

THE NEW UTILITIES: PRIVATE POWER, SOCIAL INFRASTRUCTURE, AND THE REVIVAL OF THE PUBLIC UTILITY CONCEPT

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From the renewed controversies over financial regulation and the problem of too-big-to-fail (TBTF) financial firms, to the clash over the Federal Communications Commission (FCC's) "net neutrality" regulations on internet service providers, and more recent questions about Google, Facebook, and online platforms, we are in the midst of a larger policy and political debate about how to regulate modern-day forms of private power. Encompassing different areas of law and policy, the underlying issue in this debate is the following: how should we conceptualize and regulate new forms of concentrated private power, particularly when these firms control the terms of access to vital services—such as finance, broadband internet, or information—upon which many communities, constituencies, and economic actors depend? Drawing on historical Progressive Era concepts of private power and public utility, as well as current debates in financial regulation and net neutrality, this Article

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provides an overarching framework to answer that question. First, the Article argues that what makes firms like TBTF financial giants and internet service providers distinct is that they represent a form of private control over “infrastructural” goods—goods that comprise a backbone for much of modern social and economic activity, upon which many communities and constituencies depend. Second, the Article identifies three key elements of a twenty-first century framework for public utility regulation designed to remedy this problem of private control of infrastructural goods: firewalling; imposing public obligations; and creating public options. Third, the Article applies these principles to the emergent debates over private power and infrastructure in the context of internet platforms and helps demonstrate their importance, shedding new light on how to address the myriad of concerns raised by new technology giants like Google, Amazon, or Uber. These public utility concepts offer a portable, trans-substantive legal and policy framework for understanding and contesting private power in a variety of sectors. Fourth, this approach also adds an important missing complement to our current legal frameworks and literatures on the problem of private power in the twenty-first century, particularly by reorienting business law and economic policy back towards a focus on the problems of power and inequality. Moreover, these concepts help bridge the growing literature diagnosing the legal construction of inequality with the aspiration to develop mechanisms that can undo widespread structural disparities of economic opportunity, welfare, and power.

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INTRODUCTION

Since entering office in January 2017, the new Trump Administration and Republican-controlled Congress have made plain their intention to undo several key policy developments of recent years. Wall Street firm stock prices have already begun to rise on expectations that financial regulations on “too-big-to-fail” (TBTF) systemically risky financial institutions will be undone.¹ The Federal Communications Commission (FCC) has reversed its push for net neutrality rules.² Similarly, tentative steps by the Obama Administration to tackle growing corporate concentration and merger activity seem likely to be undone as well.³ Meanwhile growing reports about the role of online

¹ Ben McLannahan & Barney Jopson, *What Wall Street Wants from Trump*, FIN. TIMES (Jan. 11, 2017), <https://www.ft.com/content/c7a5fde4-d722-11e6-944b-e7eb37a6aa8e>.

² See FCC Restoring Internet Freedom, 47 C.F.R. Parts 1, 8, & 20 (2018) (repealing net neutrality provisions).

³ Binyamin Appelbaum, *Obama’s Work to Limit Mergers May Stop with Trump Administration*, N.Y. TIMES (Jan. 10, 2017), https://www.nytimes.com/2017/01/10/business/economy/obama-corporate-monopoly.html?_r=0. While as a presidential candidate, Donald Trump also expressed some opposition to the AT&T/Time Warner merger, it remains to be seen whether this opposition was more a statement of Trump’s dissatisfaction with the media coverage of CNN (a subsidiary of Time Warner) or out of a genuine concern with market concentration.

information platforms like Google and Facebook in facilitating misinformation, manipulation, and potential online censorship raise significant questions about the regulatory implications.⁴ These shifts portend more than the usual battles between right and left or between calls for deregulation and government oversight. Rather, the debates over TBTF financial firms, net neutrality, and competition policy represent a deeper, more long-term challenge for contemporary law and policy: the return of the problem of concentrated corporate power. From the control of banks over financial stability as well as access to finance and credit, to the control of internet service providers (ISPs) and telecom companies over broadband infrastructure, the problem is the same: private actors possess the means to undermine the public value of essential goods and services upon which many businesses, communities, and individuals depend.

A century ago, Louis Brandeis coined the term the “curse of bigness,” capturing the pervasive concern that Progressive Era reformers had with new mega-corporations, trusts, monopolies, and the threats these private actors posed to economic well-being. In recent years, a growing number of scholars, journalists, and policymakers have revisited this Progressive Era concern with antitrust policy in its twenty-first century context, raising the alarm about increasing corporate concentration and declining competition.⁵ But the problem of private power extends well beyond antitrust tools. The challenges of addressing things like TBTF financial firms or private control over the transmission of data on the internet require a broader set of concepts and tools. This

⁴ See *infra* Part IV.

⁵ See, e.g., Exec. Order No. 13725, 81 FED. REG. 23417 (Apr. 15, 2016) [hereinafter Exec. Order]; Council of Economic Advisers, *Benefits of Competition and Indicators of Market Power*, WHITEHOUSE.GOV (Apr. 2016) [hereinafter Council of Economic Advisors], https://obamawhitehouse.archives.gov/sites/default/files/page/files/20160414_cea_competition_issue_brief.pdf; Senator Elizabeth Warren, Keynote Remarks at New America’s Open Markets Program Event (June 29, 2016), http://www.warren.senate.gov/files/documents/2016-6-29-Warren_Antitrust_Speech.pdf; BARRY C. LYNN, CORNERED: THE NEW MONOPOLY CAPITALISM AND THE ECONOMICS OF DESTRUCTION (2010); Zephyr Teachout & Lina Khan, *Market Structure and Political Law: A Taxonomy of Power*, 9 DUKE J. CONST. L. & PUB. POL’Y 37 (2014) (describing how political concerns with power and implications for democracy have been a historical focus for antitrust, and ought to be considered again today); K. Sabeel Rahman & Lina Khan, *Restoring Competition in the U.S. Economy*, in UNTAMED: HOW TO CHECK CORPORATE, FINANCIAL, AND MONOPOLY POWER 18-25 (Nell Abernathy et al. eds., 2016) (outlining the problem of concentration and the case for expanded antitrust enforcement); *Too Much of a Good Thing*, ECONOMIST (Mar. 26, 2016) [hereinafter *Too Much of a Good Thing*], <http://www.economist.com/news/briefing/21695385-profits-are-too-high-america-needs-giant-dose-competition-too-much-good-thing> (describing the problem of increased corporate concentration and the value of renewed antitrust enforcement); David Dayen, *Bring Back Antitrust*, AM. PROSPECT (Nov. 9, 2015), <http://prospect.org/article/bring-back-antitrust-0>; Phillip Longman, *Bloom and Bust*, WASH. MONTHLY (Nov. 2015), <https://washingtonmonthly.com/magazine/novdec-2015/bloom-and-bust/> (discussing the role that corporate concentration has played in accentuating regional inequalities).

Article looks back to an often overlooked dimension of Progressive Era thought, the public utility concept, and revises it for a modern-day approach to diagnosing and then regulating problematic concentrations of private control over essential goods and services.

In recent years, historians like Bill Novak and others have led a growing scholarly interest in recovering the intellectual history of public utility and suggesting its implications for contemporary accounts of regulation and public policy.⁶ Several scholars have sought to adapt and apply historical public utility concepts to inform attempts to regulate private power in areas as diverse as medicine and health insurance⁷ and energy.⁸ Despite these applications, however, there has as yet been no general formulation of what a trans-substantive, twenty-first century framework for public utility regulation would look like across different issue areas—nor has there been a systematic effort to draw on, and modernize, Progressive Era concepts of public utility. This Article fills that gap, providing a framework for contemporary public utility regulation that identifies common themes and principles for law and policy design and applies these concepts to new debates.

I argue in this Article that public utility-style concepts can help us conceptualize and respond to a range of contemporary problems where private actors have concentrated control over essential goods and services. First, I argue that we should conceptualize the problem not in terms of literal “bigness,” but rather in terms of what I term below “social infrastructure.” Where private actors accumulate outsized control over those goods and services that form the vital foundation or backbone of our political economy—social infrastructure—this control poses dangers. By defining social infrastructure as a concept, this Article provides a way to diagnose essential goods and services and therefore potentially problematic accumulations of private power.

The second contribution of this Article is to identify a set of regulatory strategies that are well-suited to curbing private power and addressing values of access, fairness, and accountability in the context of such infrastructural goods and services. The historical literature on the

⁶ See, e.g., William Novak, *The Public Utility Idea and the Origins of Modern Business Regulation*, in THE CORPORATION AND AMERICAN DEMOCRACY (Naomi R. Lamoreux & William J. Novak eds., 2017) [hereinafter *Public Utility Idea*]; William J. Novak, *Law and the Social Control of American Capitalism*, 60 EMORY L.J. 377, 399 (2010) [hereinafter *Social Control*]. On the historical emergence of the public utility concept, see also BARBARA H. FRIED, *THE PROGRESSIVE ASSAULT ON LAISSEZ FAIRE: ROBERT HALE AND THE FIRST LAW AND ECONOMICS MOVEMENT 160–204* (1998) (describing the development of Robert Hale’s theory of public utility regulation); GAIL RADFORD, *THE RISE OF THE PUBLIC AUTHORITY: STATEBUILDING AND ECONOMIC DEVELOPMENT IN TWENTIETH-CENTURY AMERICA* 71–87 (2013); William Boyd, *Public Utility and the Low-Carbon Future*, 61 UCLA L. REV. 1614 (2014).

⁷ Nicholas Bagley, *Medicine as a Public Calling*, 114 MICH. L. REV. 57 (2015).

⁸ Boyd, *supra* note 6 (describing the history of public utility regulation and applying it to the context of the contemporary energy and power sector).

Progressive Era public utility concept offers some clues for what a more effective and modern regulatory regime might look like. These historical models were not without their flaws. But in the rich contemporary literature and policy debate around the problem of TBTF banks and ISPs, we can see a common set of regulatory strategies that speak to the problem of private power in the modern era, pointing the way towards a twenty-first century public utility framework. Drawing from these disparate debates over net neutrality and TBTF financial firms, I extract four key elements of a twenty-first century framework for public utility regulation: *firewalling* core necessities away from behaviors and practices that might contaminate the basic provision of these goods and services—including through *structural limits* on the corporate organization and form of firms that provide infrastructural goods; imposing *public obligations* on infrastructural firms, whether negative obligations to prevent discrimination or unfair disparities in prices or positive obligations to proactively provide equal, affordable, and accessible services to under-served constituencies; and creating *public options*, state-chartered, cheaper, basic versions of these services that would offer an alternative to exploitative private control in markets otherwise immune to competitive pressures.

Third, this Article then applies these principles for twenty-first century public utility regulation to the emergent debates over private power and infrastructure in the context of internet platforms. The new technology giants like Google, Amazon, or Uber present a difficult confluence of regulatory challenges. From a conventional consumer welfare standpoint, many of these firms are a godsend, catering to consumer demand, offering new services and low prices. But these firms come to exercise increasing control over services that are themselves increasingly “infrastructural”—think Google’s function as an information intermediary or Amazon’s role as a shopping, shipping, and logistics backbone. While much of the literature on law and technology emphasizes the privacy implications of these online platforms, this infrastructural role raises broader concerns about access, discrimination, and equity, more analogous to the net neutrality and TBTF contexts. The public utility toolkit thus sheds light on how to respond to the unique regulatory and public challenges posed by these platforms. Public utility style regulatory oversight might require Amazon, for example, to treat all retailers on its platform equally, a retail infrastructure equivalent of the nondiscrimination principle behind net neutrality. These concepts also suggest a way to diagnose the deeper problems behind “fake news” and concerns about information platforms like Google and Facebook. Public utility concepts similarly reframe the vexing policy debate over platform companies like Uber, offering a wider palette of more effective and appropriate regulatory tools than barring Uber altogether or focusing narrowly on wage or

consumer safety concerns to the exclusion of the more systematic problems of access and control.

In addition to developing a generalizable, portable framework for diagnosing and responding to the problem of private power over infrastructural goods, this Article's approach raises broader implications for legal scholarship and economic policy in this era of growing inequality. By outlining a framework for diagnosing problematic concentrations of private power over infrastructural goods, deriving a toolkit for contesting such power across different sectors and areas of law, the Article aims to connect our current concern with inequality to tools that can help undo structural disparities of economic opportunity, welfare, and power. By grounding its approach in historical and normative terms and foregrounding the progressive critique of private power, the Article also seeks to deepen several important emerging developments in legal scholarship and public policy, from the renewed interest in antitrust and anti-monopoly regulation⁹; to the shifts in business law to recover themes of power and democracy, not just efficiency and welfare; to the rapidly developing literature on law, inequality, and twenty-first century capitalism.¹⁰

This Article begins in Part I by recovering the Progressive Era critiques of private power and regulatory responses, highlighting the emergence of public utility concepts, and restoring public utility to its rightful place as a set of ideas for addressing private power alongside the more well-known emergence of antitrust and corporate law. In Part II, the Article adapts those Progressive Era ideas into a modern public utility framework, first by defining the particular problem of private power over "infrastructural goods," and then by sketching out a modern-day toolkit of public utility regulatory strategies. Part III shows how this way of diagnosing and addressing private power over infrastructure is consistent with, and helps clarify, recent experiences with net neutrality and TBTF financial reform debates. In Part IV the Article then applies this framework and toolkit to more recent debates over platform power and internet utilities. Part V outlines how these public utility concepts help advance emerging scholarly and policy debates about law, inequality, and private power. Part VI concludes

⁹ *Infra* Part IV.

¹⁰ See, e.g., Joseph Fishkin & William Forbath, *Reclaiming Constitutional Political Economy: An Introduction to the Symposium on the Constitution and Economic Inequality*, 94 TEX. L. REV. 1287 (2016); K. Sabeel Rahman, *Domination, Democracy, and Constitutional Political Economy in the New Gilded Age: Towards a Fourth Wave of Legal Realism?*, 94 TEX. L. REV. 1329 (2016); Ganesh Sitaraman, *The Puzzling Absence of Economic Power in Constitutional Theory*, 101 CORNELL L. REV. 1445 (2016); Kate Andrias, *Confronting Power in Public Law*, 130 HARV. L. REV. F. 1 (2016); David Singh Grewal & Jedediah Purdy, *Introduction: Law and Neoliberalism*, 77 LAW & CONTEMP. PROBS. 1, 1–4 (2014) (situating the Roberts Court in a broader critique of "neoliberal" valorizations of market- and consumer-choice views of freedom); Joseph Fishkin & William E. Forbath, *The Anti-Oligarchy Constitution*, 94 B.U. L. REV. 669 (2014).

briefly.

I. POWER, INFRASTRUCTURE, AND THE PERSISTING PROBLEM OF
“BIGNESS”

A. *Progressive Law and Economics and the Critique of Private
Power*

Over a hundred years ago in 1913, lawyer and later Supreme Court Justice Louis Brandeis published his essay *The Curse of Bigness* in *Harper's Weekly*, documenting the growing concentration of financial firms, their collaboration with railroad tycoons, and the resulting threats to economic opportunity and liberty.¹¹ The essay would go on to inform much of the public debate about finance, corporate power, and regulation during the period and even influenced Franklin Roosevelt's New Deal decades later. Brandeis is indicative of the explosion of legal, political, and reformist thought emerging in the Progressive Era (roughly 1880–1920)—what Barbara Fried and Herbert Hovenkamp have referred to as the “first great law and economics movement.”¹² These thinkers shared a common concern: the upheaval of industrialization that created new forms of private power, which in turn needed to be channeled towards the public good. The challenge for law and public policy, then, was not just to promote economic efficiency and well-functioning markets. Rather, the challenge was a broader *political* one, of ensuring the accountability of private actors to the public good, and ensuring that the constituencies affected by private power—whether workers, consumers, or citizens more broadly—were ultimately treated fairly.¹³

Brandeis exemplifies this Progressive Era critique of private power. Large corporations, to Brandeis, enjoyed profits while paying their employees less than subsistence wages, creating a disparity in political power that was akin to slavery where workers were “absolutely subject” to the will of the corporation.¹⁴ Furthermore, these private actors had

¹¹ LOUIS D. BRANDEIS, *The Curse of Bigness*, in *THE CURSE OF BIGNESS: MISCELLANEOUS PAPERS OF LOUIS D. BRANDEIS* (Osmond K. Fraenkel ed., 1935). For a further exploration of the historical points developed in this Part, see my earlier work, including K. SABEEL RAHMAN, *DEMOCRACY AGAINST DOMINATION* (2017) [hereinafter RAHMAN, *DEMOCRACY AGAINST DOMINATION*]; Rahman, *supra* note 10.

¹² Herbert Hovenkamp, *The First Great Law and Economics Movement*, 42 *STAN. L. REV.* 993 (1990); FRIED, *supra* note 6, at 2.

¹³ Elsewhere, I have argued that this Progressive Era critique of private power represents a form of what contemporary political theorists would consider a republican critique of “domination.” See, e.g., RAHMAN, *DEMOCRACY AGAINST DOMINATION*, *supra* note 11.

¹⁴ LOUIS D. BRANDEIS, *Big Business and Industrial Liberty*, in *THE CURSE OF BIGNESS*, *supra* note 11.

acquired a size and a degree of economic and political power that could affect a wide range of other actors in society—not only their own workers, but also others within the community. Such power, for Brandeis, demanded some form of check in opposition, for no such entity could be assured to act in the true interests of the community. The corporation cannot know the full range of interests of the various affected parties or stakeholders in its actions—and even if it did, it was not structured to fully incorporate these interests.¹⁵ Corporations were thus entities with coercive powers like the state but were not subject to the kinds of democratic constraints and accountability that apply to the exercise of state power. According to Brandeis, large corporations may develop a benevolent absolutism, but it is an absolutism all the same; and it is that which makes the great corporation so dangerous. There develops within the state a state so powerful that the ordinary social and industrial forces existing are insufficient to cope with it.¹⁶

The problem of private power, then, is best understood as not just economic, but a political problem of domination—the accumulation of arbitrary authority unchecked by the ordinary mechanisms of political accountability. This domination-based critique of private power was a common thread in Progressive Era legal and political thought. Indeed, the central contention for many of these “legal realist” thinkers was that the domain of private market interactions actually involved exactly the same kinds of coercive powers that characterize the actions of the state—but market actors were rarely subjected to the same standards of accountability and social welfare justification as state action.¹⁷

As these legal realist thinkers argued, through its defense of private rights of contract and property, the state was inextricably implicated in the structuring of “private” market transactions; the free market itself was thus a regulatory system subject to state control and broader policy debate.¹⁸ Today the legal realist critique is often taken to end here: as a

¹⁵ LOUIS D. BRANDEIS, *On Industrial Relations*, in *THE CURSE OF BIGNESS*, *supra* note 11, at 70, 76.

¹⁶ *Id.*

¹⁷ Other thinkers similarly saw the changing economy as a problem of emergent, unaccountable power. Legal scholar Morris Cohen saw property rights as a form of sovereign power, compelling obedience in the commercial economy just as state power compelled obedience in politics. As a result, “it is necessary to apply to the law of property all those considerations of social ethics and enlightened public policy which ought to be brought to the discussion of any just form of government.” Morris R. Cohen, *Property and Sovereignty*, 13 *CORNELL L. REV.* 8, 14 (1927). Similarly, Louis Jaffe argued that private trade groups and corporations effectively created law by generating standard practices and customs. In effect, “the state has relinquished to the individual the ‘sovereign’ function of laying down the rules which govern society.” Louis L. Jaffe, *Law Making by Private Groups*, in *AMERICAN LEGAL REALISM* 115, 116 (Fisher et al. eds., 1993).

¹⁸ See generally MORTON J. HORWITZ, *THE TRANSFORMATION OF AMERICAN LAW, 1870–1960: THE CRISIS OF LEGAL ORTHODOXY* 193–94, 206–08 (1992); Joseph William Singer, *Legal Realism Now*, 76 *CALIF. L. REV.* 465, 495 (1988).

tremendously influential critique of the formalistic distinction between the presumptively unproblematic exercise of private power in the marketplace and the presumptively threatening coercive public power of the state. Once this distinction is erased and the omnipresence of law and regulation realized, then both systems of public and private power can be subjected to the same standards of justification and optimization for the common good. This in turn enables prudential debates over welfare-enhancing public policies and regulations. But the core insights of legal realism and Progressive Era thought more broadly point towards a broader constructive account of how these exercises of public and private power ought to be accountable, and to what ends they ought to be directed. This political approach to regulating private power in turn drove these reformers to develop a wide array of responses, proposals, and tools for public policy.

The most famous system of regulation to emerge from this critique of private power was the antitrust movement. The antitrust movement argued for the more aggressive use of state power to curtail the threat of concentrated private power in the form of large corporations capable of exploiting workers and moving markets to their own advantage. At the federal level, the battles over antitrust involved clashes between reformers, Congress, and the Supreme Court over the creation and powers of new federal regulatory agencies like the failed Interstate Commerce Commission and the later Federal Trade Commission. But at the heart of this development of antitrust and competition law was this very concern over private power. Antitrust law was needed not so much to promote economic efficiency as to ensure accountability: limiting firm size and concentration would assure fair market competition, which in turn would, through the checks and balances of market competition, ensure that the private power of firms would be channeled towards the public good.¹⁹

Brandeis himself was an ardent supporter of the antitrust movement, seeking to counteract the power of monopolies and corporations by using the state to break them up into smaller, less threatening private actors that no longer posed a threat to freedom, fair competition, or democracy. As Brandeis argued, “regulation is essential to the preservation and development of competition, just as it is

¹⁹ See, e.g., David Millon, *The Sherman Act and the Balance of Power*, 61 S. CAL. L. REV. 1219–20 (1988) (arguing that the Sherman Act was “the dying words of a tradition that aimed to control political power through decentralization of economic power, which in turn was to be achieved through protection of competitive opportunity”); Robert Pitofsky, *The Political Content of Antitrust*, 127 U. PA. L. REV. 1051, 1051–52 (1979). This political view of the market system as a mode of assuring accountability and preventing private domination is an important driver for free market theorists, among progressives of the era, as well as libertarians. See, e.g., RAHMAN, *supra* note 11; see also JOHN TOMASI, *FREE MARKET FAIRNESS* (2013).

necessary to the preservation and development of liberty.”²⁰ In this vision of regulated competition, certain kinds of legal and regulatory constraints on economic activity would be required to facilitate greater market competition, thus harnessing the benefits of market competition and innovation, while preventing the rise of concentrated private power in the form of trusts or mega-corporations capable of dominating workers and citizens alike.²¹

A second strand of thought and reform to emerge from this ferment was the focus on corporate governance. In 1932, Adolf Berle and Gardiner Means argued in their seminal *The Modern Corporation and Private Property* that the rise of large corporations owned by many diffuse shareholders represented a new form of property rights, where the owners of the corporation—the shareholders—lacked the power to command the corporation’s actions. This fact meant the creation of a new form of corporate power characterized by this separation of ownership (by shareholders) from control (by managers).²² This insight is often cited as the starting point for much of the modern literature on corporate governance, which focuses on the ways in which corporate governance can synthesize the private interests of managers, shareholders, and other constituencies with furthering public economic benefits of the corporation. But corporate governance as a strategy for legal reform emerged from the same intellectual roots as the Brandeisian critiques of bigness—and at its heart was focused on defusing the dangers of unchecked concentrated private power in an industrializing economy. As Dalia Tsuk has argued, Berle and Means were motivated first and foremost by the realization that corporations exercised quasi-sovereign authority and influence over not only workers but the economy and society as a whole, absent the kinds of checks and balances that accompany the exercise of public power in republican governance.²³ The purpose of Berle and Means’s corporate governance

²⁰ LOUIS D. BRANDEIS, *Shall We Abandon the Policy of Competition?*, in THE CURSE OF BIGNESS, *supra* note 11.

²¹ See, e.g., *Bd. of Trade of City of Chi. v. United States*, 246 U.S. 231 (1918). In this case, Justice Brandeis wrote for a unanimous Court, overturning a district court consent decree that itself rejected a “call rule” created by the Chicago Board of Trade to fix prices at those levels set at the end of the trading day. The lower court had found this to be an unreasonable restraint on trade, but in Brandeis’ account, the key question was not the fact of a restraint (as he explains, all agreements are some form of restraint) but rather whether the restraint enables or suppresses competition. Here, the call rule served a market-making function, creating public (rather than private) price levels, enabling further trade, without undermining quantity or inflating prices.

²² ADOLF A. BERLE & GARDINER C. MEANS, *THE MODERN CORPORATION & PRIVATE PROPERTY* (2009).

²³ Dalia Tsuk, *From Pluralism to Individualism: Berle and Means and 20th-Century American Legal Thought*, 30 L. & SOC. INQUIRY 179 (2005); see also Spencer Weber Waller, *Corporate Governance and Competition Policy*, 18 GEO. MASON L. REV. 833, 834–38 (2011). Corporations represented a unique form of power that could organize and direct the actions of

reform proposals—whether expanding shareholder power or deferring to more expert and elite managers—was to address the moral and political challenge of corporate power, ensuring that the corporation channeled its quasi-sovereign capacity to promote public values from fair wages to regional economic stability.²⁴ It is telling that Brandeis himself relied heavily on Berle and Means’s findings to ground his rulings favoring state limits on corporate power through anti-chain store regulations.²⁵

There was a third technique for regulation that also emerged out of this Progressive Era critique of private power: the public utility model. Brandeis’s account of contesting private power was not limited to such efforts to undo “bigness” through antitrust measures; in many instances, the good or service in question required a consolidated mode of production and distribution, whether because of economies of scale or because of social importance of the good in question, or both. In these instances, antitrust would not be effective or desirable. So Brandeis, like other reformers, sought a different regulatory response in the public utility concept.

Consider the case of *New State Ice Co. v. Liebmann*. In this case, the Supreme Court struck down an Oklahoma statute that required the production of ice to be licensed by the state. While the majority acknowledged the general police powers of states to protect consumers and to establish public utilities of this sort,²⁶ they disagreed that ice production was sufficiently affected by the public interest to warrant such extensive regulation. Ice may have been a necessity, but it was one that was increasingly made with ease by ordinary people with more widespread access to electricity.²⁷ In his dissent, Brandeis argued for upholding the statute, providing a typically researched and footnoted argument that the statute regulating ice as a public utility resulted from extensive prior experience by Oklahoma in previous efforts to regulate the industry; that ice was arguably a necessity of life, and its dynamics of production and distribution warranted the status as a public utility; and that ultimately such an exercise of police power could easily be upheld as rational. For Brandeis, when companies provided necessities of life, these companies could be regulated more stringently as public utilities

a wide range of constituencies—workers, investors, managers, consumers, suppliers, and the like—but lacked meaningful constraints on the use of such power. See, e.g., BERLE & MEANS, *supra* note 22, at 309–10.

²⁴ See, e.g., BERLE & MEANS, *supra* note 22, at 312; Tsuk, *supra* note 23, at 188. Ultimately, a more plausible solution for Berle was to turn to managers themselves and the corporate board as trustees of public values. Tsuk, *supra* note 23, at 207–08; see also A. A. Berle, Jr., *Corporate Powers as Powers in Trust*, 44 HARV. L. REV. 1049 (1931).

²⁵ See, e.g., *Louis K. Liggett Co. v. Lee*, 288 U.S. 517 (1933) (Brandeis, J., dissenting).

²⁶ *New State Ice Co. v. Liebmann*, 285 U.S. 262, 277–78 (1932) (Brandeis, J., dissenting).

²⁷ *Id.* at 278.

to ensure that the production and distribution of these goods were managed in accordance with the public good. Ice qualified as a necessity, and though private individuals were capable of manufacturing their own ice, the structure of production lent itself to a monopoly.²⁸

The pre–New Deal, Brandeisian critique of monopoly and bigness has been often dismissed as naïve, unsuited for the modern era of large-scale corporate organization, and as introducing a pathological anxiety about bigness in antitrust law.²⁹ But *New State Ice* underscores how Brandeis’s concern with corporate power did not necessarily mean a knee-jerk rejection of bigness per se, but rather a search for a variety of legal tools and techniques through which private power can be checked and channeled to ensure the public good. *New State Ice* was not a moment of evolution where Brandeis came to favor big business as some have argued.³⁰ Nor is *New State Ice* simply a case about judicial deference to state sovereignty and federalism to promote policy experimentation, as it is often read. Rather, it represents a case of an infrastructural good, a social necessity where Brandeis recognized the limits of antitrust-style limits on firm size, and instead sought to develop an alternative approach to both checking private power and ensuring the universal and fair provision of a public necessity.

While Brandeis lost the case in *New State Ice*, the state chartering of public utilities had become a widespread practice developed in the Progressive Era to regulate the provision of various goods and services, extending far beyond contemporary usage limited to industries like water, electricity, and gas to encompass everything from transportation and telecommunications to milk, fuel, and banking. As William Novak has argued, “[f]or progressive legal and economic reformers, the legal concept of public utility was capable of justifying state economic controls ranging from statutory police regulation to administrative rate setting to outright public ownership of the means of production.”³¹

By placing the problem of private power at the heart of the intellectual ferment of the Progressive Era, we can see that the major legal innovations arising from that period—antitrust, corporate governance, public utility—were in fact complementary and parallel strategies for addressing different forms of private power. Each of these approaches represent a different set of regulatory strategies, but they share a common moral purpose: not just to facilitate market mechanisms or promote efficiency, but to ensure the accountability of

²⁸ *Id.* at 287–95.

²⁹ See, e.g., THOMAS K. MCCRAW, *PROPHETS OF REGULATION* (1984) (dismissing Brandeis’s regulatory theory as unsuited for the modern era); Barak Orbach & Grace Campbell Rebling, *The Antitrust Curse of Bigness*, 85 S. CAL. L. REV. 605 (2012).

³⁰ See Orbach & Campbell Rebling, *supra* note 29, at 628–29.

³¹ *Social Control*, *supra* note 6, at 400.

private power, and to promote public values such as access, equity, and innovation. Furthermore, these regulatory strategies sought to achieve these goals by addressing the underlying *structure* of markets and firms themselves, in order to put in place more public-serving dynamics and forms of business activity.

B. *The Strengths and Failures of the Public Utility Model*

The common genealogical roots of these three areas of law—corporate governance, antitrust, and public utility—run counter to their modern practice, where these three domains are often siloed from one another.³² But as strategies for addressing the problem of private power, and for ensuring that private power is channeled towards public goods, these three approaches of corporate governance, antitrust, and public utility are in fact, “complements.”³³ Not every form of problematic private power can be counteracted by traditional tools of antitrust enforcement and merger review, or by assuring accountability of managers to shareholders. Yet of these three strategies for contesting private power, it is the public utility concept that was perhaps both the most important historically, and the most maligned or forgotten today.³⁴

For Progressives like Brandeis, public utility regulation covered the most troubling forms of private power: where the firm could not be broken up into smaller entities on an antitrust model, and where the private actors therefore retained control of a necessity upon which many depended. It was the public utility idea that mobilized new armies of lawyers and policymakers at the local, state, and federal level to innovate modern modes of economic regulation and statecraft.³⁵ Furthermore, it is the public utility concept that offers some vital, but often overlooked, insights for addressing modern-day forms of private power.

Today we tend to think of public utilities in economic terms: natural monopolies such as electricity or water provision, where economic efficiency requires a monopoly structure in order to

³² See Waller, *supra* note 23, at 841 (noting that corporate governance and antitrust law are intimately related, yet “have proceeded without any deep interaction”).

³³ *Id.* at 851 (noting the complementarity between corporate governance and antitrust). Waller does not mention public utility specifically, though in some of his other writings the public utility concept is grouped under antitrust. See, e.g., Brett Frischmann & Spencer Weber Waller, *Revitalizing Essential Facilities*, 75 ANTITRUST L.J. 1 (2008) (discussing the use of the essential facilities doctrine in antitrust law to ensure nondiscriminatory access by competitors to a dominant market actor’s core facilities as a way of creating open access to infrastructural goods and services).

³⁴ See *Social Control*, *supra* note 6; see also WILLIAM J. NOVAK, *THE NEW DEMOCRACY* (forthcoming) (manuscript on file with the author).

³⁵ *Social Control*, *supra* note 6.

incentivize expensive investments in shared infrastructure. These monopolies are tightly regulated or controlled by the public sector. But for Progressive reformers, the idea of the public utility was much more expansive. For these thinkers, public utilities did not necessarily refer only to the narrow set of goods that in the economic sense are non-rival and non-excludable, with high sunk costs to production resulting in inadequate provision through ordinary market incentives. Rather, these thinkers saw public utilities as required where a good was of sufficient social value to be a necessity, and where the provision of this necessity was at risk of subversion or corruption if left to private or market forces.

To regulate such necessities, the public utility framework built on the English common law tradition, where some industries were designated “common carriers” or “public callings” and were subject to special restrictions, such as the duty to provide a service once undertaken, to serve all comers, to demand reasonable prices, and to offer acceptable compensation. Over the course of the nineteenth century, this tradition was gradually absorbed into the emerging law of highways, rivers, ports, and innkeepers, to name a few.

One high-profile application of public utility ideas emerged in battles over railroad regulation, as reformers sought to combat the concentration of extractive and exploitative private control over the country’s transportation infrastructure. Applying common carriage norms, railroads were regulated to ensure just and reasonable rates, prohibit unfair discrimination, and to prevent railroad companies from favoring or disfavoring particular individuals, corporations, or localities in their control of the transportation system, through the Interstate Commerce Act and the battles to control railroad tycoons.³⁶ Wisconsin was the leading state experimenting with public utility commissions, designed by the leading Progressive economists John Commons and Richard Ely. The Wisconsin regime required universal service, reasonable rates, establishing accounting standards, and state oversight.³⁷

Telegraph and telephone regulation represented another major, influential policy battle where public utility ideas were developed over time. The critical importance of telecom services—and the need to regulate them accordingly—while received wisdom today, was not always a given and had to be politically and legally constructed and contested over the course of the nineteenth century.³⁸ Key legislative changes like the National Telegraph Act of 1866 or the Mann-Elkins Act

³⁶ See, e.g., *Interstate Commerce Comm’n v. Balt. & O. R. Co.*, 145 U.S. 263 (1892).

³⁷ Boyd, *supra* note 6, at 1641–42.

³⁸ See RICHARD R. JOHN, NETWORK NATION: INVENTING AMERICAN TELECOMMUNICATIONS (2010).

of 1910 (which placed regulatory authority over telecommunications with the Interstate Commerce Commission) were central to establishing public utility regulations including requirements for common carriage, fairness, and pricing, and by 1907 the idea of government ownership had even become a central point of discussion.³⁹ These ideas were pushed not just by rural populists critical of monopolies and private power; they were also driven by concerns among rival businesses and the Chamber of Commerce, fearing tainted transmission of news and information should telegraph and telephone services be monopolized—a fear made particularly stark when Jay Gould finally took over Western Union in 1881.⁴⁰

Not every industry would be a candidate for conversion to a public utility. As Yale Law professor and economist, Walton Hamilton, described in *The Nation* in 1932, only those most critical goods and services would warrant such extensive regulatory oversight. Like other Progressive legal thinkers of the era, Hamilton divided the economy into three segments: industries that produce “non-essentials” and could be left to market forces; those like coal and steel that were characterized by “distinctive groups of customers”—clear segments of the population like workers, producers, and consumers—in which undue private power could be checked by organizing and empowering these groups to bargain collectively and directly with one another; and, industries like railroads and electrical power that were “linked with all the activities of the economic order” which “demand large social oversight,” whether by outright public ownership or by the stringent regulation of an administrative commission.⁴¹

At the far end of this sliding scale there might be industries that were so powerful but so in need of oversight that they might be converted outright to public ownership. Indeed, many Progressive reformers experimented with the “municipalization” of key sectors like electricity production and water, founding the first public utilities. But by and large, Progressive reformers used arguments like Hamilton’s to distinguish themselves from the more radical strands of American socialism. For Progressive reformers, the central goal was accountability and oversight, but they also saw the need to balance oversight with maintaining efficiency of actual production. In practice, these thinkers saw the need to make context specific judgments about the degree of public oversight and ownership on an industry-by-industry basis, rather than advocating outright nationalization across the board. The very concept of “natural monopoly”—market concentration arising from technological imperatives or economic incentives—was developed

³⁹ *Id.* at 116, 343, 363.

⁴⁰ *Id.* at 175, 187.

⁴¹ Walton H. Hamilton, *The Control of Big Business*, 134 *NATION* 591 (1932).

during this period by institutional economists like Ely, as part of a broader argument *for* greater government oversight, acknowledging that the question of outright government ownership could not be determined scientifically, but rather had to emerge from context and judgment.⁴²

Progressive reformers thus understood public utilities not just in terms of economies of scale and laws of nature, but in moral and social terms. Industries triggered public utility regulation when there was a combination of economies of scale limiting ordinary accountability through market competition and a moral or social importance that made the industries too vital to be left to the whims of the market or the control of a handful of private actors. This combination of economic dominance and social necessity is what created the threat of not just exploitative prices but also discrimination and unequal access. The public utility model offered a way to check this particular form of private power. Public utility regulation thus did not apply to all forms of private power—but it did address the most vexing, powerful, and dangerous private actors. At the same time, this emphasis on social importance meant that industries could evolve into utilities over time, through changes in their production and distribution model and through social changes whereby one or another good became essential to more people.

The legacy of the public utility era was decidedly mixed. In practice, the idea of a special category of publicly critical and therefore more stringently regulated corporations came to seem unworkable. Many of the difficulties of public utility law arose as courts became involved in state and federal efforts to regulate railroads as public utilities. Thus, from the 1874 case of *Munn v. Illinois* where the Court formulated the “public interest test,” arguing that businesses “affected with the public interest” may be subjected to regulation, courts struggled to identify which businesses were sufficiently affected by the public interest to warrant regulatory oversight.⁴³ Ultimately, the Court dropped this public interest test in the 1934 case *Nebbia v. New York*, conceding that any business may be regulated by legislatures acting on a rational basis.⁴⁴ Later judicial intervention in the establishing of just rates for utilities in *Smyth v. Ames* set in motion another struggle over defining a clear doctrine that eventually collapsed.⁴⁵ Even Robert Hale, one of the main proponents of the public utility model, was skeptical about involving courts in these substantive determinations of rates and

⁴² See JOHN, *supra* note 38, at 158, 165, 195–96.

⁴³ *Munn v. Illinois*, 94 U.S. 113 (1877).

⁴⁴ *Nebbia v. New York*, 291 U.S. 502 (1934).

⁴⁵ See FRIED, *supra* note 6, at 169–200.

value.⁴⁶ In the later twentieth century, public utility regulation in industries like electricity not only raised concerns about regulatory capture, but also risked creating higher economic costs and incentives among firms to over-invest.

Yet these failures of the public utility movement in practice seem to have been rooted not in the underlying concept of the public utility, but rather in its specific manifestation, first through *judicialized* enforcement as courts struggled and failed to formulate doctrinal standards for permissible regulation and just rates; and, second, through the overly narrow focus on regulatory rate setting. Indeed, as Novak argues, the public utility concept should be understood not as one of failure, but rather one as complete success, for it was public utility concepts and innovations that enabled and ultimately gave way towards the rise of the modern regulatory state. Instead of making regulatory oversight apply only towards those businesses “affected by the public interest,” our legal regime shifted towards a default permissiveness for all kinds of economic regulation.⁴⁷

While the rise of general regulation is indeed a powerful legacy of the public utility concept, there remains something vital about the public utility ethos worth recovering. Above and beyond its more general furthering of the idea of economic regulation *tout court*—and independent of the more problematic manifestations of judicialized conflicts over rate setting in the nineteenth century—the public utility idea is valuable for the way in which it highlights the problem of private power, emphasizing innovation and experimentation with regulatory strategies to ensure private power nevertheless meets public values especially when it comes to infrastructural necessities.

As Novak has argued, even the Progressive Era reformers themselves saw their work as provisional: “progressives viewed the law of public utilities as a vibrant and expansive arena for experimenting with unprecedented governmental control over business, industry, and market.”⁴⁸ The public utility experiment thus established a broader normative framework for conceptualizing the problem of private power and the ways in which law could be tailored to protect public purposes. William Boyd notes that the idea of the

public utility is first and foremost a normative effort directed at ensuring that the governance of essential network industries . . . proceeds in a manner that protects the public from the abuses of market power by providing stable, reliable, and universal service at just and reasonable rates. Public utility, in this broader sense, is not a thing or type of entity but an undertaking—a collective

⁴⁶ *Id.* at 162.

⁴⁷ See *Public Utility Idea*, *supra* note 6, at 139.

⁴⁸ *Social Control*, *supra* note 6, at 399–400.

project aimed at harnessing the power of private enterprise and directing it toward public ends.⁴⁹

The common thread in the public utility discourse of the early twentieth century is the need to ensure collective, social control over vital industries that provided foundational goods and services on which the rest of society depended. There are some firms whose control over basic necessities and infrastructure create a greater moral danger of unaccountable power than ordinary firms or businesses. For reformers like Brandeis, public utility suggested a distinct set of regulatory strategies that were needed as a complement to parallel efforts to defuse private power through antitrust or corporate governance. Public utility regulations were seen as vital for regulating those private actors operating in goods and services whose provision seemed to require some degree of market concentration and consolidation—and whose set of users and constituencies were too vast to be empowered and protected through more conventional methods of market competition, corporate governance, or ordinary economic regulation.

Public utility thus did not address *all* forms of corporate and private power, but it did focus on some of the most troubling forms of private power. A modern-day application of the Progressive Era public utility ideas thus suggests that there are in fact *some* kinds of private power that are especially troubling, that are unique, distinctive, and thus demand a heightened level of public oversight and regulation than that applied to other more ordinary market participants. As we will see below, the values and relevance of public utility regulation resonate strongly with the challenges posed today by private control over vital necessities—goods and services like finance, telecom, and the internet. Realizing these values need not take the forms proposed by reformers of a century ago. But it will require a reinvention of public utility principles for a modern economy.

II. TOWARDS A TWENTY-FIRST CENTURY PUBLIC UTILITY FRAMEWORK

A. *Infrastructural Goods: Defining Modern “Bigness”*

In the aftermath of the financial crisis, the problem of TBTF financial firms has become a common touchstone for reformers. How can economic regulation reduce concentrated economic influence of the large banks? What about the political repercussions of the economic wealth and influence that these firms command? And how can

⁴⁹ Boyd, *supra* note 6, at 1619.

regulation address the broader problems of systemic risk and threat of financial instability that arise from not only large banks but also the rise of the “shadow banking sector” and proliferation of complex securities? Similar anxieties have surfaced in the context of the information and internet economy. The battle over net neutrality highlighted the problem of ISP monopolies and the danger of rent extraction from consolidated control over the internet infrastructure by firms like Comcast, Verizon, and backbone providers. And increasingly, commentators fear that internet platforms like Google or Amazon may pose similar threats of private power and monopolistic economic influence through their control of online platforms that structure access to information, retail infrastructure, and other critical services.

The Progressive Era ideas of public utility covered above offer an important starting point for conceptualizing a response to modern forms of private power. As we saw above, the public utility concept historically involved several key conceptual moves: first, a focus on the problem of power, accountability, and public values such as nondiscrimination or equal access rather than a narrow focus on efficiency or market failures; second, an identification of firms that posed a unique threat because of their (private) control over goods and services that comprised a vital social necessity; and third, a policy orientation towards structural mechanisms that would, through changes in firm structure or through regulatory oversight of the sector itself, assure that these private actors would work towards the public good. The core of the public utility ethos was historically motivated by a concern with use, necessity, and the risk of oppression, particularly among industries that were recognized as having economies of scale. As Nick Bagley has noted, the Progressive Era legislative and regulatory “consensus was oriented around two basic considerations: first, that the business in question met an important human need; and second, that some feature of the relevant market presented the risk of oppression.”⁵⁰ While Progressive Era reformers themselves struggled to maintain a clear definitional approach to diagnosing instances of power, and cases where businesses were so vital as to trigger heightened regulatory oversight, we can build on these core concepts to develop a more nuanced and effective framework for diagnosing and regulating private power today.

Across these different contexts, the fundamental problem is the same. Firms like TBTF finance, Verizon, Google, or Amazon provide

⁵⁰ Bagley, *supra* note 7 (reviewing legislative, regulatory, and case law examples of Progressive Era public utility regulation); *see also* Susan Crawford, *First Amendment Common Sense*, 127 HARV. L. REV. 2343, 2366–69 (2014) (arguing that public utility was rooted in special duties of nondiscrimination and public access on professions offering critical general purpose services and providing necessities for others).

essential public goods, not in the economic sense of being non-rival and non-excludable, but in a broader social sense of comprising the basic *infrastructure* of modern society. We can therefore define firms and sectors that might warrant greater regulatory oversight by examining three overlapping conditions: the economics of *production*; the *downstream uses* of the good or service; and the degree to which the good or service is a necessity that makes its users particularly *vulnerable* to exploitation. The presence of all three features indicates a firm or sector that is “infrastructural,” where the concentration of private power over these services poses a unique potential threat to public welfare. This concept of infrastructural goods represents a modern-day adaptation of the Progressive Era concern with private power and public utilities. Let us consider each of these elements in turn.

1. Production

Conventionally public goods and infrastructure are understood in economic terms: as goods that are non-rival and non-excludable, such that market participants will tend to under-supply these goods given the lack of financial incentives to invest. This conception of infrastructure describes an important set of infrastructural goods in modern society. Traditional public goods such as roads and bridges, and natural monopolies like water, electricity, communications, infrastructure, and the like are (most of the time) non-rival, non-excludable, with high sunk costs, high barriers to entry, and increasing returns to scale. These economics of production suggest that ordinary market competition will under-provide the goods. Today, we can see similar production dynamics in other goods and services as well, from telecom to banking to online platforms, where the network effects of a consolidated system yield similar increasing returns to scale, high sunk costs for competitors, and thus a likelihood towards either concentration among a few private providers on the one hand, or under-provision of the good in a more fragmented industry on the other.

2. Uses

The second defining element for “infrastructural goods” involves an assessment of their downstream uses. This element partially overlaps with the economic focus on production and scale effects. As Brett Frischmann argues, the value of infrastructure also derives from the *downstream* activity that the good enables. Infrastructural goods act as a resource input to a range of activities, goods, and services that actors relying on the good can go on to develop. Infrastructure is thus better understood as a “shared means to many ends,” comprising “resources

[that] enable, frame, and support a wide range of activities in our lives.”⁵¹ Resources that are such critical enablers of a wide range of social uses and projects must be managed as a commons: open to use by all on principles of equal access and nondiscrimination, simple to identify and access without excessive or confusing barriers, designed to maximize these downstream uses and the spillovers and innovations that might result. Frischmann calls this a “demand-side” view of infrastructure, but we might better understand this as the *social infrastructure* condition. Social infrastructure connotes the category of goods and services that enable a wide array of downstream uses for individuals and communities. As such, it may include some forms of economic infrastructure (such as communications), but also other kinds not normally included in economic definitions of infrastructure, such as rule of law, or access to information.⁵²

3. Necessity and Vulnerability

A third component of the definition for infrastructure, closely related to the second, focuses on the inverse concern: not on the positive case for goods and services that enable social action, but the negative repercussions when access to these goods and services is restricted—particularly where such loss of access introduces severe inequalities. We can call this the *basic necessities* condition of infrastructure. On this view, if we *fail* to provide such social public goods or social infrastructure in a way that is accessible to all, we magnify the kinds of disparities and inequalities of opportunity and well-being rife in today’s economy. As Joseph Fishkin suggests, the critical problem for most individuals seeking equality of opportunity is the proliferation of “bottlenecks”—structures that restrict access to resources that are critical to enabling the broad notion of opportunity as freedom described above. Bottlenecks can take a variety of forms, most quintessentially in the form of qualifications or developmental bottlenecks that restrict access to educational or career opportunities to only those with a particular degree or prior experience—prerequisites that not everyone can access and which therefore function to choke off longer-term opportunities.⁵³ But bottlenecks can also arise where access to a critical good or service is restricted, and where that good or service has an outsized impact on the future life chances and well-being of the individual. The necessities view of infrastructure points us towards

⁵¹ BRETT M. FRISCHMANN, *INFRASTRUCTURE: THE SOCIAL VALUE OF SHARED RESOURCES* 4 (2012).

⁵² *Id.*

⁵³ JOSEPH FISHKIN, *BOTTLENECKS: A NEW THEORY OF EQUAL OPPORTUNITY* 13–14 (2014).

those goods and services that are vital and urgent necessities for individual and communal flourishing—think access to healthcare or education as prime examples. These are goods and services whose social value is so critical—and whose absence introduces such profound inequalities in life opportunities and well-being—that we have a moral obligation to provide them on equal terms to all members of society. Precisely because of the importance of the good or service, the prospect of private control over the terms of access to that good or service raises the specter of a particularly troubling form of exploitation, exclusion, or vulnerability on the part of the users, the general public. Ultimately, it is the capacity of a firm or a group of firms to discriminate, exclude, or otherwise exploit users from partaking in a vital necessity—thereby putting those users in a position of deeper subordination—that is most troubling.

The presence of all three of these elements—scale effects in production; downstream uses; necessity and vulnerability to exploitation—indicates a firm or sector that warrants heightened regulatory scrutiny. These elements represent a modernized form of the Progressive Era concern with bigness and concentrated power. In other words, “infrastructure,” for our purposes, can connote those goods and services which (i) have scale effects in their production or provision suggesting the need for some degree of market or firm concentration; (ii) unlock and enable a wide variety of downstream economic and social activities for those with access to the good or service; and (iii) place users in a position of potential subordination, exploitation, or vulnerability if their access to these goods or services is curtailed in some way. Note how this concept of infrastructure moves us to a much more dynamic and nuanced view of private power beyond mere “bigness.” The issue is not necessarily firm size or market share (though these may of course be relevant factors). Rather, the inquiry encompasses questions about the essential nature of the good or service itself, as well as the capacity of the providers to exert undue influence through their control of the good.

Understanding infrastructure in this way highlights how private provision or control of infrastructure implicates important public and collective values. How then can we hold accountable those private firms to their public obligations? Consider modern finance: the provision of credit, liquidity, and risk management are critical enablers of productive economic activity and thus finance might be considered part of the social infrastructure. Yet the private provision of these services has consistently raised fears of exploitation and extraction. The same configuration of concerns arises in the context of ISPs like Comcast. It is also important to note that these sets of infrastructural goods are not static. Technological and social change over time can move goods into and out of any one of these categories. Even a few years ago, broadband

access for example, was rightly considered a luxury, yet in today's economy it is hard to argue against its increasing import as a kind of social infrastructure enabling downstream uses in Frischmann's sense.⁵⁴

While this approach to conceptualizing infrastructure is necessarily open to interpretation and context-specific judgment, identifying infrastructural goods can nevertheless help inform which goods and services need to be produced at higher levels and with more equitable access for more users. It also heightens our scrutiny of the role of *private* actors in these industries. On economic grounds, private actors may either underprovide the goods, or concentrate into monopoly providers; either outcome raises public policy concerns about access, pricing, and accountability. For necessities, the accountability worry is even greater. What happens if private providers are able to exploit their position as providers of social necessities to extract rents from users? What happens if private provision undermines values of equal access?

B. *A Modern Public Utility Toolkit*

As Frischmann suggests, at a first approximation, infrastructure should be managed in a way that protects against discrimination and facilitates widespread use and access.⁵⁵ Specifically, we can name these strategies as “firewalls,” “public obligations,” and “public options.”

First, regulations might focus on creating *firewalls*: restrictions on the activities and powers of firms that provide these infrastructural goods and services that limit a commingling of business models. Thus, regulation may mandate that companies providing transportation services, such as railroads, cannot also control other related services and adjacent industries such as, for example, the production of coal: such a combination of powers and control would create a risk of unaccountable private power and potential economic exploitation of other constituencies. A firewall between these industries would limit the power of the transportation provider, requiring them to focus more narrowly on the core social function they provide. Firewalls also become important where there is a risk of contagion from one set of activities into another. As we will see below, this is precisely the concern in modern financial regulation as risky securitization practices are troubling in part because of their ability to contaminate “core” banking functions with risk and “toxic assets.”⁵⁶

Relatedly, firewalls might take the form of legally imposed *limits on corporate structure*. We might fear that the danger of exploitation or

⁵⁴ See discussion *infra* Section III.A.

⁵⁵ See FRISCHMANN, *supra* note 51, at 101–05.

⁵⁶ See the discussion of financial regulation and firewalls *infra* Section III.B.

unequal treatment of users and citizens might arise from corporate forms that combine services in a way that create incentives for self-dealing or discriminatory practices. Thus, if Amazon, for example, simultaneously sells products of its own, while also maintaining a retail infrastructure that is on paper a platform open to other retailers, there is a heightened possibility of unfair dealing. The net neutrality debate itself largely turned on a similar problematic combination of content production functions with content delivery functions on the part of firms like Comcast or Verizon. Legal limits on the kinds of corporate forms, holding companies, or mergers and acquisitions—familiar from the world of antitrust enforcement—might prophylactically preclude some of these harms.

A second regulatory strategy involves the imposition of *public obligations* on infrastructural firms. On this approach, firms that take as their business model the provision of a foundational, infrastructural good or service, would face additional regulatory scrutiny to meet specific public obligations. In the context of railroad regulation in the Progressive Era, these obligations took the form of “common carrier” requirements to serve all comers and avoid discrimination, and to offer fair and relatively accessible pricing. Depending on the industry and public concerns, other affirmative obligations might also be required, for example, to serve underserved areas or constituencies. These regulations might thus prioritize values like nondiscrimination, affirmative obligations to serve underserved communities, limits on fair pricing, and others. The exact requirements would necessarily have to be tailored according to the context.

A third regulatory strategy involves state-chartered providers for these infrastructural goods or services, providing a kind of *public option*. Though often overlooked in contemporary “regulatory cosmology” and typologies of regulatory tools,⁵⁷ this mechanism of public options has not only a deep historical pedigree, but is also surprisingly common. Many public utilities developed during the Progressive Era were in fact public options: publicly chartered providers of key goods or services that would then compete with private providers on the market. Indeed, many New Deal Era initiatives involved the creation of such public options, from the Tennessee Valley Authority providing rural electrification, to Medicare and Social Security. The provision of a public option can be understood as a solution to the problem of private control over infrastructural goods in two senses. On the one hand, because the good or service is provided publicly, it is ultimately answerable to the political voice of citizens filtered through elections

⁵⁷ Adam J. Levitin & Susan M. Wachter, *The Public Option in Housing Finance*, 46 U.C. DAVIS L. REV. 1111 (2013); see also Robert C. Hockett & Saule T. Omarova, “Private” Means to “Public” Ends: Governments as Market Actors, 15 THEORETICAL INQUIRIES L. 53 (2014).

and regulatory appointments, thus creating a channel for affected groups to voice their concerns in the administration of the public option itself. The public option would provide these goods and services on a non-profit basis, and comporting with public values, such as nondiscrimination and serving marginalized constituencies. On the other hand, because the public option competes in the marketplace, it also facilitates market-based competitive modes of contestation. The public option offers a plain vanilla version of the service, creating price and service pressures against which other market actors have to compete. At the extreme, the public option may be an exclusive one—in other words, setting up the state as the sole provider of the good, through government owned and operated vehicles. A lesser version of this would see the public option compete alongside private providers.⁵⁸

As we will see in the next Part, these three strategies—firewalls, public obligations, and public options—are very much in play in contemporary regulatory policy debates. As the examples of net neutrality and TBTF financial regulation indicate, we are already witnessing a gradual emergence of precisely these regulatory strategies on-the-ground, among the scholars and practitioners battling to develop responses to the problem of private control over our telecom and financial infrastructures. Drawing on these case studies, we can see that these public utility regulatory strategies are in fact feasible and necessary—and by comparing both of these case-specific debates to one another, we can see how generally portable these strategies are to multiple domains where private power might threaten the production, use, and access to infrastructural goods and services. Furthermore, these cases indicate that choosing between these three regulatory strategies is necessarily a context-specific judgment. Nor are these regulatory strategies mutually exclusive: they might be implemented in combination with one another as needed.

For example, depending on the nature of the infrastructural good and the political economy of regulation in that sector, public obligations enforced by regulatory enforcement might be preferable as a less costly and more dynamically adaptable way to ensure accountability. As we will see below, this is precisely what the FCC sought to do in creating its net neutrality rules, designing them to be flexibly enforced by the agency itself. In other areas, where we might have good faith reasons to doubt the efficacy of regulatory agencies in the face of complexity, capture, or

⁵⁸ Other variations of the public provision/public option approach might also be possible. For example, government actors could subsidize private providers, making them de facto public. But there are risks that arise when “government entangles itself with profit-seeking enterprises.” Jon D. Michaels, *Running Government Like a Business . . . Then and Now*, 128 HARV. L. REV. 1152, 1178 (2015). Administering a public option or public provision effectively would require that the government do so on a non-profit basis; that the objectives are clearly specified. The analogy would be to state-provided services like the VA or Medicare.

uncertainty, we might instead prefer more structural, prophylactic restraints in the form of firewalls or public options. This is the concern that has animated proposals in financial regulation to move away from top-down oversight by regulators at the Fed, for example, to more structural limits through firewalls or public banking.

III. TWENTY-FIRST CENTURY PUBLIC UTILITY REGULATION IN ACTION

A. *Net Neutrality and the Revival of the Public Utility Ethos*

The recent debates over net neutrality provide a high-profile, contemporary example of how these Progressive Era concepts of public utility and private power can be adapted for addressing regulatory challenges today. In the net neutrality battle, the FCC ultimately imposed a set of regulations on broadband providers—like Verizon and Comcast—that essentially revived Progressive Era ideas of public utility in a modified and adapted form. This legal and policy dispute is indicative of the ways in which public utility concepts can be adapted for the modern economy and offer valuable tools for restructuring the corporations that control access to, and provision of, core infrastructural goods.

While broadband internet service was not a technology contemplated by Progressive Era reformers, we can understand high-speed internet as a form of contemporary infrastructure.⁵⁹ Broadband access benefits from economies of scale in its production and provision, in light of the tremendous sunk costs of investing in high-speed networks and the challenges of managing those networks. Broadband is also increasingly a necessity and potential bottleneck in the modern economy. As debates over the “digital divide” underscore, high-speed internet access is critical for many businesses, individuals, and communities to thrive—and limited access in turn has major harmful effects on economic opportunity and social inclusion. The regulatory and policy challenge around broadband, therefore, is not just an economic one; it is also a political one of ensuring equal access, fairness, and preventing the exploitative or extractive treatment of users by private providers. The infrastructural status of broadband makes it a prime candidate for a revived public utility regulatory framework. It should be no surprise then that the recent battles over net neutrality took place over the attempt to expand old Progressive Era and New Deal

⁵⁹ See, e.g., FRISCHMANN, *supra* note 51, at 317–56 (arguing that broadband internet access represents a new form of infrastructure that should therefore be regulated as a commons).

Era legal concepts to cover this new form of communications infrastructure.

1. From Telecom to Broadband: A Brief History of Net Neutrality

In the early twentieth century, common carriage and public utility ideas were applied to telegraph and communications services,⁶⁰ eventually being codified in the Communications Act of 1934. At its core, these obligations applied to businesses holding themselves out as serving the public at large—whether or not they were for-profit, and whether or not they literally serviced the entire public.⁶¹ Courts argued that these businesses were thus quasi-public in character, owing a “stricter duty of care,” because they had “implicitly accepted a sort of public trust.”⁶² These common carrier requirements allowed AT&T to thrive as a regulated monopoly, with a required duty to provide service to all comers on an equal basis.

Eventually, AT&T was broken up in 1981, and the ensuing effort to rethink telecom regulation culminated in the Telecommunications Act of 1996. Here the shift was to create competition between companies, requiring the unbundling of services offered to consumers, but ensuring that all service providers were “interconnected”—that the basic infrastructure of telecom wiring was such that users of one provider could still call users of another provider. In effect, this created a universal backbone infrastructure for telecom, on top of which different companies would compete to offer services. Title II of the Telecommunications Act of 1996 adapted traditional concepts of public utility to the new telecom reality, seeking to ensure this balance between universal access and market competition by imposing common carrier requirements on telecom services—including the requirement to serve all comers,⁶³ have just and reasonable rates,⁶⁴ prohibiting unjust or unreasonable discrimination,⁶⁵ and requiring that each carrier establish physical connections with other carriers.⁶⁶ The Act empowered the FCC with broad authority to oversee the industry, investigate complaints, and enforce these obligations.⁶⁷

⁶⁰ *W. Union Tel. Co. v. Call Publ'g Co.*, 181 U.S. 92 (1901).

⁶¹ *See Nat'l Ass'n of Regulatory Util. Comm'rs v. FCC (NARUC I)*, 525 F.2d 630 (D.C. Cir. 1976).

⁶² *Id.* at 641–42.

⁶³ Telecommunications Act of 1996, 47 U.S.C. § 201(a) (2012).

⁶⁴ § 201(b).

⁶⁵ *Id.*

⁶⁶ § 201(a).

⁶⁷ *See* 47 U.S.C. §§ 204, 205, 208, 215.

The concept of “net neutrality” focuses on the problem of preventing ISPs, like Comcast or Verizon, from discriminating across different applications, sites, or content, drawing on principles of common carrier nondiscrimination, but falling short of the Title II requirements of the Telecommunications Act.⁶⁸ In the context of the internet, the railroad and telecom analogy is apt. On the one hand there are end users, who access the content of “edge providers” like Netflix, Google, YouTube, and the like. But between the end user and the edge provider lie backbone and broadband providers like Verizon, Comcast, and Cogent: companies that control the transmission mechanisms between online content and end users. This creates a potential risk of blocking, prioritization, or rent extraction: the broadband providers can slow down content they disfavor—for example, because of relationships with competing content providers like cable networks—or speed up access to content in exchange for rents (so-called “paid prioritization”). As Tim Wu argued, net neutrality would “forbid broadband operators, absent a showing of harm, from restricting what users do with their internet connection, while giving the operator freedom to manage bandwidth consumption and other matters of local concern.”⁶⁹ Here we have a modern statement of the threat of private power: the problem is not literally bigness, but rather the fear that private control over this critical infrastructure creates the opportunity for unaccountable and exploitative practices.

2. The FCC and the Return of Public Utility Regulation

The move for net neutrality sought to address this concern by reviving and updating public utility concepts. But the path to a full-blown policy of net neutrality, employing common carriage and public utility principles and applying the legal structures of Title II, was a tortured one.⁷⁰ For much of the 2000s, the FCC had categorized ISPs as “broadband services,” not “telecommunications services” under the meaning of the Telecommunications Act, thus exempting ISPs from Title II common carrier requirements.⁷¹ It could be argued that this was a sensible policy: for much of the 1990s, internet access could have been seen as a luxury good, not the kind of necessity that telephones were, and thus not necessary to subject to Title II common carriage

⁶⁸ Tim Wu, *Network Neutrality, Broadband Discrimination*, 2 J. TELECOMM. & HIGH TECH. L. 141 (2003).

⁶⁹ Tim Wu, *A Proposal for Network Neutrality*, TIM WU (June 2002), <http://www.timwu.org/OriginalNNProposal.pdf>.

⁷⁰ For a good overview of this debate, see JAMES GRIMMELMANN, *INTERNET LAW: CASES & PROBLEMS* 618–56 (2015).

⁷¹ *Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967 (2005).

requirements. But since then, the economic and social necessity of internet access and interconnectedness of the data connections themselves have become increasingly central to the vitality of the economy and to innovation. These shifting realities gradually induced the FCC to attempt to ensure equal access to transmitting data on the internet. In 2004, FCC Commissioner Michael Powell issued a letter outlining four key freedoms for the modern internet, including the freedom to access content, to use applications, to attach personal devices, and to obtain service plan information.⁷² In 2007, investigative journalists broke the story that Comcast was secretly and deliberately blocking and slowing down internet users' access to sites like BitTorrent. The open internet advocacy group the Free Press sought a declaratory statement from the FCC, which issued a ruling banning the practice, in part on the Powell four freedoms. This order, however, was invalidated by the D.C. Circuit for lacking sufficient legal grounds.⁷³

Then in 2011, the FCC issued a more lengthy and aggressive net neutrality policy, in the Open Internet Order of 2011.⁷⁴ Here, the FCC proposed a set of prophylactic rules aimed at preventing private broadband providers and ISPs from unfairly exploiting their control of internet infrastructure. The proposals called for transparency of internet management policies and speeds, a prohibition on "blocking" practices that would limit users' access to particular edge providers and online content, and a prohibition on discrimination against particular users or content providers. Although the FCC did not initially invoke Title II, common carriage, or public utility regulations explicitly, its argument represents a modern revival of the public utility ethos described above.

First, the FCC cast the problem of net neutrality as one of private power, raising the same kinds of concerns about unaccountable and exploitative control that animated Brandeis and Progressive Era reformers. The FCC argued that broadband providers like Verizon and Comcast had the ability and incentive to exploit their position as private controllers of the internet infrastructure for their own advantage, harming the ability of content providers and end users alike to communicate through online media. The Order argued that, for example, broadband providers had the ability and incentive to slow down user access to competing services like voice-over-IP companies, such as Vonage, which used internet technology to compete with traditional phone services also offered by the ISPs.⁷⁵ The FCC rightly

⁷² Michael K. Powell, *Preserving Internet Freedom: Guiding Principles for the Industry*, 3 J. TELECOMM. & HIGH TECH. L. 5 (2004).

⁷³ *See Comcast Corp. v. FCC*, 600 F.3d 642 (D.C. Cir. 2010).

⁷⁴ *Preserving the Open Internet*, 76 Fed. Reg. 59192 (2011) [hereinafter *Open Internet Order*].

⁷⁵ *See id.* at 59195–96.

argued that this kind of private power over the internet infrastructure could not be adequately checked by ordinary market competition or consumer choice. Consumers would be unable to tell whether their higher prices or lower speeds were due to ISPs cutting deals for or against particular content providers through paid prioritization or blocking regimes. The high costs of switching service—such as termination fees and set up costs—and the low availability of genuine competing broadband providers in most localities meant that consumer choice alone would be ill-suited to discipline ISPs from such behavior.⁷⁶

Second, in the net neutrality decisions, the FCC deployed two particular public utility regulatory strategies. The Open Internet Order employs a *firewalling* approach, separating out the core good that, because of increasing returns and network effects, needs to be consolidated rather than broken up, but also needs to be open to all. In the net neutrality case, the core good was the underlying internet architecture: net neutrality prevents private actors from interfering with the transmission of content. Once this obligation is met, private firms can engage in ordinary competition, offering different bundles and prices of services to consumers on the open market. The Order also employs a strategy of imposing *public obligations*, such as nondiscrimination and equal access, manifesting in the Order's bans on blocking and slowing or prioritizing of data flows. These obligations would be enforced through FCC oversight. Furthermore, where Progressive Era public utility commissions often focused on the contentious and difficult task of rate regulation to maintain fair prices, the FCC's Open Internet Order represents a more tailored and flexible regime than full-blown Title II rate regulation requirements, requiring simply compliance with standards of reasonable pricing and equal access.

The legal battles over the Open Internet Order were tellingly less about a substantive dispute over the importance and value of these policies and more of a political battle driven by Comcast and Verizon, who stood to lose a lucrative stream of rents. Indeed, the Open Internet Order of 2011 was also struck down by the D.C. Circuit in *Verizon v. FCC*,⁷⁷ but it is interesting to note that the court largely approved of the FCC's substantive analysis and policy. The dispute arose because the FCC had, in the court's view, effectively created common carrier obligations on ISPs, but did so without classifying the ISPs as "telecommunications" services subject to common carrier requirements under Title II of the Telecommunications Act; therefore, the FCC was acting, in effect, outside the statutory scheme established by Congress.⁷⁸

⁷⁶ See *id.* at 59198.

⁷⁷ *Verizon v. FCC*, 740 F.3d 623 (D.C. Cir. 2014).

⁷⁸ See *id.* at 650.

In 2015, in the FCC's third and most recent attempt to establish net neutrality principles, the FCC sought to remedy this legal failing. Initially, after the *Verizon* decision, the FCC considered abandoning net neutrality, seemingly leaning towards allowing paid prioritization (Verizon and Netflix had announced exactly such a deal in the months after the D.C. Circuit decision), and considering other half-measures that might be less controversial.⁷⁹ But after increasing pressure from net neutrality advocates like the Free Press, Fight for the Future, the Open Technology Institute, and others, as well as from President Obama, the FCC issued a new Open Internet Order that offered a more comprehensive net neutrality policy regime.⁸⁰ This time, the FCC grounded its policy in the legal authority of the Telecommunications Act by formally reclassifying ISPs as "telecommunications services," thus subject to Title II common carrier requirements. The 2015 Order holds that ISPs can no longer block, slow-down ("throttle"), prioritize, or otherwise interfere with internet traffic. Like the Order of 2011, the recent Order draws upon public utility principles but does not impose a full public utility regulatory regime: the FCC was very careful to avoid the all-or-nothing framework of utility rate regulation, instead proposing that ISPs be exempted from some of the more stringent limits of Title II and conventional rate regulation, instead pursuing a more pragmatic set of regulations that limit the risks of private power and ensuring public values of equal access.

The FCC also evoked a third public utility regulatory strategy of sanctioning the creation of a *public option* in its municipal broadband decision, released at the same time as the 2015 Open Internet Order. In policy circles, there is a growing recognition that the "digital divide"—significantly limited access to broadband, high-speed internet among rural communities and urban communities of color—is a major constraint on economic opportunity and mobility.⁸¹ Market competition has been insufficient to induce companies to provide low-cost access to these communities.⁸² In response, several cities have begun using municipally chartered utilities to provide cheap, high-speed internet access to these communities. Chattanooga, Tennessee, for example, now offers its own government-provided broadband service

⁷⁹ See EDWARD WALKER ET AL., GETTYSBURG PROJECT ON CIVIC ENGAGEMENT, WHAT WORKED IN THE FIGHT FOR NET NEUTRALITY 5 (2015), https://static1.squarespace.com/static/56423f2ae4b0552eb7fcec0e/t/5714ec79b654f96a65356cda/1460989050173/Gettysburg_NetNeutrality_August2015_Final.pdf.

⁸⁰ *Id.* at 5–8.

⁸¹ See THE EXEC. OFFICE OF THE PRESIDENT, COMMUNITY-BASED BROADBAND SOLUTIONS: THE BENEFITS OF COMPETITION AND CHOICE FOR COMMUNITY DEVELOPMENT AND HIGH-SPEED INTERNET ACCESS (2015), https://obamawhitehouse.archives.gov/sites/default/files/docs/community-based_broadband_report_by_executive_office_of_the_president.pdf.

⁸² *Id.*

that is more affordable and oriented to reach schools, libraries, and minority communities through its Electric Power Board municipal utility.⁸³ This policy was initially challenged in court by Comcast, and the Tennessee state legislature passed a law preventing the municipal broadband provision.⁸⁴ In its ruling, the FCC overturned the Tennessee law and a similar one in North Carolina on federal preemption grounds, citing the Telecommunications Act and dismissing the state law as a protectionist move in favor of incumbent providers like Comcast.⁸⁵ While the municipal broadband battle was less prominent than the net neutrality debate, this controversy over the FCC's Order was a significant setback for the idea of public access to broadband internet. The FCC Order, in effect, would have opened up the field for municipal broadband providers. These providers are not nationalizing the internet infrastructure. Rather, the providers are a state-chartered, plain vanilla public option in internet access, that meets public values of equal access and affordability, plugging gaps in the competitive market, and potentially placing competitive pressures for service quality and price on existing market actors.

3. Adapting Public Utility Ideas for the Twenty-First Century

With the election of President Trump, the net neutrality and municipal broadband initiatives are likely to be short-lived. Trump has indicated that Ajit Pai, a dissenter in the FCC's Open Internet Orders, and now the new chair of the FCC, has expressed a desire to overturn the net neutrality rulings. Furthermore, the municipal broadband decision was overturned by the Sixth Circuit by August 2016.⁸⁶ Yet these battles over access to the internet thus provide a very recent example of how public utility thinking can inform the regulation of private power over critical infrastructural goods. We see here the public utility ethos in its modern form: the recognition that private control over an infrastructural good or service on which many depend can be problematic; the awareness that these private actors have all the incentives and ability to exploit their position for private gain and public harm; the realization that ordinary market competition is insufficient to prevent such behavior; and the use of regulatory tools to create a more

⁸³ See Micah Singleton, *Tennessee City That Fought Comcast and Won Announces 10Gbps Internet*, VERGE (Oct. 15, 2015, 2:55 PM), <http://www.theverge.com/2015/10/15/9543839/chattanooga-tennessee-just-found-out-its-getting-the-fastest-internet>.

⁸⁴ See Ben Popper, *Comcast Sued a City Trying to Build High-Speed Internet—Then Offered Its Own Version*, VERGE (May 1, 2015, 2:07 PM), <http://www.theverge.com/2015/5/1/8530403/chattanooga-comcast-fcc-high-speed-internet-gigabit>.

⁸⁵ *City of Wilson*, 30 FCC Rcd. 2408 (2015).

⁸⁶ See *Tennessee v. FCC*, 832 F.3d 597 (6th Cir. 2016).

productive and public-serving balance between universal access and market competition. We also see here how public utility concepts can come to be vital in shaping the regulatory approach to goods and services that were once considered luxuries, but which now have evolved into more foundational, infrastructural necessities.

The FCC's approach indicates several key lessons for developing a more generalized, modern public utility framework that avoids the pitfalls of early twentieth century public utility and rate regulation, and that ensures the social goals of widespread provision of and access to internet services.⁸⁷ First, as the FCC's policy changes indicate, the underlying principles of public utility—the need to ensure equal and fair access to a good upon which many depend, and which is currently controlled by private corporations—need not require the full imposition of traditional public utility regulation, rate regulation, common carriage, or nationalization. Instead, the public utility principles can be revised and adapted for a modern economy, manifesting in regulations that focus on *restructuring* the dynamics of the market and the private actors themselves through strategies of firewalling, imposing public obligations, or creating public options. This in turn enables more productive forms of market competition and innovation atop this foundation. These same concepts can help inform regulatory strategies for infrastructural goods in other high-profile regulatory and policy debates, such as finance and online platforms.

Second, the FCC, as a regulatory agency—rather than a court—was able to employ its expertise and broad policymaking discretion to tailor a flexible and adaptable oversight regime. In imposing common carrier obligations, the FCC was sure to provide a safety valve where it would exempt ISPs from some of the more stringent forms of common carrier and rate regulation burdens through a “forbearance” regime. This indicates how the policing of public values, like equal access, need not take the form of an overwhelming imposition of regulatory burdens. This regulatory flexibility is an important shift from the original public utility and common carriage legal frameworks of a century ago, which depended too much on (non-expert) judicial enforcement, fuzzy doctrinal tests, and all-or-nothing judgments.⁸⁸ The forbearance approach is indicative of a more flexible and modernized regulatory strategy to ensure public utility policy goals in the face of rapidly

⁸⁷ See Alan M. White, *Banks as Utilities*, 90 TUL. L. REV. 1241, 1256–58 (2016).

⁸⁸ Daniel T. Deacon, *Common Carrier Essentialism and the Emerging Common Law of Internet Regulation*, 67 ADMIN. L. REV. 133 (2015). Deacon argues against the return of common carriage doctrine as being overly ambiguous. *Id.* But Deacon's analysis focuses narrowly on the judicial interpretation of common carriage as evidenced by the D.C. Circuit's grappling with net neutrality. *Id.* By contrast, I suggest here that the correct modern usage of these ideas should operate through the more flexible, expert-driven, and adaptable mechanism of *administrative* interpretation and enforcement.

evolving economic and technological conditions.⁸⁹

Indeed, the net neutrality policy is powerful precisely because it accomplishes the moral ends of public utility regulation—ensuring equal access to a vital necessity—while protecting against many of the worst failings of conventional Progressive Era public utility regulation. In place of difficult and controversial rate-setting determinations, the forbearance regime offers a more flexible and dynamic approach to regulatory oversight. The combination of these flexible standards for public obligations and the expansion of public options hedges against the risk that public utility regulations might ratify high-priced monopolies, insulating them from competition without creating sufficient safeguards for user access, pricing, and quality.⁹⁰ In place of judicialized management, the FCC represents the modern administrative state's attempt to combine expertise, openness, and participation to manage the complexity and legitimacy of the policy regime.

The FCC rightly argued that by introducing these regulations on broadband providers, it was not inhibiting technological innovation or growth, rather it was effectively *restructuring* the broadband system and market so as to enable both universal access to the core good of internet service, and promote a more virtuous cycle of innovation. According to the FCC, innovation by content providers, like Netflix or YouTube, depended on low barriers to entry and no restrictions on transmitting content to end users. This would allow companies like Verizon and Comcast to block access to some content or to fast-track other kinds of content in exchange for higher fees, undermining market innovation.⁹¹ Net neutrality, therefore, was in fact a structural regulatory move that, rather than undermining innovation, would instead promote more socially beneficial and desirable forms of innovation. By ensuring fair and equal access through the pathways of data transmission, net neutrality would promote innovation at the level of content creation, incentivizing companies to develop new offerings to entice users, rather than enabling firms to extract rents simply by controlling the data pathways themselves.

⁸⁹ For a description and normative defense of the general case for administrative forbearance authority, including in the net neutrality/FCC context, see Daniel Deacon, *Administrative Forbearance*, 125 YALE L.J. 1548 (2016).

⁹⁰ Indeed, a common criticism of the AT&T era of monopolized utility service under Title II was that it imposed high prices on consumers. Yet the total deregulation of telecoms in the late twentieth century raised the opposite concern of unchecked private control, leading to the very problems like paid prioritization or discriminatory service. Net neutrality oversight offers an alternative to both overbearing utility regulation, and a free-market free-for-all.

⁹¹ See Open Internet Order, *supra* note 74, at 59194.

B. *Public Utility Principles and Financial Regulation*

The net neutrality debate thus offers us a vision of the value and adaptability of public utility concepts to our modern era. Legally, net neutrality is rooted in a statutory framework that was originally designed to include public utility-style regulation: as suggested above, the Title II regime under the Communications Act was very much rooted in the public utility ethos of the Progressive Era. Thus, it is perhaps unsurprising that modern-day Title II regulations such as net neutrality essentially recover and update those Progressive Era aspirations. Finance represents another kind of infrastructural good, a critical service upon which the entire economy depends. The interruption of basic depository, savings, and credit loans functions cause tremendous social upheaval. It is also one where private firms control the provision of, and access to, these services—and where this private control has created other risks for the public as a whole. Much of the scholarly literature and policy debate around financial reform engages, applies, and adapts public utility concepts, evoking the same strategies of firewalls, public obligations, and public options, parallel to the debates over telecom regulation and net neutrality.⁹²

At the same time, finance also represents a different type of legal and policy environment for the (re)emergence of these public utility concepts. Where net neutrality is a straightforward application of a statutory regime for public utility regulation, finance represents what we might consider a “per se” or “de facto” public utility model: there is no single statute or regulatory body equivalent to Title II or the FCC, which is charged with developing and enforcing public utility values. Rather, what we see in the financial reform context is an accumulation of statutes, regulations, and policy designs which, when examined as a whole, work effectively to transform finance into a de facto public utility.

1. Banking Regulation as a Form of Public Utility

A century ago, in his pamphlet *Other People's Money*, Brandeis documented the role of investment banks in manipulating and controlling the flow of finance towards railroads and other large businesses. The problem of finance, for Brandeis, was not economic, but

⁹² Note that in this Section, we will focus on the longer-term policy questions about financial stability, inclusion, and regulation, as opposed to a focus on the immediate challenges of responding to a financial panic or crisis. See, e.g., Anna Gelpern, *Financial Crisis Containment*, 41 CONN. L. REV. 1051 (2009) (describing strategies for immediate term financial crisis response in contrast to longer-term financial regulation or crisis prevention).

a matter of power. “The investment banker has, within his legitimate province, acquired control so extensive as to menace the public welfare, even where his business is properly conducted,” wrote Brandeis. “If the New Freedom is to be attained, every proper means of lessening that power must be availed of,” including reducing bank size, eliminating banker-middlemen.⁹³ Banks, for Brandeis, were “public-service corporations,” akin to “common carriers” such as railroads in other areas of law, providing a backbone service for the entire economy that could not be tainted by private interests or favoritism.⁹⁴

This recognition of the fundamentally public nature of banking has played a large role in the contemporary literature on financial regulation and financial reform. As Bob Hockett and Saule Omarova have noted, from its origins in special chartering to the modern Federal Reserve-based system, banking has always operated as a kind of public franchise, built upon the full faith and credit of the sovereign United States government.⁹⁵ Banking provides several foundational social functions: providing credit, liquidity, and financial intermediation, managing deposits, payments, and transactions, and constructing “safe assets” that serve as stores of value and the backbone of the financial system.⁹⁶

In a sense, the New Deal synthesis of banking regulation effectively managed depositories as a form of public utility, manifesting the public utility principles described earlier. In exchange for deposit insurance backed by the Federal Deposit Insurance Corporation (FDIC), depositories were subject to a variety of restrictions on their corporate structure and activities. Cash depositories are firewalled away from riskier forms of finance through the Glass-Steagall Act’s separation of investment and commercial banking. By separating different types of financial industries like investment and commercial banks, mortgage lenders, and finance companies from one another, the New Deal regulatory framework compartmentalized the economic activities of different financial firms.⁹⁷ The Bank Holding Company Act of 1956 was partly designed as an anti-monopoly policy to prevent concentration of economic and financial power among banks, and imposed restrictions on the kinds of financial activities these firms could pursue.⁹⁸

⁹³ LOUIS D. BRANDEIS, *OTHER PEOPLE’S MONEY AND HOW THE BANKERS USE IT* 109 (1914).

⁹⁴ *Id.* at 63.

⁹⁵ Hockett & Omarova, *supra* note 57, at 461 (describing the chartered public-private nature of corporations in general, and banking in particular).

⁹⁶ See Adam J. Levitin, *Safe Banking: Finance and Democracy*, 83 U. CHI. L. REV. 357 (2016); Alan M. White, *Banks as Utilities*, 90 TUL. L. REV. 1241 (2016); Anna Gelpern & Erik F. Gerding, *Inside Safe Assets*, 33 YALE J. ON REG. 363 (2016).

⁹⁷ GRETA R. KRIPPNER, *CAPITALIZING ON CRISIS: THE POLITICAL ORIGINS OF THE RISE OF FINANCE* 61 (2011).

⁹⁸ See, e.g., Saule T. Omarova, *The Merchants of Wall Street: Banking, Commerce, and Commodities*, 98 MINN. L. REV. 265, 276–77 (2011); *The Bank Holding Company Act of 1956*, 9 STAN. L. REV. 333 (1957).

Meanwhile, the Federal Reserve imposed ceilings on savings rates and the creation of federal deposit insurance combined to make banking a low-profit (but still remunerative), stable, dependable service. This not only limited excess risk taking, but also ensured public obligations of stability and access were met. As a result, “postwar commercial banking became similar to a regulated utility, enjoying moderate profits with little risk and low competition.”⁹⁹ This system of “boring banking”—a system that lacked the complex array of wildly profitable and risky securities that marked the pre-2008 crisis economy—proved more than adequate to facilitate postwar economic growth and relatively high incomes for workers in the financial sector.¹⁰⁰

This regulatory framework was undone in the 1980s and 1990s by the combination of deliberate deregulation, financial “innovation” creating new complex securities, the rise of “shadow banking,” and the consolidation of depositories and securities trading offices under the same financial holding companies. In modern finance we still depend on the system as a backbone infrastructural service that stores savings, channels investment, and enables liquidity. The private control over these services and the shifting nature of modern finance creates opportunities for private gain at public expense. We can see this in the rise of proprietary trading as financial firms exploit their role in providing core financial services to also make risky, high-profit trades using the funds at their disposal. We can also see this in the problem of TBTF firms: because government must backstop the financial system, these systemically interconnected firms operate with an implicit subsidy that figures in the billions. And we see this in the rise of the shadow banking sector, the proliferation of non-cash, money-like instruments that offer short-term stores of liquidity and value but pose the risk of nineteenth century-style panics and runs: repo, money market funds, and the like. The result has been a concentration of private power in finance over the last few decades. This power is partly economic, manifesting in the degree to which the economic well-being of the entire country depends on the activities of a few giant, systemically-risky TBTF firms. It is also partly a problem of political power, as financial giants have proven adept at lobbying and influencing through direct and indirect means efforts to police the industry.

2. Public Utility Principles and Financial Reform Today

Given the publicness of finance and its role in the modern

⁹⁹ SIMON JOHNSON & JAMES KWAK, 13 BANKERS: THE WALL STREET TAKEOVER AND THE NEXT FINANCIAL MELTDOWN 35 (2011).

¹⁰⁰ *Id.* at 61–64.

economy, it should be unsurprising that public utility principles animate many of the major proposals in the current financial regulation reform literature and policy debate. Since the financial crisis of 2008–2009, there has been a resurgence of concern around these questions of how to protect against financial panics, how to manage the rise of large, TBTF financial firms, and how to ensure that finance serves its public, social functions rather than becoming too exploitative, extractive, or risk-inducing. As in the net neutrality case, public utility principles animate these proposals in ways that insulate the core, infrastructural good—in net neutrality, the basic transmission of data between content providers and end users; in finance the basic services of savings, intermediation, and loans—from the other kinds of private activity that might undermine that good.

a. Firewalls

One approach to regulating modern finance involves the strategy of *firewalling*: cordoning off the core, essential service from other riskier or potentially exploitative uses, and limiting the types of firms and activities that can operate in this domain. So long as these core basic banking activities are insulated from other forms of finance, the stability of, and access to, the service can be maintained. The key is for those assets and money-like products that form the foundation of the financial system to be protected from risk-based contamination.¹⁰¹ This firewalling strategy can be operationalized in a variety of ways, as indicated by several different proposals in the current financial reform debate.

Some scholars suggest that new financial products be subjected to some kind of product evaluation and safety testing regime, akin to the Food and Drug Administration's oversight of new pharmaceutical and cosmetic products.¹⁰² On this approach, the complexity and riskiness of modern finance would both be reduced by limiting new financial products at the moment of introduction. Regulators could accomplish this firewalling in a variety of ways; for example, by forecasting through a cost-benefit analysis whether new products would be used more for speculation rather than legitimate insurance and risk-mitigation purposes,¹⁰³ or through a multi-pronged test exploring the economic purpose of the product, its systemic effects on the economy as a whole, and the institutional capacity of regulators to manage the possible

¹⁰¹ See Gelpern & Gerding, *supra* note 96.

¹⁰² See, e.g., Eric A. Posner & E. Glen Weyl, *An FDA for Financial Innovation: Applying the Insurable Interest Doctrine to Twenty-First-Century Financial Markets*, 107 NW. U. L. REV. 1307 (2013); Saule T. Omarova, *License to Deal: Mandatory Approval of Complex Financial Products*, 90 WASH. U. L. REV. 63 (2012).

¹⁰³ See Posner & Weyl, *supra* note 102.

repercussions of the product.¹⁰⁴

A more structural, prophylactic approach to firewalling would preemptively limit the kinds of activities financial firms could partake in. Some scholars have suggested a revival of Glass-Steagall-style limits on deposit banking, separation of investment, and commercial banking.¹⁰⁵ Similarly, legal tools—such as greater enforcement of the Federal Reserve Act’s section 23A—protect depositories from exposure to credit risks.¹⁰⁶ In the current policy debate, the Volcker Rule ban on proprietary trading evinces some of this “firewalling” approach. Named after the former Federal Reserve chairman Paul Volcker, the Volcker Rule contemplates a ban on proprietary trading, where financial firms use their own funds to engage in risky trading. The original Volcker Rule consisted of two parts: (1) an absolute size limitation on financial firms to less than ten percent of market share in loans or deposits, and (2) a ban on proprietary trading that supporters saw as a way to reformulate and modernize the New Deal era Glass-Steagall provision separating commercial and investment banking.¹⁰⁷ In effect, it seeks to restore a kind of separation between core banking services and riskier trading activities.

A more radical manifestation of the firewalling strategy would call for a shift in financial firm corporate structure, preventing the linking of basic banking entities like depositories with risky investment enterprises under the same financial holding company structure. Some scholars, for example, have suggested eliminating the practice of forming bank holding companies and financial holding companies. Both of these corporate forms “effectively [nullify] the foundational principle of separation of banking from commerce,” threatening safety and soundness; undermining fair and efficient credit flow; and expanding the concentration of power and new forms of systemic risk.¹⁰⁸

Others have suggested applying public utility laws to restructure such financial and bank holding companies. Public utilities such as electrical utilities were subject to such state regulatory oversight for much of the twentieth century under the Public Utility Holding Company Act (PUHCA). The PUHCA was passed in 1935 and empowered the Securities and Exchange Commission (SEC) to dismantle and simplify the corporate structures of utilities. This power

¹⁰⁴ See Omarova, *supra* note 102.

¹⁰⁵ See, e.g., Prasad Krishnamurthy, *Reviving Glass-Steagall?* (forthcoming) (draft on file with the author).

¹⁰⁶ See Saule T. Omarova, *From Gramm-Leach-Bliley to Dodd-Frank: The Unfulfilled Promise of Section 23A of the Federal Reserve Act*, 89 N.C. L. REV. 1683 (2011).

¹⁰⁷ Jonathan R. Macey & James P. Holdcroft, Jr., *Failure Is an Option: An Ersatz-Antitrust Approach to Financial Regulation*, 120 YALE L.J. 1368, 1397 (2011).

¹⁰⁸ Saule T. Omarova, *The Merchants of Wall Street: Banking, Commerce, and Commodities*, 98 MINN. L. REV. 265, 269 (2013).

lay dormant until the 1940s and 1950s, when it was employed as a tool to respond to the growing concentration of corporate ownership of local electrical utilities. The PUHCA shared a similar motivation as antitrust reforms, but instead of breaking up firms through lengthy litigation which often would not favor the government's antitrust effort, it employed regulatory agencies to restructure the firm in question; this defused concerns about conflicts of interest and excessive pricing for consumers and ensured fair voting shares for security holders in the utility.¹⁰⁹ Under the PUHCA, utilities were required to register with the SEC, which would then scrutinize the utilities, assessing their corporate structures and business practices to prevent internal conflicts of interest, unfair prices and terms for consumer, and other similarly abusive activities. The experience of the PUHCA could be applied to financial holding companies, preventing the problems of TBTF without resorting to costly antitrust litigation, which historically has favored Wall Street over the U.S. government.¹¹⁰

The various proposals to address TBTF financial firms by “breaking up the banks” represents the most stringent version of firewalling through structural limits on the size, powers, and forms of financial corporations. In theory, these smaller entities would no longer pose a systemic risk to the broader economy. This antitrust-style approach could limit the concentration of economic influence over the financial system, for example, by capping the total deposits of firms at some percentage of the gross domestic product (GDP), or using the Federal Deposit Insurance Corporation's already-existing metrics of firm size.¹¹¹ The Federal Trade Commission could similarly prevent financial mergers as matters of unfair competition, as a preventative measure.¹¹²

b. Public Obligations and Public Options

As discussed in the net neutrality context, another strategy to address the problem of private power in finance would involve imposing *public obligations* on financial firms. In a literal sense, banks that operate on the basis of a public charter might be required to comply with affirmative obligations to serve a wider range of constituencies in providing financial services.¹¹³ Such oversight might also involve caps

¹⁰⁹ Roberta S. Karmel, *Is the Public Utility Holding Company Act a Model for Breaking Up the Banks That Are Too-Big-to-Fail?*, 62 HASTINGS L.J. 821, 827–28, 846–56 (2011).

¹¹⁰ *Id.* at 843–44.

¹¹¹ See, e.g., Macey & Holdcroft, *supra* note 107, at 1392–95, 1371–73.

¹¹² See, e.g., Jesse W. Markham, Jr., *Lessons for Competition Law from the Economic Crisis: The Prospect for Antitrust Responses to the “Too-Big-to-Fail” Phenomenon*, 16 FORDHAM J. CORP. & FIN. L. 261 (2011).

¹¹³ See, e.g., Hockett & Omarova, *supra* note 57.

on rates and prices for basic banking services.¹¹⁴

The third related application of public utility principles in the finance domain could address the problems of financial exclusion and consumer protection through a combination of affirmative public obligations and the creation of public options. Despite the vast growth of the financial sector, many poor and minority communities lack access to basic financial services.¹¹⁵ One approach to addressing these challenges would be to make financial inclusion part of the affirmative obligations imposed on core banking functions—in keeping to the common carrier obligation to serve all comers. Another approach would be to create an outright publicly owned and operated banking service as a *public option* for banking. As suggested earlier, such public options would provide a plain vanilla set of services for users, with a mandate to reach underserved communities, and in the process would provide some degree of pricing and quality competition for private providers.

A hundred years ago in his pamphlet, Brandeis argued that the public utility status of finance and the concentration of private control over the financial system suggested the need for public provision of basic financial services, through the creation of cooperatives of farmers and producers,¹¹⁶ or through the creation of people's savings banks, which offer a democratic model of banking by employing the resources “of the people . . . managed by the people . . . [and] for the people.”¹¹⁷ Like the proposal for the public option in the healthcare reform context, states or the federal government could easily provide basic banking services for deposits and loans with transparent and low fee structures. One such proposal is to offer “postal banking,” where these services would be provided by the United States Post Office—a proposal that has roots in the nineteenth-century Populist movement and has now resurfaced in recent years.¹¹⁸ Another proposal is to follow the lead of states like North Dakota and Montana, creating a public option alternative for banking that would not only offer secure depositories, but also provide a lever for investing in new industries and competition for private firms to offer similarly stable banking systems.¹¹⁹ Indeed, in

¹¹⁴ See, e.g., White, *supra* note 87, at 1261–64, 1274–78; MEHRSA BARADARAN, *HOW THE OTHER HALF BANKS: EXCLUSION, EXPLOITATION, AND THE THREAT TO DEMOCRACY* (2015).

¹¹⁵ See, e.g., BARADARAN, *supra* note 114.

¹¹⁶ BRANDEIS, *supra* note 93, at 213–14.

¹¹⁷ *Id.* at 214–19.

¹¹⁸ See, e.g., Mehrsa Baradaran, *It's Time for Postal Banking*, 127 HARV. L. REV. F. 165 (2014); David Dayen, *The Post Office Should Just Become a Bank*, NEW REPUBLIC (Jan. 28, 2014), <https://newrepublic.com/article/116374/postal-service-banking-how-usps-can-save-itself-and-help-poor>.

¹¹⁹ See Ellen Brown, *The Public Option in Banking: How We Can Beat Wall Street at Its Own Game*, HUFFINGTON POST, (Sept. 5, 2009, 5:12 AM), http://www.huffingtonpost.com/ellen-brown/the-public-option-in-bank_b_252161.html; Matthew Yglesias, *The Case for a Public Option for Small-Scale Savings*, THINKPROGRESS (May 6, 2011, 9:29 PM), <http://>

North Dakota, the official state bank provides student, residential, and private loans, operating mostly like a normal depository subject to external audits and whose profits are turned over to the state treasury. Other states, including Hawaii, Washington, Illinois, Massachusetts, and Virginia, are already considering similar state-backed depository institutions.¹²⁰ City governments could even get in the act and create public banking entities that function like utilities, providing basic depository and investment channeling functions under the purview of the city government.¹²¹

c. Public Banking and Narrow Banking

The most far-ranging proposals for financial reform combine these public utility strategies—firewalls, public obligations, public options—by fully accepting the public function of finance and reconstituting the legal structure of finance as a public utility, with powers and capacities limited to serving the basic social functions of banking. The goal for this approach would be to convert basic finance into a kind of common carrier industry: identifying those financial firms and services that provide the most basic and critical function of deposits, savings, and short-term money flows and imposing strict public obligations and limits on the kinds of activities that these firms can take. On this approach, the goal of financial regulation would be to protect and preserve this “narrow banking” domain, firewalled from riskier transactions and activities, and with strict public obligations imposed upon them.¹²² Thus, financial firms that deal in cash or cash-equivalents like deposits, repo agreements, and money market mutual funds—any short-term demandable store of value—would be subject to regulations that separate these core functions from more risky forms of financial activity such as proprietary trading, securitization, or investment banking. This narrower domain of banking would then be tightly regulated to ensure the basic provision of those financial services carries on without interruption or contamination by excessive risk-taking and complex, potentially toxic, securities. Once the basic infrastructure is secured, other forms of financial activity involving more complex,

thinkprogress.org/yglesias/2011/05/06/200883/the-case-for-a-public-option-for-small-scale-savings; Brent Budowsky, *Time for a Public Option Bank*, THE HILL (Dec. 9, 2009, 12:33 AM), <http://thehill.com/opinion/columnists/brent-budowsky/71317-time-for-a-public-option-bank>.

¹²⁰ Jake Grovum, *The Bank of North Dakota: Banking's 'Public Option'*, PEW CHARITABLE TRUSTS (Apr. 14, 2010), <http://www.pewstates.org/projects/stateline/headlines/the-bank-of-north-dakota-bankings-public-option-85899374841>.

¹²¹ See Gerald E. Frug, *The City as a Legal Concept*, 93 HARV. L. REV. 1059, 1150–51 (1980).

¹²² See John Kay, *Should We Have 'Narrow Banking'?*, in THE FUTURE OF FINANCE: LSE REPORT 217 (2010); Morgan Ricks, *Regulating Money Creation After the Crisis*, 1 HARV. BUS. L. REV. 75 (2011); Arthur E. Wilmarth, Jr., *Narrow Banking: An Overdue Reform That Could Solve the Too-Big-to-Fail Problem and Align US and UK Financial Regulation of Financial Conglomerates (Part II)*, 31 BANKING & FIN. SERVICES POL'Y REP. 1 (2012).

profitable, and risky transactions could then be safely left alone to engage in profit-maximizing activities, since the core social function of depositories, savings, and basic credit would be cordoned off and insulated from the potential risks of these more risky activities.¹²³ This approach of creating a form of “narrow” or “basic” banking can adequately provide core financial services and be backstopped against potential panics, without being exposed to other forms of systemic risk or contagion. Robert Hockett and Saule Omarova, for example, have suggested that banking companies could be partially converted to public ownership on a sliding scale.¹²⁴ Adam Levitin has suggested a “pure reserve banking” regime that would separate deposit from lending functions, prioritizing safety and soundness of the financial system.¹²⁵

This narrow banking framework not only applies public utility principles, it also offers another way to address persisting concerns about systemic risk and future financial crises. As former Treasury official and now Vanderbilt Law professor Morgan Ricks argues, the 2008–2009 financial crisis was largely a product of a run on short-term financial securities that function like money—for example, money market funds—but are not protected or regulated the way cash deposits are. For example, these money-like instruments are treated by businesses and consumers as liquid and stable in value, but purveyors of these instruments are not subject to depository regulations, nor are they covered by FDIC insurance. By regulating money-like instruments as a public utility and as part of the narrow banking sector, the state could oversee these firms and extend deposit insurance to cover these money-like instruments, thereby preventing the risk of future runs and financial firm failures. In this approach, the public utility in question is not only the function of taking deposits and extending basic loans, but is also the act of money *creation* itself. All money-like instruments—instruments that can be demanded at any time and are expected to retain value—are then lent out by financial firms, effectively creating money. By providing a backstop and preventing risky investments or financial activities, the government can thus insulate the core money creation function—and basic depository, savings, and investment functions—from the repercussions of risk-taking or firm failure in other domains of the financial sector.¹²⁶

As Ricks has argued:

¹²³ See Kay, *supra* note 122.

¹²⁴ White, *supra* note 87, at 1281; see Robert C. Hockett & Saule T. Omarova, *Public Actors in Private Markets: Toward a Developmental Finance State*, 93 WASH. U. L. REV. 103, 160–74 (2015).

¹²⁵ Levitin, *supra* note 96 (proposing the separation of deposit and lending functions to assure greater financial stability).

¹²⁶ See, e.g., Ricks, *supra* note 122; PERRY MEHLING, *THE NEW LOMBARD STREET: HOW THE FED BECAME THE DEALER OF LAST RESORT* (2011).

Arguably, we have been making financial stability policy much more complicated than it needs to be. Panics are an age-old problem. They are not about cutting-edge developments in modern finance. Short-term debt is primitive, not complex. The upshot is that panic-proofing does not entail the extension of regulatory oversight or control over the outer reaches of modern finance. Nor does it entail taking aim at nebulous enemies like “systemic risk” or “excessive risk-taking.” It is not clear that these are even meaningful concepts—much less that they can provide a sound basis for policy.¹²⁷

3. Implications for Twenty-First Century Public Utility Regulation

Like in the net neutrality case, the application of public utility principles in finance does not necessarily involve an extreme nationalization or public takeover of private firms involved in the provision of an infrastructural good, nor does it necessarily require the full imposition of early twentieth century public utility and rate regulation. It also departs from more managerial, technocratic forms of regulation that depend on case-by-case oversight of financial activities—a regulatory approach that leaves regulators vulnerable to failure in the face of industry influence and complexity.¹²⁸ But the framework orients us towards a number of other regulatory strategies aimed at changing the very structure of the financial market to ensure both equal and fair access to the core services, while cabining competitive and profit-seeking behaviors in ways that are more productive and less likely to taint the infrastructural good itself. These policies may limit some kinds of financial profits, but, as in the net neutrality case, these measures are

¹²⁷ Morgan Ricks, *A Simpler Approach to Financial Reform*, 36 REGULATION 36, 26, 41 (2013).

¹²⁸ See, e.g., James Kwak, *Cultural Capture and the Financial Crisis*, in PREVENTING REGULATORY CAPTURE: SPECIAL INTEREST INFLUENCE AND HOW TO LIMIT IT 71 (Daniel Carpenter & David A. Moss eds., 2014) (describing how a shared social and cultural background can lead to subtle forms of industry influence on regulators); Nolan McCarty, *Complexity, Capacity, and Capture*, in PREVENTING REGULATORY CAPTURE: SPECIAL INTEREST INFLUENCE AND HOW TO LIMIT IT 99–123 (Daniel Carpenter & David A. Moss eds., 2014) (describing how complexity creates an epistemic dependence of regulators on regulated parties themselves for information to ground regulatory policies, creating additional channels for special interest influence, limiting regulatory effectiveness). For more on complexity and the limits of technocratic oversight, see, e.g., Dan Awrey, *Complexity, Innovation, and the Regulation of Modern Financial Markets*, 2 HARV. BUS. L. REV. 235 (2012); Robert F. Weber, *Structural Regulation as Antidote to Complexity Capture*, 49 AM. BUS. L.J. 643, 645, 720 (2012); Wendy E. Wagner, *Administrative Law, Filter Failure, and Information Capture*, 59 DUKE L.J. 1321, 1326, 1332 (2010); K. Sabeel Rahman, *Envisioning the Regulatory State: Technocracy, Democracy, and Institutional Experimentation in the 2010 Financial Reform and Oil Spill Statutes*, 48 HARV. J. ON LEGIS. 555, 571 (2011) (“Indeed, even where agencies emphasize scientific knowledge, sophisticated interest groups are able to provide agencies with data and information more favorable to their interests.”).

not anti-innovation. Rather, they limit rent-seeking and socially harmful forms of “innovation” that generate profits without social benefits, while encouraging more socially beneficial forms of innovation that comport with the imposed public obligations and values.¹²⁹ Financial regulation, in this view, is thus premised on the fulfillment of social values and goals, not just market efficiency.¹³⁰

These proposals are not necessarily guaranteed to succeed; as financial regulation literature explores in great detail, financial regulation is extremely difficult to implement. There is a tendency for laws and regulations to be undone, in light of the self-interested and well-resourced nature of financial firms, the complexity of regulatory oversight, and the political economy of regulation.¹³¹ Nevertheless, the public utility framework represents a distinctive approach to the problem of restraining private power and assuring public values in the domain of finance. The financial regulation debate explored above highlights how these public utility principles—firewalls, public obligations, and public options—can be operationalized through a variety of legal and policy approaches. All of these proposed measures involve regulatory, not judicial, implementation of public utility restraints. They all work to create restraints on private power to prevent extractive or exploitative practices, while ensuring that the core social functions of finance are secured.

IV. THE NEW UTILITIES? PLATFORM POWER AND INFRASTRUCTURE IN THE INTERNET ECONOMY

Broadband and finance represent key infrastructural elements of today’s society—combining economies of scale, vast downstream uses by a variety of constituencies, and a high risk of vulnerability to exploitation or extraction. Public utility strategies of firewalls, public obligations, and public options represent approaches to restraining the private power over these infrastructural services, ensuring that ISPs and financial firms serve the public good, and thus assuring the production

¹²⁹ For an important critique of “financial innovation” as obscuring socially harmful, yet profitable practices, see, e.g., Simon Johnson & James Kwak, *Finance: Before the Next Meltdown*, 14 *DEMOCRACY* 19 (2009); RAHMAN, *DEMOCRACY AGAINST DOMINATION*, *supra* note 11, at 116–38; Adam J. Levitin, *In Defense of Bailouts*, 99 *GEO. L.J.* 435, 451 (2011).

¹³⁰ See Levitin, *supra* note 129; White, *supra* note 87, at 1274 (“The key point for banking law is that we must first describe and agree on the social goals that banks, as utilities, should serve. Having defined the ends to be served, we can proceed to consider what useful models public utilities in other industries can offer in redesigning the means used by banking regulation.”).

¹³¹ Levitin, *supra* note 96, at 385 (noting that because of the self-interest of financial firms and the epistemic and capacity limits of regulators, “finance will inevitably flow to the least regulated channel”).

of, and equal access to, these vital services. The cases of net neutrality and financial regulation show how these public utility principles are both feasible and compelling, animating a variety of existing proposals for managing the problem of private power in these very different sectors.

The framework developed above—the definition of infrastructural goods and services, and the toolkit of public utility-inspired regulatory strategies—can help us diagnose and respond to new forms of private power in a changing economy. The internet economy in particular raises the specter of problematic concentrations of private power in a variety of contexts, from the debates concerning Google and Facebook’s dominance over the spread of information, to the concerns about Amazon’s vast retail empire, to the battles over Uber, Airbnb, and their impact on the dynamics of urban development. The law and policy debate around these internet firms has at times struggled to zero in on the core problems that these firms raise, and the appropriate policy solutions. This Part suggests that the public utility framework developed in this Article can help identify and remedy a unique set of problems arising from these firms’ position as infrastructural.

Just as broadband represents a new form of infrastructure in today’s economy, new problems arise from how the information economy has enabled private control over new online platforms increasingly vital to economic and social functioning. Whether it is Google, Facebook, Amazon, Uber, or Airbnb, these internet giants all share a common structure. They operate online interfaces that function as marketplaces or clearinghouses—in short, as *platforms*—linking producers and consumers of goods, services, and information. This gives these firms a unique kind of “platform power,”¹³² influencing production, distribution, and access. The benefits of platforms depend on consolidated control—but platform power presents another form of problematic private power with outsized abilities to set the terms of exchange, influencing wages, prices, and standards, and extracting rents in the process. The concentration of control over the platform also creates additional vulnerabilities, as the private company can exploit its opaque and unchecked use of the mountains of data it collects about users and service providers alike—data which can enable subtle forms of pricing, racial, and geographic discrimination. Such platform power raises the kinds of concerns to which old public utility reformers were

¹³² K. Sabeel Rahman, *Curbing the New Corporate Power*, BOSTON REV. (May 4, 2015), <http://bostonreview.net/forum/k-sabeel-rahman-curbing-new-corporate-power>; Evgeny Morozov, *Where Uber and Amazon Rule: Welcome to the World of the Platform*, GUARDIAN (June 6, 2016, 7:05 PM), <https://www.theguardian.com/technology/2015/jun/07/facebook-uber-amazon-platform-economy>. Some economists have theorized these platforms are “two-sided markets.” See Jean-Charles Rochet & Jean Tirole, *Two-Sided Markets: A Progress Report*, 37 RAND J. ECON. 645 (2006).

attuned. As these platforms increasingly take on an infrastructural role in the modern economy, the public utility principles that animate proposals in net neutrality and finance offer a productive alternative.

A. *The New Utilities: Google, Facebook, and Amazon*

The internet giants, Google, Facebook, and Amazon, are examples of online-enabled infrastructure for the modern economy. Whether it is Google's domination of search and online information,¹³³ Facebook's centrality for access to media,¹³⁴ or Amazon's growing control over not just bookselling but the very distribution networks for physical goods,¹³⁵ these firms are increasingly operating as foundational utilities for much of today's economy. This infrastructural role raises the problem of private power.

1. Google, Facebook, and Informational Infrastructure

In recent months, an explosion of reports has highlighted the role of online information platforms like Facebook, YouTube (owned by Google), and Google search and news services in shaping the flow of information. Much of this controversy emerged in the context of fears of Russian misinformation campaigns in the 2016 election,¹³⁶ as well as growing concern about the role of these information platforms in facilitating the radicalization of extreme views and fostering racial and gender discrimination online.¹³⁷ The "fake news" debates are indicative

¹³³ See, e.g., FRANK PASQUALE, *THE BLACK BOX SOCIETY: THE SECRET ALGORITHMS THAT CONTROL MONEY AND INFORMATION* 98–100 (2015) [hereinafter PASQUALE, *BLACK BOX SOCIETY*] (discussing the analogy between Robert Hale's ideas of public utility and the problem of Google and ISPs today); see also *id.* at 208–12 (discussing potential public options alternatives to Google in search and online information retrieval).

¹³⁴ *How to Win Friends and Influence People*, ECONOMIST (Apr. 9, 2016), <http://www.economist.com/news/briefing/21696507-social-network-has-turned-itself-one-worlds-most-influential-technology-giants?frsc=dg%7Ca>. Ironically, Facebook even describes itself on its homepage as a "social utility," indicating its ambition to be a foundational, infrastructural communications platform used by, and depended upon, by everyone. See *Peering*, FACEBOOK, <https://www.facebook.com/peering> (last visited Jan. 16, 2018).

¹³⁵ See, e.g., Shira Ovide, *Amazon Takes the Wheel*, BLOOMBERG GADFLY (Feb. 9, 2016, 11:13 AM), <http://www.bloomberg.com/gadfly/articles/2016-02-09/amazon-wants-to-transform-the-delivery-path-to-everyone-s-door> (describing Amazon's move into shipping and logistics).

¹³⁶ See, e.g., Violet Blue, *Facebook's Widening Role in Electing Trump*, ENGADGET (Sept. 8, 2017), <https://www.engadget.com/amp/2017/09/08/facebooks-widening-role-in-electing-trump>; Adam Entous et al., *Obama Tried to Give Zuckerberg a Wake-up Call over Fake News on Facebook*, WASH. POST (Sept. 24, 2017), https://www.washingtonpost.com/business/economy/obama-tried-to-give-zuckerberg-a-wake-up-call-over-fake-news-on-facebook/2017/09/24/15d19b12-ddac-4ad5-ac6e-ef909e1c1284_story.html?utm_term=.8ff38831dccb.

¹³⁷ See, e.g., Will Oremus, *Blame the Minder, Not the Machine*, SLATE (Sept. 20, 2017, 2:13 PM), http://www.slate.com/articles/technology/technology/2017/09/it_s_not_the_facebook_

of a deeper set of problems arising from the way in which Google and Facebook operate as informational infrastructure.

Google and Facebook are increasingly part of our informational infrastructure, shaping the distribution of and access to news, ideas, and information upon which our economy, culture, and increasingly politics depend on. As information platforms, Google and Facebook represent new forms of infrastructure. Their social and economic value stems in large part from the economies of scale in creating a centralized platform that mediates access to information. As the most influential and widely used platforms shaping individual consumption of news, information, and media, these platforms in turn enable a wide range of downstream uses. But this creates a vulnerability among users who could be excluded from access, or, more troublingly, may be consuming a tainted or manipulated information stream. These information platforms thus meet our criteria from Part I of infrastructural goods.

Indeed, there is a growing awareness of the potential harms that can arise from the abuse of these information platforms. This raises the concern that these platforms can invisibly alter the kinds of services and information that users can access in the first place.¹³⁸ Google has already been investigated once by the Federal Trade Commission for manipulating its search results to favor its own properties. Fair search results are increasingly make-or-break for businesses trying to reach consumers. The platform's influence on information can even have electoral consequences. A recent study found that search engines, like Google and Facebook, can have large impacts on voter behavior in elections by shifting the order of search results and news feeds, influencing up to twenty percent of undecided voters.¹³⁹ As Jonathan Zittrain suggests, these examples are part of a broader threat of "digital gerrymandering: the selective presentation of information by an intermediary to meet its agenda rather than to serve its users."¹⁴⁰ Recent revelations that employees can manipulate lists of "trending" topics on Facebook feeds accentuate this concern.¹⁴¹ Indeed, as scholars and journalists have documented, it is increasingly clear that Facebook is

algorithm_s_fault_it_s_easy_for_racists_and_russians.html.

¹³⁸ PASQUALE, *supra* note 133, at 66.

¹³⁹ Robert Epstein & Ronald E. Robertson, *The Search Engine Manipulation Effect (SEME) and Its Possible Impact on the Outcome of Elections*, 112 PNAS E4512 (2015), <http://www.pnas.org/content/112/33/E4512.full.pdf?with-ds=yes>.

¹⁴⁰ Jonathan Zittrain, *Engineering an Election*, 127 HARV. L. REV. F. 335, 336 (2014) [hereinafter Zittrain, *Engineering an Election*]; see Jonathan Zittrain, *Facebook Could Decide an Election Without Anyone Ever Finding Out*, NEW REPUBLIC (June 1, 2014), <https://newrepublic.com/article/117878/information-fiduciary-solution-facebook-digital-gerrymandering>.

¹⁴¹ Robinson Meyer, *A Bold New Scheme to Regulate Facebook*, ATLANTIC (May 12, 2016), <http://www.theatlantic.com/technology/archive/2016/05/how-could-the-us-regulate-facebook/482382>.

already engaged in significant curation and editorial management of the flow of information, speech, and expressions of opinion on its platform—often through ham-handed and misguided attempts to regulate hate speech in ways that disproportionately burden racial minorities.¹⁴² Facebook's growing dominance as a communications platform, shaping access to news and other kinds of written media, magnifies these concerns.¹⁴³

Most troublingly, these results can arise even in the absence¹⁴⁴ of an employee intentionally skewing the results, emerging instead from how the algorithms adapt to the frequencies of queries. The problem, therefore, is not just the possibility of self-interested manipulation of news, information, and search feeds by Google and Facebook themselves; it is also in the ways in which the emergent properties of the underlying algorithms might produce skewed results, favoring some kinds of media and content over others, or even creating patterns of discrimination in the absence of willful intent on the part of the programmers themselves.¹⁴⁵ Indeed, the problems of discrimination, manipulation, misinformation, and the like inhere in the very business model and structure of platforms themselves.¹⁴⁶ The threat that such private control poses to our larger political, economic, and social life in

¹⁴² See, e.g., Kate Klonick, *The New Governors: The People, Rules, and Processes Governing Online Speech*, 131 HARV. L. REV. (forthcoming 2018); Julia Angwin & Hannes Grassegger, *Facebook's Secret Censorship Rules Protect White Men from Hate Speech But Not Black Children*, PROPUBLICA (June 28, 2017, 5:00 AM), <https://www.propublica.org/article/facebook-hate-speech-censorship-internal-documents-algorithms>.

¹⁴³ See generally FRANKLIN FOER, *WORLD WITHOUT MIND: THE EXISTENTIAL THREAT OF BIG TECH* (2017); JONATHAN TAPLIN, *MOVE FAST AND BREAK THINGS: HOW FACEBOOK, GOOGLE, AND AMAZON CORNERED CULTURE AND UNDERMINED DEMOCRACY* (2017).

¹⁴⁴ Robert Epstein, *How Google Could Rig the 2016 Election*, POLITICO MAG. (Aug. 19, 2015), <http://www.politico.com/magazine/story/2015/08/how-google-could-rig-the-2016-election-121548#.VdUlu4g8KK1>.

¹⁴⁵ On the emergent properties of algorithms and their possible exclusionary, discriminatory, or biased impact, see CATHY O'NEIL, *WEAPONS OF MATH DESTRUCTION: HOW BIG DATA INCREASES INEQUALITY AND THREATENS DEMOCRACY* (2016); Joshua A. Kroll et al., *Accountable Algorithms*, 165 U. PA. L. REV. 633 (2017); Solon Barocas & Andrew D. Selbst, *Big Data's Disparate Impact*, 104 CALIF. L. REV. 671 (2016).

¹⁴⁶ See, e.g., Zeynep Tufekci, *Zuckerberg's Preposterous Defense of Facebook*, N.Y. TIMES (Sept. 29, 2017), <https://mobile.nytimes.com/2017/09/29/opinion/mark-zuckerberg-facebook.html?referer=https://t.co/NrOYAuBbs?amp=1> (noting that the problems of misinformation are inherent in the Facebook system itself); Isaac Chotiner, *Facebook Was Built for This*, SLATE (Sept. 25, 2017, 12:30 PM), http://www.slate.com/articles/news_and_politics/interrogation/2017/09/facebook_was_built_to_enable_bad_actors_like_russia.html (noting the same); Annalee Newitz, *It's Time to Get Rid of the Facebook "News Feed," Because It's Not News*, ARS TECHNICA (Nov. 18, 2016, 7:15 PM), <http://arstechnica.com/staff/2016/11/its-time-to-get-rid-of-the-facebook-news-feed-because-its-not-news> (noting that the core problem lies in Facebook's straddling the line between news provider and neutral platform, operating as both but evading the norms and restraints expected of either); see also Zittrain, *Engineering an Election*, *supra* note 140, at 340 ("If we can't trust the intermediaries who not only bring us our viral videos but our news, our daily cries, and our calls to action, we enter a territory of power that's unfamiliar and unfair.").

turn arises from the increasingly essential status in our internet economy, and the myriad of ways in which the platforms can be manipulated to operate on unequal, discriminatory, or misleading terms.

The infrastructural nature of these information platforms suggests that the public utility strategies and tools developed above might offer important avenues for reform in this context. These tools would broaden the current debate over informational platforms considerably. Much of the literature to date on information platforms has tended to focus on two features: the privacy concerns of users, and the First Amendment claims of the platforms seeking to evade regulatory oversight. Google and Facebook have simultaneously claimed that they are mere conduits without responsibility for the content on their sites, but also that their sites represent content worthy of First Amendment protection.¹⁴⁷ Yet these firms are not passive information intermediaries: both Facebook and YouTube (which is owned by Google) have developed extensive internal administrative regimes to manage and monitor content on their platforms, making the companies themselves the “new governors” of speech online.¹⁴⁸ Some scholars have suggested that the state-like nature of these information platforms—analogue not to a private content producer but rather to a town square—can trump these First Amendment defenses.¹⁴⁹ Others have cast the information platforms as a part of a “pluralist” model of speech regulation, where users, government, and platforms alike structure the dynamics of online information and speech.¹⁵⁰

Many of the remedies proposed for the problem of manipulable information platforms have prioritized privacy concerns and sought to overcome this potential First Amendment shield against regulation. Consider, for example, Jack Balkin’s proposal for “information fiduciaries.”¹⁵¹ Balkin rightly foregrounds the unique power that these information platforms possess over users:

¹⁴⁷ Frank Pasquale, *Platform Neutrality: Enhancing Freedom of Expression in Spheres of Private Power*, 17 THEORETICAL INQUIRIES L. 487 (2016).

¹⁴⁸ Kate Klonick, *The New Governors: The People, Rules, and Processes Governing Online Speech*, 131 HARV. L. REV. (forthcoming), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2937985.

¹⁴⁹ See, e.g., Andrew Tutt, *The New Speech*, 41 HASTINGS CONST. L.Q. 235 (2014) (describing Facebook as a modern day public square); Trevor Puetz, *Facebook: The New Town Square*, 44 SW. L. REV. 385 (2014) (same); Jon D. Michaels, *Running Government Like a Business . . . Then and Now*, 128 HARV. L. REV. 1152, 1180–81 (2015) (reviewing NICHOLAS R. PARRILLO, *AGAINST THE PROFIT MOTIVE: THE SALARY REVOLUTION IN AMERICAN GOVERNMENT, 1780–1940* (2013) (describing new media platforms as quasi-sovereign entities)).

¹⁵⁰ See, e.g., Jack M. Balkin, *Free Speech in an Algorithmic Society: Big Data, Private Governance, and New School Speech Regulation*, U.C. DAVIS L. REV. (forthcoming 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3038939.

¹⁵¹ Jack M. Balkin, *Information Fiduciaries and the First Amendment*, 49 U.C. DAVIS L. REV. 1183 (2016).

Because of their special power over others and their special relationships to others, information fiduciaries have special duties to act in ways that do not harm the interests of the people whose information they collect, analyze, use, sell, and distribute. These duties place them in a different position from other businesses and people who obtain and use digital information.¹⁵²

Balkin proposes that these platforms be subject to fiduciary duties to protect user data when the platforms present themselves publicly as privacy-respecting institutions, and users reasonably believe that their personal information will be protected.¹⁵³ These fiduciary obligations would create duties of care, which would induce changes to the operation of these platforms. Implementing such obligations might also require modifying existing statutes, in particular § 230 of the Communications Decency Act.

Public utility concepts can contribute to these debates in several ways. First, as Susan Crawford has suggested, common carriage concerns—familiar from the history of public utility regulation—might well provide a sufficiently strong interest to override First Amendment concerns as well, without requiring undue speech restraints.¹⁵⁴ Furthermore, as Frank Pasquale has argued, the problematic power concentrated in these platforms extends beyond individual user privacy, to encompass a wider range of possible harms from the potentially skewed, biased, discriminatory, misleading, or manipulable dynamics of the information results themselves.¹⁵⁵ This in turn suggests the need for a wider range of possible regulatory strategies, drawing on the public utility tools developed above.

Firewalls might help by separating out the branded services offered by these firms from the conduit function that they also serve. Thus, Google-branded products would have to compete on equal terms with other retailers over the Google search engine. Similarly, we might require a form of “search neutrality,” equivalent to the common carriage, nondiscrimination principles developed in the net neutrality context.¹⁵⁶ Just as in net neutrality, search neutrality would require regulatory oversight to prevent concerns about bottlenecking, imposition of barriers or discriminatory dynamics in search results, stealth marketing, and the like.¹⁵⁷ Adapted for search, these principles

¹⁵² *Id.* at 1186.

¹⁵³ *Id.* at 1223–24.

¹⁵⁴ Crawford, *supra* note 50, at 2387.

¹⁵⁵ Frank Pasquale, *Internet Nondiscrimination Principles: Commercial Ethics for Carriers and Search Engines*, 2008 U. CHI. LEGAL F. 263, 264 (noting that the literature on informational platforms is gradually evolving from a first-wave focus on privacy, to a second-wave focus on search itself).

¹⁵⁶ See generally Pasquale, *supra* note 155.

¹⁵⁷ See generally *id.*

might call for conditions such as universal access, prohibiting the blocking of the transmission of particular content providers or retailers, and bans on hidden prioritizations or stealth marketing done either to favor on-brand content, or paid content. These requirements would level the playing field among those seeking to use the platforms as a conduit towards users or consumers. Such regulations might be necessary to counter the dangers of platform manipulation by the platform owners themselves or systemic forms of racial discrimination that might result.¹⁵⁸ More radically, some scholars have even suggested the potential need for a public option in search engines to balance Google.¹⁵⁹ A public competitor to Google may seem a little farfetched, but consider the wide and growing use of what is termed peer production in the digital universe—not for profit collaborations, the best known of which is Wikipedia.

2. Amazon and the New Retail Infrastructure

Amazon raises similar concerns in how it operates its search function for its retail store. But Amazon is more than just a search portal. As a retailer in its own right producing and selling its own Amazon-branded goods, and as a logistics and shipping company that increasingly dominates the direct-to-consumer world of online retail, Amazon is increasingly the “central infrastructure for the internet economy.”¹⁶⁰ Just as Google rankings or Facebook feeds are critical for the success of online content providers, fair dealing in Amazon’s retail system is critical for a wide variety of online and offline businesses. In light of its rapidly-growing dominance over direct-to-consumer retail sales across the board, not just in its core business of books, Amazon is thus best understood as a retail, shipping, and logistics platform that operates as the infrastructure for twenty-first century retail.

This infrastructural power can be restrained by applying the public utility strategies developed above. For example, prophylactic limits on vertical integration by platforms like Amazon could limit the spillover of dominance in retail logistics to adjacent lines of business¹⁶¹—an extension of the firewall concept developed above. Similarly, public obligations like nondiscrimination realized through platform neutrality regulations could apply just as readily to Amazon in its capacity as retail platform, as it does to informational platforms like Google.

¹⁵⁸ See, e.g., *supra* note 145.

¹⁵⁹ See Jonathan Taplin, *Is It Time to Break up Google?*, N.Y. TIMES, Apr. 23, 2017, at SR4; PASQUALE, BLACK BOX SOCIETY, *supra* note 133, at 218.

¹⁶⁰ Lina M. Khan, *Amazon’s Antitrust Paradox*, 126 YALE L.J. 710, 754 (2017).

¹⁶¹ *Id.* at 793–94.

B. *Uber and Airbnb: Partial or Emergent Utilities?*

While Google, Facebook, and Amazon have entrenched themselves as infrastructural services in the internet economy, new entrants like Uber and Airbnb have a more uncertain status. Uber and Airbnb have grown rapidly, with sky-high valuations, quickly dominating the ride-sharing and short-term rental markets in major metro areas. But it is unclear to what extent these services are “necessities” warranting a full-blown public utility treatment.

In some ways, these new businesses are platforms that enjoy economies of scale evocative of infrastructural goods. Uber is a paragon of the latest wave of “disruptive” business models coming out of Silicon Valley: the rise of on-demand platform-based companies that seek to match consumers to a variety of goods and services through user-friendly apps backed by extensive networks of service providers and sophisticated algorithms. Replacing traditional middlemen by connecting providers and users, buyers and sellers through a technology-enabled platform is increasingly at the heart of the Silicon Valley playbook.¹⁶²

Uber generates very real benefits from the ways in which it has led to a vertical and horizontal integration of the taxi market. Through its platform and data algorithms, Uber has made it radically easier for riders to find drivers and vice versa, and by creating a single platform that operates across cities Uber has made this kind of taxi service provision much more efficient and effective, roundly trumping the often ineffectual practices of local taxi franchises.¹⁶³ The same can be said about Airbnb and the hotel industry. It also seems likely that in the long-run, Uber’s own internal system of consumer ratings are much more likely to be efficient at maintaining trust in the network, rather than bureaucratic ex ante licensing regimes.¹⁶⁴

While these businesses may not be conventional natural monopolies as in water or electricity production, the reality is that the vastly increasing returns to scale of the networks they depend on—networks of riders, users, and drivers—means that it is increasingly difficult for new entrants to compete with established platforms. This effectively means that these platforms are largely here to stay, and that regulatory strategies will have to come to terms with the businesses themselves.

As platforms linking buyers and sellers (or drivers and riders),

¹⁶² Claire Cain Miller, *Where Uber and Airbnb Meet in the Real World*, N.Y. TIMES, Oct. 19, 2014, at SR5.

¹⁶³ See Brishen Rogers, *The Social Costs of Uber*, 82 U. CHI. L. REV. DIALOGUE 85, 88–90 (2015).

¹⁶⁴ See, e.g., *id.* at 93.

Uber and Airbnb are prone to some of the same concerns afflicting Google, Facebook, and Amazon in how they operate their matching and search algorithms. Their path to dominance is subtle in part because it can masquerade as being consumer-friendly: initially the aggregation of services and users on the platform simply makes the platform more desirable and useful for consumers, but once competitors are sufficiently weakened, these platforms can increase prices as monopolies or monopsonies.¹⁶⁵ A second problem arising from platform power is the risk of discrimination of various kinds. Through their underlying algorithms shaping how users access information, goods, or services, these platforms can engage in algorithmic price-fixing, charging different prices to different consumers based on their inferred income level, race, gender, or geographic location.¹⁶⁶ Civil rights advocates are increasingly raising concerns that the algorithms governing platforms like Uber and Airbnb are creating subtle forms of racial discrimination against minority buyers and sellers.¹⁶⁷

To the extent that we think Uber and Airbnb are infrastructural services, public utility principles suggest some possible responses. First, like in the net neutrality case, we might impose some basic public obligations on these platforms, akin to the net neutrality common carrier requirements, particularly once they cross some threshold of market dominance in particular localities. On this approach, platforms could be subjected to additional public policy requirements such as common carrier and antidiscrimination obligations by virtue of their size and expansive influence.¹⁶⁸ These obligations can be structured as part of franchise agreements permitting the platforms to operate in particular metro areas or states. In the context of Uber and other platform services, it is plausible to imagine that as a condition for franchises from city or state governments permitting operation in metro areas, these services might be obligated to comport with some basic regulations about labor standards, antidiscrimination and common carrier principles, and addressing public interest concerns such as the role of Uber pricing in emergency contexts. Already some advocacy groups have called for platform companies to voluntarily adopt public-interested codes of conduct, such as the National Domestic Workers'

¹⁶⁵ See, e.g., Ben Thompson, *Antitrust and Aggregation*, STRATECHERY (Apr. 26, 2016), <https://stratechery.com/2016/antitrust-and-aggregation>.

¹⁶⁶ See, e.g., Ryan Calo & Alex Rosenblat, *The Taking Economy: Uber, Information, and Power*, 117 COLUM. L. REV. 1623 (2017); Alex Rosenblat, *Uber: Algorithmic Price-Fixing*, MEDIUM (Apr. 1, 2016), <https://medium.com/uber-screeds/the-conspiracy-of-algorithmic-price-fixing-e70ca6dcabbf#.64cr0vlj9>.

¹⁶⁷ See PASQUALE, BLACK BOX SOCIETY, *supra* note 133, at 23, 41; *see also supra* note 139.

¹⁶⁸ See, e.g., Nancy Leong & Aaron Belzer, *The New Public Accommodations: Race Discrimination in the Platform Economy*, 105 GEO. L.J. 1271 (2017) (exploring possible applications of public accommodations nondiscrimination statutes to the platform economy).

Alliance proposal for a Good Work Code, highlighting core values for how platforms should relate to the service providers in their systems, including stability and flexibility, transparency, livable wages, shared prosperity, and inclusion and input.¹⁶⁹

Another strategy is to create public options of the sort proposed in finance. As Nick Grossman, the chairman of Union Square Ventures, has argued, platforms like Uber could be subjected to competition from rival platforms that are “thinner”—offering only the basic service without imposing additional requirements and extracting too much from workers and the public.¹⁷⁰ While platforms will have a tendency to “thicken” over time, imposing more and more requirements as they achieve more dominant market position, Grossman argues that technology monopolies are eventually challenged by more open source alternatives. The key is for these alternatives to match the original platforms in terms of technology and user experience. While that is a high bar to meet, if it can be met, then we could see the emergence of platforms that prioritize worker support and safety, or that offer more plain vanilla “thin” services without the add-ons.¹⁷¹ Indeed, a number of critics have suggested that worker-owned cooperative platforms would be a simple solution to the problem of extractive platforms.¹⁷² If, for example, an Uber rival were structured as a worker cooperative with its profits cycling back to the drivers themselves, then things look very different. Another alternative might be the creation of “public digital intermediaries”—essentially public platforms that would mediate between the two sides of the transaction, for example through an alternative app or platform.¹⁷³ The creation of such alternative public options would both provide a version of the service that comported more readily with public values in terms of labor conditions, consumer protections, and proactively reaching underserved communities and neighborhoods. But it would also provide competitive pressure on Uber and dominant platforms.

¹⁶⁹ See GOOD WORK CODE, <http://www.goodworkcode.org> (last visited Mar. 19, 2018); Palak Shah, *It's Time to Build a Movement for Good Work. Are You with Us?*, MEDIUM (Nov. 2, 2015), <https://wtfecconomy.com/it-s-time-to-build-a-good-work-movement-are-you-with-us-7f099fd35d09>.

¹⁷⁰ Nick Grossman, *Venture Capital vs. Community Capital*, NICK GROSSMAN (May 22, 2015), <http://www.nickgrossman.is/2015/05/22/venture-capital-vs-community-capital>.

¹⁷¹ *Id.*

¹⁷² See, e.g., Mike Konczal, *Socialize Uber*, NATION (Dec. 10, 2014), <https://www.thenation.com/article/socialize-uber>; Janelle Orsi, *Three Ways to Put Tech Platforms into the Commons*, NATION (May 27, 2015), <http://www.thenation.com/article/5-ways-take-back-tech>; Nathan Schneider, *Power to the People (Not the Platform)*, NATION (May 27, 2015), <http://www.thenation.com/article/5-ways-take-back-tech>; Brian Van Slyke & David Morgan, *The “Sharing Economy” is the Problem*, GRASSROOTS ECON. ORGANIZING (July 3, 2015), <http://www.geo.coop/story/sharing-economy-problem>.

¹⁷³ See Rory Van Loo, *Rise of the Digital Regulator*, 66 DUKE L.J. 1267 (2017).

While these strategies of imposing public obligations and creating public options might help rein in the unchecked power of these platform businesses, it is important to note that these applications of public utility principles do not recreate the inefficiencies of existing utilities like city taxi and limousine commissions. Consider what the above discussion does *not* do: there is no top-down city licensing, inspection, or monitoring regime; rather the public obligations such as nondiscrimination and equal access can be monitored and enforced through policies that require Uber to share its own data. Nor do these proposals depend on consumer protection laws as conventionally enforced, instead leveraging the efficiency and efficacy of Uber's own ratings system for drivers and riders. In effect, these proposals offer avenues for harnessing the gains offered by new technologies animating these platforms, while still directing these abilities towards public ends. Indeed, in addition to the dangers of private platform power, there are very real public purposes that could be served by channeling the social value created by these platforms towards public ends. Imagine how the sophisticated matching algorithms and databases of Uber and Airbnb might change the landscape of addressing transportation inequities or managing the demands of affordable housing and displacement. There are real public benefits that could be generated from these technologies. But to achieve these benefits, we need a more dynamic and creative regulatory approach that draws on public utility principles to meet overall public goals, but with the flexibility to engage the benefits of new technologies and dynamic regulatory and monitoring methods.

It may also be true that Uber and Airbnb are not infrastructural backbone services to the degree that Amazon or Google might be. Uber may dominate ride-sharing and may need to be regulated to prevent hidden forms of discrimination, but it is not clear that taxi services are a necessity in the way that search or retail shipping might be. Furthermore, it may still be the case that rival competitors could displace Uber and Airbnb, checking their potential dominance through ordinary market competition. If genuine competition remains a possibility, it may be preferable to facilitate new market entrants rather than ratifying Uber and Airbnb's dominance and imposing corresponding utility-style regulations.

But the recent history of these firms also suggests the very real possibility that they might continue to evolve into something that is very much infrastructural. First, as already suggested above, the growing monopolization of user data that these platforms possess might entrench their position to such a degree that market competition is effectively impossible, suggesting the need for regulatory oversight. Second, as Uber and Airbnb reach saturation points in certain metro areas, there is a possibility that they become *de facto* privatized components of the *urban infrastructure*: Uber in transit, and Airbnb in

housing. Indeed, a number of community groups are increasingly concerned about the impact of Airbnb's penetration on neighborhoods, zoning codes, and the stock of affordable housing.¹⁷⁴ With its latest rounds of fundraising, Uber is also spending aggressively to move beyond taxi services to everything from food delivery, courier service, and merchant delivery programs—a shift that would make it more of a shipping and logistics infrastructural service like Amazon in last-mile delivery.¹⁷⁵ This tipping point for triggering public utility regulations may not have been reached yet—whether or not it would be a matter of judgment and context—but the potential is very much there. And if this point is reached, public utility principles will have to enter in as possible regulatory responses.

V. PUBLIC UTILITY AND THE INEQUALITY CRISIS

This public utility framework does more than offer insight into specific sectors where infrastructural goods and private power raise concerns. It also connects to several parallel debates in contemporary legal scholarship.

A. *Public Utility as a Complement to Corporate Governance and Antitrust*

Public utility concepts by themselves do not exhaust the realm of possible regulatory approaches. As noted in Part I above, historically, public utility emerged alongside antitrust and corporate governance as parallel responses to the shared problem of private power. The case studies in Parts III and IV above highlight the degree to which these public utility tools are necessary complements even today to more conventional corporate governance or antitrust measures to address the problem of private power over infrastructural goods.

Corporate governance is of limited efficacy in addressing private

¹⁷⁴ See, e.g., Roy Samaan, *Short-Term Rentals and L.A.'s Lost Housing*, L.A. ALLIANCE FOR NEW ECON. (Aug. 24, 2015), http://www.laane.org/wp-content/uploads/2015/08/Short-Term_RentalsLAs-Lost_Housing.pdf; see also K. Sabeel Rahman, *The Shape of Things to Come: The On-Demand Economy and the Normative Stakes of Regulating 21st Century Capitalism*, 7 EUR. J. RISK REG. 652, 660–62 (2016).

¹⁷⁵ See, e.g., Sarah Buhr, *Uber Takes on Postmates with UberRUSH, an On-Demand Delivery Service*, TECHCRUNCH (Oct. 14, 2015), <http://techcrunch.com/2015/10/14/uber-takes-on-postmates-with-uberrush-to-deliver-all-the-retail-things-to-you>; Jordan Crook, *Uber Is Quietly Testing a Massive Merchant Delivery Program*, TECHCRUNCH (Apr. 28, 2015), <http://techcrunch.com/2015/04/28/uber-is-quietly-testing-a-massive-merchant-delivery-program>; Fitz Tepper, *Uber's New Update Gives Food Delivery as Much Attention as Transportation*, TECHCRUNCH (Aug. 17, 2015), <http://techcrunch.com/2015/08/17/ubers-new-update-gives-food-delivery-as-much-attention-as-transportation>.

power concerns when it comes to infrastructural goods. Consider the case of finance. Stakeholders for financial firms involve not only workers in those firms, but also depositors and the public at large: we all depend on a well-functioning banking system. Finance thus poses an even more extreme form of fragmentation and separation of interests beyond what even Berle and Means originally described.¹⁷⁶ This fragmentation and diffusion of affected constituencies is made worse by distorted incentives arising from, for example, proprietary trading practices, and from the holding company structure that allows large financial firms to possess many subsidiaries, each of which engages in a different kind of financial business model. The same argument can be made for ISPs: they provide a good that implicates the interests of the entire public and a whole range of constituencies who are fragmented, diffused, and difficult to organize even were we to promote the added measures of stakeholder representation within corporate boards. Meanwhile, Silicon Valley companies like Google and Uber eschew public stock offerings until fairly late in their development, and when they do, their shareholders have weak rights, further limiting the scope of internal corporate governance mechanisms to hold these firms accountable.¹⁷⁷ Furthermore, there is the difficulty that *shareholders* by definition do not have the same interests or aspirations as *citizens*: what we want as consumers or investors is not necessarily the same thing as what we want as a public. And in the case of firms that provide goods upon which the whole public depends—banking services, internet access, and the like—this public stance is critical. These limitations arise especially in the context of infrastructural goods, independent of and in addition to more general critiques of corporate governance as a tool for holding corporate power accountable.¹⁷⁸

Antitrust law similarly has difficulties in addressing the problems

¹⁷⁶ Anita Krug, *The Modern Corporation Magnified: Managerial Accountability in Financial-Services Holding Companies*, 36 SEATTLE U. L. REV. 821 (2013).

¹⁷⁷ Lynn A. Stout, *On the Rise of Shareholder Primacy, Signs of Its Fall, and the Return of Managerialism (in the Closet)*, 36 SEATTLE U. L. REV. 1169 (2013).

¹⁷⁸ There are two main critiques of this type that arise in the literature. First, there is a debate as to whether even the most expansive and inclusive forms of shareholder and stakeholder empowerment might ultimately result simply in greater managerial discretion or result in even more skewed incentives for managers. See Adam Winkler, *Corporate Law or the Law of Business? Stakeholders and Corporate Governance at the End of History*, 67 LAW & CONTEMP. PROBS. 109, 124 (2004); Stephen M. Bainbridge, *Response to Increasing Shareholder Power: Director Primacy and Shareholder Disempowerment*, 119 HARV. L. REV. 1735 (2006). Hansmann and Kraakman make a similar point in rejecting stakeholder and labor-based models of corporate governance. See Henry Hansmann & Reinier Kraakman, *The End of History for Corporate Law*, 89 GEO. L.J. 439, 441–49 (2001). Second, shareholder democracy even at its most expansive is not like civic democracy at all: shareholders have a profit motive, incentive, and ability to exit the firm altogether by selling shares and have only limited modes of voice and power. See Usha Rodrigues, *The Seductive Comparison of Shareholder and Civic Democracy*, 63 WASH. & LEE L. REV. 1389 (2006).

of private power over infrastructural goods. For ISPs and internet platforms like Google, antitrust enforcement would effectively eliminate many of the benefits that these services provide; concentration and consolidation are key to the efficiencies of scale for broadband access or search. For many of these firms like Uber, consumer welfare is enhanced, not diminished, by concentration and control by these firms. Further, the very idea of capping size or breaking up these firms eliminates much of the social and economic value of the firms themselves. Finance must still be able to flow from saver to borrower; internet backbone providers must be consolidated enough to allow users to reach sites and users on other provider networks; horizontal and vertical integration by Uber produces much of the ease for riders and drivers alike. Arguably, a competitive market of many smaller providers would not produce the kind of broad-based access to infrastructural goods that we might desire.¹⁷⁹

B. *Public Utility and the Renewed Concern with Private Power*

In addition to providing a complement to corporate governance and antitrust tools, the *specific* approach to public utility developed above—with its focus on power and infrastructure and accountability concerns—is part of a larger scholarly trend seeking to restore a normative focus on problems of private power and democracy to areas of law that have long been dominated by a more market- and welfare-oriented view stemming from the law and economics revolution of the late twentieth century. The excavation of public utility ideas developed in this Article contributes to this effort to reorient these scholarly and policy discourses away from the modern focus on consumer welfare and economic efficiency, back to their historical focus on *power and*

¹⁷⁹ In the debate over TBTF regulation, some scholars have argued that antitrust principles offer a more effective and administrable response to the problem of TBTF by structurally limiting firm size and leverage, hearkening to antitrust's original ethos of curtailing bigness, rather than promoting consumer welfare. See, e.g., Macey & Holdcroft, *supra* note 107, at 1392–95. I am sympathetic to this view, as I have suggested elsewhere. See RAHMAN, DEMOCRACY AGAINST DOMINATION, *supra* note 11, at 128–29. However, even if we were to cap financial firm size in some respect, this would still leave in place some underlying problems of interconnectedness, systemic risk, and the problems of financial exclusion. See Lawrence J. White, *Antitrust and the Financial Sector, with Special Attention to 'Too Big to Fail'* 12–18 (NYU Stern Sch. of Bus. Research Paper Series, Working Paper No. 2451/33582, 2014), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2769233 (describing why the problem of TBTF financial firms is not amenable to antitrust solutions). As a result, public utility strategies described in Part III.B above might still be needed as a complement to antitrust-style limits on financial firm size. Other scholars have argued that antitrust enforcement is mismatched to addressing the TBTF problem and the underlying drivers of the 2008 financial crisis. See, e.g., Alan Devlin, *Antitrust in an Era of Market Failure*, 33 HARV. J.L. & PUB. POL'Y 557 (2010); Orbach & Rebling, *supra* note 29; Markham, Jr., *supra* note 112.

accountability.

Consider the corporate governance debate, for example. In the decades after Berle and Means's seminal research, the concern with power was gradually read out of the corporate governance literature, in favor of a more narrow focus on economic efficiency. Initially, the idea of the separation of ownership from control meant broad discretionary authority for firm managers to address the interests of the firm, its workers, and the public obligations of corporations to contribute to economic growth more broadly.¹⁸⁰ Then in 1976, Michael Jensen and William Meckling helped catalyze a revolution in corporate governance, arguing that this diffusion of shareholders meant that they were unable to coordinate effectively, leaving managers free to pursue their own interests at the expense of the firm and of the economy as a whole.¹⁸¹ On this view, corporate power would be held accountable through the accountability assured by expanded shareholder activism through the channels of internal corporate governance and mergers or takeovers enabled by modern financial markets. Indeed, the rise of modern finance theories of portfolio management, capital structure irrelevance, efficient markets, coupled with new practices in the private sector of hostile takeover attempts and defenses combined to radically transform corporate law.¹⁸² These changes led to a shift from a default hostility to takeovers and preference for managerial discretion within firms, to a greater openness to takeovers, mergers, and preference for expanded power among shareholders as a way to discipline managers and hold them accountable. By the end of the twentieth century, this model of "shareholder primacy" was the prevailing and dominant framework, leading Henry Hansmann and Reiner Kraakman to famously declare an "end of history" to corporate law.¹⁸³ The model of shareholder primacy became "internalized as the dominant norm[] of a rising generation of business leaders, investors, academics, journalists, and lawmakers," an "omnipresent belief system."¹⁸⁴

But as suggested in Part I above, the idea of shareholder primacy is better understood as a mechanism for remedying excesses of private power in the modern economy—in much the same way that the public utility principles developed in this Article are also focused on power and political values like accountability and access. First, the shareholder model suggests that private power may be adequately checked through market competition, and in particular through battles between

¹⁸⁰ See, e.g., Stout, *supra* note 177, at 1170–72.

¹⁸¹ Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305 (1976).

¹⁸² Roberta Romano, *After the Revolution in Corporate Law*, 55 J. LEGAL EDUC. 342, 343–48 (2005).

¹⁸³ Hansmann & Kraakman, *supra* note 178.

¹⁸⁴ Stout, *supra* note 177, at 1178.

management and shareholders over the control and direction of the firm. Allowing for more dynamic attempts at takeovers, mergers, and acquisitions could be a primary tool for mitigating private power and promoting overall firm and economy-wide efficiency. Thus, some scholars argue that corporations can be made more accountable through reforms that increase the disciplinary effect of capital markets.¹⁸⁵ Increasing the power of shareholders to hold managers more accountable, for example through expanded powers to set internal governance rules or intervene in major management decisions, would prevent corruption and promote economic growth.¹⁸⁶ These arguments have been met with some skepticism that shareholders cannot exert such independent power in practice.¹⁸⁷ Recently scholars have suggested that the rise of large-scale and sophisticated institutional investors like private equity and hedge funds might overcome these limits on shareholders' capacity to act collectively, thereby enabling greater scrutiny of management decisions and promotion of long-term economic productivity.¹⁸⁸

Other thinkers have argued that the idea of shareholder voice should be expanded to encompass a much wider range of constituencies. By creating more direct channels for stakeholders like workers and residents, not just shareholders, to have a say in corporate governance, corporate power can be channeled to promote public ends.¹⁸⁹ Instances of corporate malfeasance like the Enron accounting scandals and the financial crisis itself often provoke calls to reform the internal structure of corporations to create greater contestation of CEO or manager power—for example, through expanded power of shareholders in board elections, or promoting the independence of boards from CEOs seek to create greater checks on corporate power. These corporate governance reforms effectively seek to contest private power by mimicking traditional institutional forms of public politics like elections and the separation of powers.¹⁹⁰ Similarly, corporations increasingly face demands for transparency and publicity akin to that demanded of states as part of a challenge to the legitimacy and exercise

¹⁸⁵ See, e.g., JONATHON R. MACEY, *CORPORATE GOVERNANCE: PROMISES KEPT, PROMISES BROKEN* (2010).

¹⁸⁶ Lucian Arye Bebchuk, *The Case for Increasing Shareholder Power*, 118 HARV. L. REV. 833 (2005).

¹⁸⁷ See Lynn A. Stout, *New Thinking on "Shareholder Primacy"*, ACCT., ECON., & L., 2012 (criticizing the shareholder value theory of corporate law); see also Anita K. Krug, *Investment Company as Instrument: The Limitations of the Corporate Governance Regulatory Paradigm*, 86 S. CAL. L. REV. 263, 278–89 (2013) (noting the limitations of relying on boards and shareholders to check corporate power).

¹⁸⁸ See, e.g., Jill E. Fisch, *The New Governance and the Challenge of Litigation Bylaws*, 81 BROOK. L. REV. 1637 (2016).

¹⁸⁹ See, e.g., Kent Greenfield, *The Stakeholder Strategy*, DEMOCRACY J. 47 (2012).

¹⁹⁰ Cary Coglianese, *Legitimacy and Corporate Governance*, 32 DEL. J. CORP. L. 159 (2007).

of corporate power.¹⁹¹ Corporations, as “franchise governments,” may be treated as a variation of political republics and thus ought to be subject to the same internal checks on their authority.¹⁹² This reorientation of corporate law away from a narrow focus on shareholder value and market efficiency towards a more political concern with power and accountability in many ways parallels the arguments of this Article, which provides a similar power-focused interpretation and application of public utility principles.

A similar trend is underway in antitrust law as well. Antitrust measures that prevent any one firm from being too dominant to begin with, thereby prevent the kinds of monopoly pricing and exploitation that is especially problematic in the context of social infrastructure and necessities. But modern antitrust law has moved away from its early origins as a political project. First, modern antitrust law is considerably more permissive of large firm consolidation than it was a century ago. Antitrust reform around the turn of the twentieth century emphasized a moral and political critique of concentrated private power, animating legislative interventions like the Sherman Act, the Clayton Act, the 1936 Robinson-Patman Act regulating chain stores, and the 1937 Miller-Tydings Act providing a floor on retail prices. The shift over the course of the twentieth century from this early conception of antitrust to the modern focus on maximizing consumer welfare has been well-documented.¹⁹³ The preference of lawyers like Brandeis for reducing bigness itself gave way (with some exceptions) to the views of others like Theodore Roosevelt and later New Dealers focused on managing (rather than eliminating) large concentrations of private power through regulation, disclosure, and other means. For a time, this meant technocratic, yet aggressive antitrust enforcement under the tenures of Robert Jackson and Thurman Arnold.¹⁹⁴ But by the mid-century, antitrust as a movement was mostly gone, sublimated into a more

¹⁹¹ See, e.g., Hilary A. Sale, *The New “Public” Corporation*, 74 LAW & CONTEMP. PROBS. 137 (2011).

¹⁹² David Ciepley, *Beyond Public and Private: Toward a Political Theory of the Corporation*, 107 AM. POL. SCI. REV. 139 (2013).

¹⁹³ See, e.g., MICHAEL SANDEL, *DEMOCRACY’S DISCONTENT: AMERICA IN SEARCH OF A PUBLIC PHILOSOPHY* (1996); Martin J. Sklar, *THE CORPORATE RECONSTRUCTION OF AMERICAN CAPITALISM: 1890–1916: THE MARKET, THE LAW, AND POLITICS* (1988); Robert Pitofsky, *The Political Content of Antitrust*, 127 U. PA. L. REV. 1051 (1979); David Millon, *The Sherman Act and the Balance of Power*, 61 S. CAL. L. REV. 1219, 1220 (1988) (the Sherman Act was “the dying words of a tradition that aimed to control political power through decentralization of economic power, which in turn was to be achieved through protection of competitive opportunity”); Richard Hofstadter, *What Happened to the Antitrust Movement?*, in *THE BUSINESS ESTABLISHMENT* 113–51 (Earl Cheit, ed., 1964); Gerald Berk, *Corporate Liberalism Reconsidered: A Review Essay*, 3 J. POL. HIST. 70 (1991); Herbert Hovenkamp, *Antitrust Policy, Federalism, and the Theory of the Firm: An Historical Perspective*, 59 ANTITRUST L.J. 75, 75–91 (1990).

¹⁹⁴ See Waller, *supra* note 23, at 844–45.

technocratic project of competition policy and enforcement, declining in political salience.¹⁹⁵ And in the later twentieth century, even technocratic enforcement had weakened to a more permissive stance towards free markets, shaped by an under-counting of the potential benefits of rigorous anti-trust enforcement.¹⁹⁶ In the 1970s, just as financial economics, law and economic agency theories were revolutionizing corporate governance, parallel developments in antitrust triggered a decisive shift towards a more permissive stance where, following the scholarship and policy influence of Robert Bork, antitrust enforcement would only proceed if there were clear harms to consumer welfare in the form of higher prices.

While this weakening of antitrust enforcement over the late twentieth century has been defended by some as enhancing economic efficiency without any harms to small businesses, consumer choice, or democratic politics,¹⁹⁷ more recently this trajectory has been criticized as being too lax. A number of journalists and scholars have increasingly argued that we are in a new era of private power and monopoly, as firms in industries from agriculture to food production to finance have concentrated power to shape market dynamics and to influence politics and public policy.¹⁹⁸ Senator Elizabeth Warren¹⁹⁹ and the outgoing Obama Administration²⁰⁰ have called for greater scrutiny of mergers. New reports have documented the dangers of new monopolies, reduced competition, and the need for revived antitrust enforcement.²⁰¹

In a similar vein, the public utility concepts developed above are not narrowly focused on efficiency or welfare concerns, but rather driven by a broader set of moral questions about power, inequality, and democratic accountability.

C. *Public Utility, Regulation, and the Inequality Crisis*

The orientation of this public utility approach towards values of power and accountability indicates another way in which public utility tools are essential to emerging debates about law and inequality: it orients towards the importance of the regulatory and administrative

¹⁹⁵ Hofstadter, *supra* note 193. For a defense of the move towards a technocratic antitrust regime, see, e.g., Dan Crane, *Technocracy and Antitrust*, 86 TEX. L. REV. 1159 (2007).

¹⁹⁶ Harry First & Spencer Weber Waller, *Antitrust's Democracy Deficit*, 81 FORDHAM L. REV. 2543, 2568–71 (2013); Waller, *supra* note 23, at 846–48.

¹⁹⁷ See, e.g., Douglas H. Ginsburg & Taylor M. Owings, *Since Bork*, 10 J.L. ECON. & POL'Y 599 (2014).

¹⁹⁸ See, e.g., *Social Control*, *supra* note 6.

¹⁹⁹ Senator Elizabeth Warren, *supra* note 5.

²⁰⁰ Exec. Order, *supra* note 5.

²⁰¹ Council of Economic Advisors, *supra* note 5; Rahman & Khan, *supra* note 5; *Too Much of a Good Thing*, *supra* note 5.

state as a key vehicle and front-line for inequality debates.

In recent years, a growing number of legal scholars have taken up the problem of inequality and expressed a renewed interest in the larger normative and structural questions of capitalism and political economy.²⁰² Thus far, much of this literature has emphasized historical themes, tracing how concerns about inequality and power have shaped the long arc of American politics, or constitutional themes, looking at the implications of these ideas for historical and contemporary debates about the constitutional structure of our democracy. By contrast, a public utility approach would seek to tackle many of these same deep moral and structural questions of inequality and private power, *not* through constitutional structures, but rather through the politics and policies of the administrative state.

Elsewhere, I have suggested that this turn to regulation is a critical front-line for addressing modern concerns about inequality and power, and represents a mode of “small-c” constitutionalism, where we address fundamental moral and structural questions about our society through administrative tools and forums.²⁰³ Indeed, many of the arguments diagnosing infrastructural power of internet platforms or financial actors outlined above might also appear in more traditional constitutional analysis, for example to find state action, to apply Fourteenth Amendment rights of Due Process or Equal Protection nondiscrimination regimes, or First Amendment requirements for protecting free speech. I have deliberately bracketed those arguments for purposes of this Article, to focus more squarely on the *administrative* and *regulatory policy* tools through which we might address these same concerns.

A corollary of this shift towards regulation as a vehicle for addressing deep structural and moral issues, then, is that we need to take seriously questions of regulatory reform and capacity. These questions are beyond the scope of this particular Article, but I should note a few points in passing.

First, one advantage of the public utility approach described above is that it focuses on promoting public values *not* through a reliance on superhuman, technocratic regulators to oversee all aspects of these complex industries from the top-down, instead focusing regulation on underlying economic and political *structures*, and not just specific forms of conduct. This structural focus is a great strength that we see in other areas of business law as well, including corporate governance and antitrust law.²⁰⁴ This “structuralism” represents a regulatory strategy

²⁰² See sources cited *supra* note 10.

²⁰³ See Rahman, *supra* note 10.

²⁰⁴ See Kent Greenfield, *Reclaiming Corporate Law in a New Gilded Age*, 2 HARV. L. & POL'Y REV. 1, 21–23 (2008) (noting that for all its limitations, corporate governance has one

distinct from conventional “managerial” or technocratic regulation.²⁰⁵ This also diffuses some of the responsibility and burden for regulation beyond regulatory agencies themselves. Indeed, these industries are ones where it seems especially problematic to depend too heavily on case-by-case monitoring and enforcement by regulatory experts, who are limited in their knowledge of the complexities of these industries and face extensive lobbying and influence pressures.²⁰⁶ That said, there will still be a need to ensure a baseline level of expertise and capacity to manage these public utility regulatory strategies, particularly when it comes to the need to enforce public obligations such as nondiscrimination requirements. The technical needs here, while doable, would require notable changes to regulatory agency structures and staff.²⁰⁷

Second, the likelihood that agencies will be able to address these types of concerns and do so in a responsive, accountable manner, depends very much on the larger social movement and civil society ecosystem surrounding the agency. It is no surprise that organized labor played a major role in Louis Brandeis’s vision of a democratic economy: without the pressure from below through organized labor, many of the policies that Brandeis envisioned would not come into being. Similarly, the public utility strategies outlined above would need to be catalyzed and driven by political actors, including social movements and grassroots coalitions advocating for—and then defending—these policies. Indeed, the FCC’s net neutrality regime in part resulted from sustained social movement organizing and pressure on the FCC; it was not just a product of presidential influence or agency expertise.²⁰⁸ This suggests that the pathway to implementing these public utility strategies requires a parallel effort to organize and mobilize constituencies—and institutional strategies that can embed such countervailing, movement-based constituencies in the regulatory process itself to hold regulators accountable and advocate for these kinds of reforms.²⁰⁹ Here too, there

important unique feature of regulating private power not through external oversight of firm conduct, but instead by building in checks and balances within the firm itself to systematically induce firms to serve the public good).

²⁰⁵ See RAHMAN, *DEMOCRACY AGAINST DOMINATION*, *supra* note 11, at 139–65 (on the distinction between managerialism and structuralism). Adam Winkler suggests a similar distinction between corporate governance structural limits on firms and ordinary regulation through the “law of business.” Winkler, *supra* note 178.

²⁰⁶ See, e.g., *supra* note 128.

²⁰⁷ On the technical challenges of regulating platforms and algorithms and the need for more centralized and technically sophisticated regulatory expertise, see, e.g., Paul Ohm & Blake Reid, *Regulating Software When Everything Has Software*, 84 *GEO. WASH. L. REV.* 1672 (2016); Van Loo, *supra* note 173.

²⁰⁸ See, e.g., WALKER ET AL., *supra* note 79.

²⁰⁹ A full exploration of how civil society groups can and should be empowered to shape regulation—and to defend it from rollback or capture—is beyond the scope of this Article. However, there is a growing literature exploring the interactions between social movements and regulatory agencies, with implications for regulatory reform and how agencies can be made

is potential for the public utility approach to create new opportunities: a key feature of the infrastructural focus developed above is that it cuts across many different social movement and advocacy constituencies, implicating racial justice, consumer welfare, labor, business, and other interests along a common set of concerns about concentrated private power.

CONCLUSION

In the early twentieth century, the idea of the public utility offered a new strategy through which reformers could tackle the problem of private power over critical goods and services upon which many individuals, businesses, and groups depended. While the formal codification of public utility regulation faded in later decades, the underlying principles remain compelling and especially useful for thinking about private power in this New Gilded Age. Public utility principles offer us three ways of ensuring public values such as nondiscrimination, broad-based access, and stability, through *firewalling*, *imposing public obligations and common carriage requirements*, and *creating public options*. These principles will not apply in all cases, but for *infrastructural goods* that are characterized by scale, downstream uses, and vulnerability of users to exploitation. With this framework in hand, we can see how modern goods and services like internet access, finance, and some online platforms are infrastructural and could be regulated through some of these public utility strategies to assure that these firms serve the public good.

By recovering these public utility concepts, this Article opens up a range of future applications in scholarship and policy. The strategies of firewalling, public obligations, and public options can help shape ongoing debates over other forms of private power and infrastructural goods as they emerge over time. Public utility concepts can inform more than the tired, old top-down institutional forms we might associate with early twentieth century rate regulation; rather it can offer a set of principles and strategies that can be both structural *and* dynamic

more responsive to these kinds of bottom-up politics. See, e.g., Gillian E. Metzger, *Administrative Constitutionalism*, 91 TEX. L. REV. 1897 (2013); Sophia Z. Lee, *Race, Sex, and Rulemaking: Administrative Constitutionalism and the Workplace, 1960 to the Present*, 96 VA. L. REV. 799 (2010) (describing the evolution of equal employment rights through battles over the hiring and promotion practices in regulatory agencies like the Federal Communications Commission and the Federal Power Commission); Karen M. Tani, *States' Rights, Welfare Rights, and the "Indian Problem": Negotiating Citizenship and Sovereignty, 1935–1954*, 33 LAW & HIST. REV. 1 (2015) (documenting efforts by Native American activists to secure access to welfare benefits under the Social Security Act and the Constitution through skilled advocacy that navigated state and federal bureaucracies in the 1930s and 1940s); RAHMAN, DEMOCRACY AGAINST DOMINATION, *supra* note 11, at 139–65.

responses to the problem of private power in a changing economy. This approach is structural in that it departs from conventional reliance on top-down technocratic expertise, instead seeking ways to build into the structure of the market itself the kinds of obligations, restraints, and incentives that limit the reach of private power, and channel such power towards public ends. This approach is dynamic in that it employs a range of strategies and concepts—firewalling, public obligations, public options—that can be adapted to new empirical contexts in the modern economy. It also suggests that regulation can and should be tailored to meet the nature of the problem at hand: public utility strategies can be dialed up (as in the case of a full public option) or dialed down (such as through more light-touch regulatory obligations of nondiscrimination).

Indeed, this Article does not suggest, and is not meant to suggest, that we should mechanically copy and reinstate old models of public utility regulation. It does not offer a blueprint for public policy—many details would have to be subsequently worked out to apply any one of these strategies in a particular policy context. What this Article does suggest is that public utility concepts and values offer an important starting point for understanding and addressing the normative and regulatory challenges arising from private power in the modern economy. Just as the public utility strategies described above were derived in part by comparing similar proposals and initiatives across very different areas of law and policy—from telecommunications to finance to internet law—the framework developed in this Article provides a generally portable and adaptable approach to the problem of private power over a variety of infrastructural goods and services, from healthcare to housing and more.²¹⁰

But the broader import of this public utility framework extends beyond its policy relevance. The account of private power and infrastructure developed in this Article offers us a way to think about specifically *public* and *political* values that are not captured by a more conventional orientation of regulation towards the interests of the consumer or the shareholder, or the focus on economic efficiency. As citizens in a complex and highly unequal economy, we have interests beyond these roles, interests in public values like equal access, nondiscrimination, and in stable provision of foundational, infrastructural goods and services—and our concerns extend beyond price to problems of power, control, and accountability. Our challenge is

²¹⁰ See, e.g., Bagley, *supra* note 7, at 70 (“[P]ublic utility regulation offers a less disruptive alternative [to single-payer healthcare systems], one that retains the basic architecture of the private financing system while asserting state control over the medical industry’s perceived excesses.”); see also Cary Franklin, *Infrastructures of Provision* (2016) (unpublished manuscript) (on file with author) (describing how reproductive rights depend not just on legal claims but on infrastructures of provision including doctors, facilities, and other conditions that make the right real).

to take these strategies and values to innovate regulatory policies that fulfill these aspirations in the context of modern technological and economic forces.

The law and economics revolution of the 1970s radically shifted our understandings of antitrust, corporate law, and finance. Then, a combination of changes in the economy, new innovations in practice, and the birth of modern financial theory and Chicago School economics produced a revolution in corporate governance law and business law on the basis of new models of markets, firms, and consumer welfare. The impact of this revolution was not just in offering new forms of empirical research and analytical models. It also served a political economic function, neutralizing earlier generations' fears of corporate power as adequately controlled and channeled through the dynamics of markets and corporate governance. And they offered a new model for legal practice and training.²¹¹

Today we face renewed anxieties about bigness and concentrated corporate power—anxieties which now call into question some of the models we have now grown familiar with since this revolution. These concerns are likely to be accentuated given the possibility of further deregulation under the new Trump Administration. A new wave of interdisciplinary scholarship is challenging the law and economics understandings of the 1970s and exploring the legal construction of economic and political inequality in terms much more resonant with the law and economics of the 1910s, 1920s, and 1930s.²¹²

These ideas will be vital not just in scholarship, but in shaping a new generation of legal and policy practice. The concerns raised by this Article—focused on problems of power, accountability, and institutional design—are areas where law and lawyers have particular expertise to contribute, distinct from but complementary to the work done by more quantitative, formal, and empirical scholars in economics. Indeed, in the net neutrality battle, lawyers played a critical role bridging the gaps between technologists with deep understandings of how the internet works, political figures facing constituent and interest group pressures, and the policymakers charged with formulating a regulatory regime that would address the central public needs in an effective way. There is a growing need for lawyers to play a similar role in areas like financial regulation and the internet economy—as suggested by the sophisticated scholarship emerging in these areas. These questions of regulatory system design suggest an important public-facing role for the future of business law, regulatory theory, and the legal profession.

²¹¹ Romano, *supra* note 182.

²¹² See sources cited *supra* note 10.