitution of the United States believed that they were establishing a regime that would easily incorporate technological change. By broadly defining national powers, the Framers enabled the national legislature to take advantage of the ways new technologies might advance national goals. Alexander Hamilton in The Federalist Papers, No. 23 maintained that constitutional powers to secure the national defense, prevent internal disruption, regulate interstate and foreign commerce, and oversee relations with foreign nations:

ought to exist without limitation, because it is impossible to foresee or define the extent and variety of national exigencies, or the correspondent extent and variety of the means which may be necessary to satisfy them. The circumstances that endanger the safety of nations are infinite, and for this reason no constitutional shackles can wisely be imposed on the power to which the care of it is committed.¹

The Framers did not, for example, foresee the internet, but they adopted a set of national powers that enabled Congress to regulate online activities that threaten national security, risk internal subversion, affect interstate and foreign commerce, or influence foreign relations. A constitution flexible enough to incorporate technological change would facilitate regime change.

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Chief Justice John Marshall in *McCulloch v. Maryland* anticipated the logic of federal regulation of the internet and use of other new technologies when he pointed out:

The subject is the execution of those great powers on which the welfare of a nation essentially depends. It must have been the intention of those who gave these powers, to insur[e] as far as human prudence could insur[e], their beneficial execution. This could not be done by confiding the choice of means to such narrow limits as not to leave it in the power of congress to adopt any which might be appropriate, and which were conducive to the end. This provision is made in a constitution intended to endure for ages to come, and, consequently, to be adapted to the various crises of human affairs. To have prescribed the means by which government should, in all future time, execute its powers, would have been to change, entirely, the character of the instrument, and give it the properties of a legal code. It would have been an unwise attempt to provide, by immutable rules, for exigencies which, if foreseen at all, must have been seen dimly, and which can be best provided for as they occur. To have declared, that the best means shall not be used, but those alone without which the power given would be nugatory, would have been to deprive the legislature of the capacity to avail itself of experience, to exercise its reason, and to accommodate its legislation to circumstances.³

The image of a “horseless carriage” captures how the Framers thought the Constitution would incorporate technological change. The Framers were familiar with horse-drawn carriages. The first federal law sustained by the United States Supreme Court was a federal tax on that technology.⁴ Horseless carriages were merely carriages that did not require horses to operate. If a federal tax on horse-drawn carriages is constitutional, then a federal tax on horseless carriages—or the fuel used to operate a horseless carriage⁵—is constitutional. Horseless carriages are a lot faster than horse-drawn carriages, but both can be regulated as vehicles that are instrumentalities of interstate commerce and substantially affect interstate commerce.⁶ The rules for searching one are no different than the rules for searching the other.⁷

2. 17 U.S. 316 (1819).
3. *Id.* at 415–16.
7. *See* Carroll v. United States, 267 U.S. 132, 153 (1925) (applying the same rules for automotive searches as for searches of the vehicles that existed in the late eighteenth and nineteenth centuries).
The horseless carriage may nevertheless subvert the tidy constitutional universe promised by Hamilton and Chief Justice Marshall. Framers reared on horse-drawn carriages may not be able to grasp fully how horseless carriages operate or how they affect such matters as the national defense or interstate commerce. Horseless carriages helped obliterate what many constitutional authorities in the early twentieth century believed to be core elements of constitutional doctrine, most notably the line between interstate and intrastate commerce. Pollutants from a tractor that never leaves a farm threaten global environmental catastrophe in ways horse manure never did. The Framers were largely concerned with the impact of technological change on national powers. Technological change may be more difficult to incorporate into a scheme of constitutional rights when rights are understood as trumps against national power. The same constitutional flexibility that enables governing officials to incorporate new technologies when exercising constitutional powers may provide those officials with the means for overcoming rights limitations on government powers.

The essays prepared for the 2019 Maryland Constitutional Law Schmooze provide a diversity of perspectives on constitutional capacity to incorporate technological change. Professor William D. Blake challenges the framing confidence in constitutional capacity to incorporate technological change by pointing to the consequences of increasing judicial unfamiliarity with social science. The papers by Professor Jill I. Goldenziel and Manal Cheema and by Professor Henry L. Chambers, Jr. more optimistically suggest how the Constitution can incorporate technological change when preventing disinformation campaigns and regulating elections, respectively, in ways that enhance both government power and individual rights. Professor David Gray and Professor Carol Nackenoff detail how changes in surveillance technology may undermine existing constitutional doctrine, with Gray being more confident than Nackenoff that such technologies may nevertheless be made compatible with more enduring constitutional principles. Professor Frank Pasquale and Professor Leslie F. Goldstein explore constitu-

8. See RONALD DWORKIN, TAKING RIGHTS SERIOUSLY xi (1977) (“Individual rights are political trumps held by individuals.”).


tional solutions to new technologies, but speech and birth tourism, respectively, that the Framers did not anticipate and their conceptual universes do not easily incorporate.\textsuperscript{12} Professor Julie Novkov highlights how automated systems undercut constitutional welfare rights by requiring beneficiaries to make claims using technologies they do not fully understand and instructions for determining eligibility for welfare benefits they do not fully grasp.\textsuperscript{13}

Professor William Blake highlights the most basic problem with incorporating technological change into constitutional decisionmaking: constitutional decisionmakers who do not understand contemporary science may be inclined to invoke science only to buttress predetermined conclusions. The Framers lived at a time when Thomas Jefferson, Benjamin Franklin, and Benjamin Rush could simultaneously be among the leading scientific and political thinkers of their period. “Don’t Confuse Me with the Facts”: The Use and Misuse of Social Science on the United States Supreme Court details how more than two hundred years of scientific and political evolution have resulted in species of scientific and political thinkers as different from each other as the Eloi and Morlocks of H.G. Wells’s \textit{The Time Machine}.\textsuperscript{14} Blake points out, “[A]s quantitative social science becomes more methodologically rigorous, it becomes more likely that judges, who lack statistical training, may be unable to evaluate the research they cite.”\textsuperscript{15} This increasing judicial incapacity helps explain why science, that in theory should rise above ideology, becomes just one more tool in the partisan wars that are wracking the United States and federal judiciary. Blake’s careful analysis of judicial citations to social science finds, “The decision to cite science is one that polarizes Justices on the Court’s left and right. Rather than letting scientific knowledge mitigate a Justice’s ideological proclivities, the date indicate Justices on both ends of the spectrum resort to scientific arguments to bolster their underlying worldviews.”\textsuperscript{16}

Professor Jill Goldenziel and Manal Cheema more optimistically provide a road map for reconciling technological change and constitutional principle. Their Protecting First Amendment Rights in the Fight Against Disinformation: Lessons Learned from FISA begins by acknowledging how the internet and social media threaten to undermine both fundamental individual rights and vital government powers. Technological change threatens the worst of both worlds: a government with the power to curtail vital freedoms

\textsuperscript{15} Blake, \textit{supra} note 9, at 230.
\textsuperscript{16} \textit{Id.} at 252.
but without the power to combat threats to national security. Goldenziel and Cheema assert that “U.S. laws and jurisprudence protecting free speech do not reflect modern technological realities”\(^\text{17}\) and that those “laws do not allow the collection of . . . data that would adequately enable the government to assess the extent of [dis]information campaign and fight them.”\(^\text{18}\) Nevertheless, existing constitutional norms and doctrine do provide foundations for laws that will enable government officials to combat foreign disinformation campaigns while preserving constitutional rights. National capacity to shut down foreign disinformation attempts can be advanced when rights holders are limited to American citizens.\(^\text{19}\) Individual rights can be maintained by disaggregating First and Fourth Amendment concerns. In order to prevent Fourth Amendment violations, government “must obtain a court order or warrant” when seeking to surveil American citizens and “[p]robable cause must not be based solely on a proposed target’s First Amendment activities.”\(^\text{20}\) In order to prevent First Amendment violations, “the government should be required to put forward a compelling state interest that is narrowly tailored to surveil a particular individual.”\(^\text{21}\) The warrant requirement and strict scrutiny are longstanding features of constitutional doctrine. Goldenziel and Cheema would simply apply them to governmental use of new technologies.

Professor Henry Chambers provides as optimistic a Hamiltonian perspective on technological change and the Constitution. \textit{Technological Change, Voting Rights, and Strict Scrutiny} discusses how technology can simultaneously improve state capacity to regulate elections and remove burdens that prevent many individuals from voting. Consider common claims that states must close voter registration long before Election Day. Technology enables government to exercise power better while making registration easier. “Election officials may have required several weeks to produce an accurate voter roll in years past,” Chambers notes, “but as states with same-day registration suggest, with today’s technology, the time required to produce an accurate voter roll may be significantly shorter.”\(^\text{22}\) Given this technological win-win, Chambers insists that official failures to implement the relevant technology should be evaluated under the constitutional standards used when states deprive persons of the right to vote rather than the constitutional standards used when states regulate elections in ways that merely bur-

\(^{17}\) Goldenziel & Cheema, \textit{supra} note 10, at 117.
\(^{18}\) \textit{Id.} at 118.
\(^{19}\) \textit{Id.} at 116.
\(^{20}\) \textit{Id.} at 141.
\(^{21}\) \textit{Id.} at 142.
\(^{22}\) Chambers, \textit{supra} note 10, at 203.
den many voters. “When technology can make voting easier and more accessible,” he writes, “a state’s refusal to adopt such technology . . . should trigger increasingly strict constitutional scrutiny.”23 Existing constitutional doctrine, applied correctly, reconciles new technologies with inherited constitutional values just as Marshall dreamed of in *McCulloch.*24

Professor David Gray’s discussion of *Carpenter v. United States*25 finds existing doctrine more wanting then Goldenziel, Cheema, and Chambers, but maintains that new surveillance technologies can be reconciled with broader constitutional principles. Building on his acclaimed *The Fourth Amendment in an Age of Surveillance,*26 Gray maintains, constitutional doctrine should recognize that Fourth Amendment rights belong to the people as a collective rather than to persons as individuals. In his view, the Constitution “commands that ‘the people’ shall live in a state free from fear of being the targets of unreasonable searches and seizures—and particularly searches and seizures wielded as tools to punish disfavored political and religious groups.”27 Technologies that enable government to see everything a person does in public or shares with another person undermine the existing “public observation doctrine”28 because, as Gray points out, there is a constitutional difference between government use of technologies that only enable limited observation of some people in some places at some times and new technologies that enable government to surveil all people in all places at all times. He notes that “[a] reasonable person does not expect anyone to monitor and retain a record of every time he drives his car, including his origin, route, destination, and each place he stops and how long he stays there,”29 or for that matter, everything that person does in public or on a cell phone or the internet in private. For this reason, Gray is cheered by what he perceives as an emerging “technology-centered approach”30 to whether the use of new technologies require a warrant. By discarding doctrines rooted in older technologies that provided government with only a limited opportunity to observe individuals and basing constitutional doctrine on the threat new technologies pose to basic privacy rights, constitutional decisionmakers will provide the same kind of security for constitutional rights in the twenty-first century that the Framers sought to provide in the eighteenth century. Gray maintains, “affording law

23. *Id.* at 192.
27. Gray, *supra* note 11, at 82.
30. *Id.* at 76.
enforcement broad discretion to search using [new technologies] would leave each of us and all of us—‘the people’—vulnerable to intrusive, pervasive, and indiscriminate surveillance—just the sort of insecurity posed by the general warrants that inspired ratification of the Fourth Amendment in 1791.”

Professor Carol Nackenoff is less confident that inherited constitutional doctrines or principles will provide good answers for the surveillance problems presented by new technologies. She begins from similar premises as Gray when noting, “Current definitions of privacy and assumptions about the right to privacy in the home are inadequate to deal with challenges posed by ‘smart home’ devices.” She departs from Gray by worrying whether generational efforts to accommodate new technologies have created incentives for Americans to abandon the security concerns of the past. Nackenoff fears that a generation raised on contemporary technologies may have very different understandings of privacy than generations that, for example, could not and would not have transferred nude pictures of themselves over the internet. “If Americans share all sorts of information with friends and strangers, caring less about privacy than they used to (what is it with Jeff Bezos anyway?),” she declares, “is less privacy the twenty-first century’s ‘reasonable expectation of privacy?’” Nackenoff believes we have a better grasp of the relevant questions posed by technological advances, than the relevant answers, while suspecting, along with Gray, that privacy concerns are better resolved legislatively than judicially. She concludes, “If the Supreme Court were to insist that only it, and not Congress, can define these constitutional values, American citizens, may be in for a great deal of trouble.”

Her more optimistic view suggests that “in working to redefine [constitutional] values as technology changes, citizens, activists, and legal scholars may be able to push toward a better resolution.”

Professor Frank Pasquale’s essay highlights how new technologies may subvert longstanding First Amendment doctrine, forcing Americans to make choices without powerful guidance from the Framers. Much “speech” in the United States and elsewhere is now automated in ways likely to mislead listeners into thinking they are hearing another human being. Six Horsemen of Irresponsibility points out how “the advancing technology of ‘deepfakes,’ faces, voices, and other elements of human identity may be increasingly easily mimicked mechanically.” Such algorithmic speech scrambles traditional first amendment categories that assume human speakers and human

31. Id. at 80.
32. Nackenoff, supra note 11, at 92.
33. Id. at 98.
34. Id. at 104 (footnote omitted).
35. Id.; see also Gray, supra note 11, at 86.
audiences. “[B]ot interventions,” Pasquale asserts, “are less speech than anti-speech, calculated efforts to disrupt democratic will formation and fool the unwary.” This substitution of non-human programs for human rhetoric requires constitutional decisionmakers to consider whether and when speech detached from human speakers warrants constitutional protection, a choice that could not even be conceived of by the persons responsible for the First Amendment. Pasquale chooses human expression. “Given growing concern about the extraordinary power of secret algorithmic manipulation to target influential messaging to persons with little to no appreciation of its ultimate source,” he concludes, “courts should not privilege algorithmic data processing in these scenarios as speech worthy of the level of protection traditionally granted to political or even commercial speech.”

Professor Leslie Goldstein points out how birth tourism is another matter on which technological improvements are playing havoc with constitutional norms. Technologies of Travel, “Birth Tourism,” and Birthright Citizenship details how advancements in transportation challenge framings of citizenship. The persons responsible for the Fourteenth Amendment were aware of women not legally in the United States who gave birth. Reconstruction Republicans self-consciously chose to grant citizenship to the children of such mothers. They did so because they believed that persons residing in the United States had sufficient connection with that regime to justify treating their children as members of that national community. Goldstein points out, “Allowing birthright citizenship to the children of bona fide residents—people who contribute to their communities and have plans to put down roots here, irrespectively of how they got here, fits within the broad umbrella of the Fourteenth Amendment.”

The Framers could not, however, foresee the phenomenon of “birth tourism,” made possible by what Goldstein notes as “modern travel, advertising, and financing technologies not imaginable in the mid-nineteenth century.” Approximately 36,000 pregnant women a year travel to the United States solely for the purpose of gaining U.S. citizenship for their children. Given their mother’s lack of any intention to establish domicile in the United States, Goldstein claims that such children should not be granted citizenship. Just as Pasquale rejects a wooden textualism that would equate human speech, which the Framers foresaw, with bot speech, which the Framers could not have even conceived, so Goldstein rejects a wooden formalism that would equate the children of persons illegally attempting to establish residence in the United States, a matter

37. Id. at 107–08.
38. Id. at 108.
40. Id. at 177.
41. Id. at 182.
the Framers explicitly addressed when writing the citizenship clause of the Fourteenth Amendment, with the children of persons in the United States solely to give birth, a matter the Framers never considered. Goldstein asserts, “there is no good reason to give U.S. citizenship to the offspring of anyone wealthy enough to purchase a maternity vacation in the United States but who has no interest in living here as a member of the community.”

Professor Julie Novkov is the least sanguine of the authors in the Symposium on the successful integration of technological change and constitutional principle. One of her concerns is that historically disadvantaged persons, who tend to have less education and technological skills, may not be able to operate new technologies successfully to the detriment of their constitutional and legal rights. *Unclaiming and Reblaming: Medicaid Work Requirements and the Transformation of Health Care Access for the Working Poor* points out that many poor people have been denied welfare benefits because they have been unable to input vital information into the computerized systems increasing responsible for determining eligibility. Medicaid is designed to provide benefits for poor persons with health problems, but such persons are far more likely than healthy affluent persons to have problems operating automatic systems for claiming benefits. Novkov writes, “common themes across their experiences were preexisting poor health, marginal work records that, for many, intertwined with their health struggles, and difficulty in understanding and using the electronic system for reporting [the] work hours” necessary to obtain financial assistance. These problems with technology raise questions about “the amount of aggravation, delay, frustration, and error we can rightfully expect people to endure to gain access to statutorily granted benefits.” As, if not more, important, Novkov points out, computerized systems eliminate human discretion that in the past often enabled persons to obtain welfare benefits when the circumstances of their lives, while clearly entitling them to benefits, did not fall into the specific narrow categories mandated by law. When human beings determined eligibility for welfare, “public benefit recipients learned to work within the system, often with the help of sympathetic caseworkers would could reformulate their messy narratives into claims that circumvented or short-circuited problematic results.” Technology undercuts such cases, as *Goldberg v. Kelly* recognized, by forcing persons entitled by law to statutory benefits to rely without much assistance when making claims on unfamiliar technologies and legal categories.

42. *Id.* at 190.  
44. *Id.* at 171.  
45. *Id.* at 173.  
Historians insist “the past is a foreign country” for reasons that directly and indirectly implicate technological evolution. The past is a different country in part because late eighteenth century and mid-nineteenth century constitutional thinkers did not foresee contemporary technology when making constitutional rules and principles. They did not think about the internet, birth tourism, or of cell phone technology. The past is a different country in part because late eighteenth century and mid-nineteenth century constitutional thinkers did not have the same conceptual tools to describe technological change as their turn of the twenty-first century descendants. Their vocabulary could not capture “virtual reality” or the “surveillance state.” The past is a different country in part because new technologies fuel new conceptual tools. Our notions of privacy are evolving in part because contemporary technologies that affect privacy are evolving.

The technological and conceptual gulf between past and present raises fundamental questions about the nature of constitutional decisionmaking implementing a constitution designed “to endure for ages to come.” Constitutional decisionmakers may have the simple task of applying inherited constitutional rules to new technologies. Constitutional decisionmakers maintaining constitutional stability in light of technological change may have to engage in the more difficult task of updating existing constitutional rules in light of broader constitutional principles. Alternatively, new technologies may require constitutional decisionmakers to make choices the Framers did not foresee and would not have understood. These choices may require Americans to abandon some strands of their constitutional tradition in order to maintain others or to develop new constitutional traditions with the hope that those reforms will survive the next wave of technological development.

47. For the origin of this quotation, see L.P. HARTLEY, THE GO BETWEEN 17 (1953).
49. See supra text accompanying note 3.