

# INSTITUTIONAL GOVERNANCE FOR ESSENTIAL INDUSTRIES UNDER COMPLEXITY: PROVIDING RESILIENCE WITHIN THE RULE OF LAW

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## I. INTRODUCTION

Deregulatory policies in industries vital to the United States' economy, such as electricity, financial services, and telecommunications, have arisen from numerous technological innovations and the desire to reap the benefits of increased reliance on competitive markets. These policies constitute recent developments in the centuries-old co-evolution of markets and legal and policy-making institutions triggered by technological revolutions.<sup>1</sup>

Unlike the traditional regulatory paradigms that evolved to provide market stability in these vital industries—albeit at the sacrifice of some innovation—deregulatory policies have generated increased complexity, interconnectedness, and instabilities within and among these industries and throughout the economy. These effects are intensified by the conditions of rapid technological change and globalization.

The electricity crisis in California and the recent subprime mortgage crisis in the United States are illustrative of the unpredictability and rapidity with which market instabilities can appear and possibly cascade to catastrophic levels. In both the electricity crisis and the subprime mortgage crisis and subsequent economic downturn, the government was required to exercise extraordinary

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<sup>1</sup> See generally DEBORA L. SPAR, RULING THE WAVES: DISCOVERY, CHAOS, AND WEALTH FROM THE COMPASS TO THE INTERNET 11 (2001) (discussing four distinct phases of societal response along the technological frontier: innovation, commercialization, creative anarchy, and rules). Spar provides a vivid recounting of these phases of societal response along the technological frontier through a series of technological revolutions, beginning with the development of the compass in the early Middle Ages, following with the development of telegraph and radio during the nineteenth century, and turning to satellite television and the Internet in the twentieth century. *Id.* at 11–21.

“lender of last resort” and related interventionist powers under emergency circumstances to stabilize the electricity and financial markets.<sup>2</sup> State and federal regulatory reforms were subsequently adopted in the electricity industry, but regulatory reform of financial markets has yet to occur.<sup>3</sup> Similar crises can also evolve in telecommunications markets, as experienced through the shift in liability rules under detariffing.<sup>4</sup>

This article asserts that experience under deregulatory policies reveals an acute challenge for institutional governance. More specifically, a complexity theory<sup>5</sup> perspective is instrumental for understanding that government must increase regulatory resilience. In other words, government must create regulatory structures and policies of increased adaptability to the complexity and increasing pace of technological innovation and ensuing economic and social changes. Furthermore, this article discusses how the rule of law is an emergent property<sup>6</sup> and the most fundamental requirement of a legal and policymaking

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<sup>2</sup> See Subsequent Events, California’s Energy Crisis, <http://www.eia.doe.gov/cneaf/electricity/california/subsequentevents.html> (last visited Sept. 18, 2008) [hereinafter California’s Energy Crisis] (providing an outline of the actions taken by the government to contain the crisis); see also N. ERIC WEISS, GOVERNMENT INTERVENTIONS IN FINANCIAL MARKETS: AN ECONOMIC AND HISTORIC ANALYSIS OF SUBPRIME MORTGAGE OPTIONS 4 (2008) (identifying four times that the government “has intervened in the past to modify market outcomes.”). The Emergency Economic Stabilization Act of 2008, approving a \$700 billion financial bailout plan, was signed into law on Oct. 3, 2008.

<sup>3</sup> See California’s Energy Crisis, *supra* note 2 (noting, among many actions, regulation announced by the Federal Energy Regulatory Commission to increase reliable energy supplies). For a recommendation of prospective regulatory reform of financial markets, see UNITED STATES DEP’T OF THE TREASURY, BLUEPRINT FOR FINANCIAL REGULATORY REFORM 1 (2008), available at <http://www.treas.gov/press/releases/reports/Blueprint.pdf>.

<sup>4</sup> See Barbara A. Cherry, *Improving Network Reliability—Liability Rules Must Recognize Investor Risk/Reward Strategies*, in RETHINKING RIGHTS AND REGULATIONS: INSTITUTIONAL RESPONSES TO NEW COMMUNICATIONS TECHNOLOGIES 309 (L. CRANOR & S. WILDMAN, EDS., 2003) [hereinafter Cherry, *Improving Network Reliability*]. Tariffs are a form of price controls, whereby regulators require regulated firms to “submit tariffs, including the prices, terms, and conditions under which they offered service.” See Jim Rossi, *Lowering the Filed Tariff Shield: Judicial Enforcement for a Deregulatory Era*, 56 VAND. L. REV. 1591, 1592 (2003). Under a tariffing regime, common carriers were permitted under certain circumstances to limit their liability for damages. However, the liability regime for telecommunications (telephony) carriers evolved anomalously – under traditional justifications that were legally and factually flawed - relative to transportation carriers and even telegraph carriers, resulting in telecommunications carriers’ ability to limit their liability to a greater extent. As a result, ramifications of detariffing have dramatically differed among these types of carriers, introducing a greater increase in potential liability for telecommunications (telephony) carriers relative to its preexisting tariffed regime. See Cherry, *Improving Network Reliability*, *supra*, at 310–316.

<sup>5</sup> See Quantifying Complexity Theory, <http://www.calresco.org/lucas/quantify.htm> (last visited Aug. 19, 2008); J.B. Ruhl, *The Co-Evolution of Sustainable Development and Environmental Justice: Cooperation, then Competition, then Conflict*, 9 DUKE ENVTL. L. & POL’Y F. 161, 166 (1999) (discussing how complexity theory relates to legal systems).

<sup>6</sup> See Emergent Properties, Stanford Encyclopedia of Philosophy,

system. In turn, the emergence of market capitalism and liberal democracy are dependent on the rule of law. Therefore, regulatory resilience must also be constrained by the sustainability of the rule of law.

This article further asserts that the problems revealed under deregulatory policies are symptomatic of a deeper, more fundamental set of sustainability problems arising from a historical process of accelerated technological and social change. This historical process, which Scheuerman refers to as “the social acceleration of time,” is undermining the sustainability of the rule of law.<sup>7</sup>

The adverse effects of the social acceleration of time on the rule of law also threatens the long-term sustainability of market capitalism and liberal democracy.<sup>8</sup> Therefore, the challenge for institutional governance needs to be viewed more generally in terms of new developments in the co-evolution of markets and policymaking systems that are pressing for a phase transition in their inter-relationship. Meeting the challenge of institutional governance in this broader context should be the focus of future research particularly for essential industries. Toward meeting this demand for research, this article provides reference to recent work by legal theorists and insights from recent experiences under deregulatory communications policies. This article concludes with a discussion of how the analysis presented here is illustrated by the events, and mirrored by public discourse, of the recent financial crisis.

## II. THE CHALLENGE FOR INSTITUTIONAL GOVERNANCE IS REGULATORY RESILIENCE

The goal of this article is to contribute to the formation of the inquiry for how to design institutional governance to support sustainable policies. In so doing, this article incorporates and expands upon prior research stressing the difficulties in designing sustainable telecommunications policies during the recent phase of deregulatory policies in the co-evolution of the economy and

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<http://plato.stanford.edu/entries/properties-emergent/> (last visited Aug. 19, 2008) (describing emergence as properties or substances that “‘arise’ out of more fundamental entities and yet are ‘novel’ or ‘irreducible’ with respect to them.”).

<sup>7</sup> WILLIAM E. SCHEUERMAN, *LIBERAL DEMOCRACY AND THE SOCIAL ACCELERATION OF TIME* xv (Johns Hopkins University Press 2004). Scheuerman defines the social acceleration of time as:

[A] long-term yet relatively recent historical process consisting of three central elements: technological acceleration (e.g. the heightening of the rate of technological innovation), the acceleration of social change (referring to accelerated patterns of basic change in the workplace, e.g.), and the acceleration of everyday life (e.g., via new means of high-speed communication or transportation).

*Id.*

<sup>8</sup> See *id.* at 145.

the legal and policymaking institutions.<sup>9</sup> Some articles have examined the sustainability of specific regulatory policies, such as universal service,<sup>10</sup> rate rebalancing,<sup>11</sup> and the effects of detariffing on liability rules.<sup>12</sup> Others have broadened the scope of inquiry, looking at sustainability problems arising from fundamental attributes of the U.S. governance structure,<sup>13</sup> including efforts to retrench from public utility regulation<sup>14</sup> and resistance to the extension of common carriage obligations to broadband access and services.<sup>15</sup>

Importantly, the analysis in this article expands upon the insights from recent research using a complexity theory perspective—this perspective asserts the need to understand the economic and policymaking systems as coevolving complex adaptive systems in order to examine sustainability problems.<sup>16</sup> In

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<sup>9</sup> See Barbara A. Cherry, *The Telecommunications Economy and Regulation as Co-evolving Complex Adaptive Systems: Implications for Federalism*, 59 FED. COMM. L. J. 369, 370 (2007) [hereinafter Cherry, *The Telecommunications Economy*] (discussing prior research on sustainable regulatory telecommunications policies).

<sup>10</sup> See Barbara A. Cherry & Steven S. Wildman, *Unilateral and Bilateral Rules: A Framework for Increasing Competition While Meeting Universal Service Goals in Telecommunications*, in MAKING UNIVERSAL SERVICE POLICY: ENHANCING THE PROCESS THROUGH MULTIDISCIPLINARY EVALUATION 39, 45 (Barbara A. Cherry et al. eds., 1999) (developing “a typology for mapping social goals regarding marketplace activities to the types of regulatory intervention that are needed to accomplish those goals.”).

<sup>11</sup> See Barbara A. Cherry, *The Irony of Telecommunications Deregulation: Assessing the Role Reversal in U.S. and E.U. Policy*, in THE INTERNET UPHEAVAL: RAISING QUESTIONS, SEEKING ANSWERS IN COMMUNICATIONS POLICY 355 (Ingo Vogelsang & Benjamin M. Compaine eds., 2000) [hereinafter Cherry, *Deregulation Role Reversal*]; see also Barbara A. Cherry & Johannes M. Bauer, *Institutional Arrangements and Price Rebalancing: Empirical Evidence from the United States and Europe*, 14 INFO. ECON & POL’Y 495 (2002) (discussing rebalancing of prices for voice service in the U.S.).

<sup>12</sup> See Cherry, *Improving Network Reliability*, *supra* note 4, at 309 (“The liability regime for telecommunications carriers is shifting from one based on an absolute limit on liability in tariffs to a form of strict liability under the common law.”).

<sup>13</sup> See generally Barbara A. Cherry & Steven S. Wildman, *Preventing Flawed Communication Policies by Addressing Constitutional Principles*, 2000 MICH. ST. L. REV. 55, 56 (2000) (discussing sustainability problems in communications policy to develop “achievable communications policies in the United States.”).

<sup>14</sup> See Barbara A. Cherry, *The Political Realities of Telecommunications Policies in the U.S.: How the Legacy of Public Utility Regulation Constrains Adoption of New Regulatory Models*, 2003 MICH. ST. L. REV. 757, 758–60 (2003) (identifying “specific political feasibility constraints in the United States that are impeding the adoption of sustainable policy objectives for the provision of public utility services under deregulatory regimes.”).

<sup>15</sup> See Barbara A. Cherry, *Utilizing “Essentiality of Access” Analyses to Mitigate Risky, Costly, and Untimely Government Interventions in Converging Telecommunications Technologies and Markets*, 11 COMMLAW CONSPECTUS 251, 275 (2003) (stating that the lack of common carriage requirements on cable modem or wireline broadband Internet access “could adversely affect the availability of broadband and narrowband services at reasonable rates”); see also Barbara A. Cherry, *Misusing Network Neutrality to Eliminate Common Carriage Threatens Free Speech and the Postal System*, 33 N. KY. L. REV. 483, 484 (2006).

<sup>16</sup> See BARBARA A. CHERRY & JOHANNES M. BAUER, ADAPTIVE REGULATION: CONTOURS OF A POLICY MODEL FOR THE INTERNET ECONOMY 26 (2004), available at

particular, this article also draws upon analyses and insights from recent research directly applying, or inspired by, the complexity theory perspective to examine specific attributes of institutional governance and policy rules.<sup>17</sup>

A complexity theory perspective is instrumental for understanding that one of the fundamental challenges of institutional is regulatory resilience, and that a new paradigm of policy analysis is necessary to meet this challenge. Furthermore, recognition of key properties of complex adaptive systems and the insights from recent research are important not only for examining specific sustainability problems under telecommunications deregulatory policies, but also for identifying and evaluating an even deeper core set of sustainability problems as discussed in Parts II and III.<sup>18</sup> For these reasons, and because readers may not be familiar with a complexity theory perspective, this part provides an overview of aspects of prior research based on a complexity theory perspective that are instrumental in the framing of the present inquiry.

#### A. The General Need for Greater Regulatory Resilience

Recent research has stressed the need for a new paradigm of policy analysis for achieving sustainable policies.<sup>19</sup> A new paradigm rejects the traditional paradigm whereby “policy recommendations are developed based on optimization of some measure of . . . efficiency . . . using models that are essentially mechanic and deterministic.”<sup>20</sup> Rather, “a new paradigm . . . is needed that explicitly recognizes the evolutionary dynamic inherent in policymaking systems and the systems they endeavor to influence.”<sup>21</sup> In particular, when “sustainable policies are defined as rules that are politically adoptable and for which the

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<http://quello.msu.edu/wp/wp-04-05.pdf> [hereinafter CHERRY & BAUER, ADAPTIVE REGULATION]; Johannes M. Bauer & Barbara A. Cherry, *Transatlantic Conundrums: Lessons for Europe?*, in ENCIP 2010: COMMENTS AND CONTRIBUTIONS, EURO CPR 2006: SELECTED PAPERS 12 (Verhoest ed. 2006), available at [http://www.encip.org/document/eurocpr\\_2006\\_publication.pdf](http://www.encip.org/document/eurocpr_2006_publication.pdf); see also P. H. Longstaff, *The Puzzle of Competition in the Communications Sector: Can Complex Systems be Regulated or Managed?* 9 (Harvard Univ. Program on Info. Res. Policy, Working Paper, 2003), available at [http://www.pirp.harvard.edu/pubs\\_pdf/longsta/longsta-p03-1.pdf](http://www.pirp.harvard.edu/pubs_pdf/longsta/longsta-p03-1.pdf).

<sup>17</sup> See *infra* Part II.A.

<sup>18</sup> See *infra* Part II.A (discussing the general need for greater regulatory resilience); Part III (discussing how regulatory resilience must be constrained by sustainability of the rule of law).

<sup>19</sup> See CHERRY & BAUER, ADAPTIVE REGULATION, *supra* note 16, at 1 (explaining that sustainable telecommunications policies are “rules that are politically adoptable and for which the desired policy goals are reasonably likely to be achievable given the conditions for economic viability in network investment.”).

<sup>20</sup> Barbara A. Cherry, *The Telecommunications Economy and Regulation as Coevolving Complex Adaptive Systems: Implications for Federalism*, 59 FED. COMM. L. J. 369, 374 (2007) [hereinafter Cherry, *Implications for Federalism*].

<sup>21</sup> *Id.*

desired policy goals are reasonably likely to be achievable,”<sup>22</sup> a new paradigm must acknowledge the numerous constraints on adoptability and achievability, which are dynamically assessed. Furthermore, given that “policies are outputs of and inputs to coevolving complex adaptive systems,”<sup>23</sup> a new paradigm recognizes that “the distinctive properties of complex systems have unique effects on adoptability and achievability, which, in essence, limit human ability to predict—much less control and manage—system behavior.”<sup>24</sup>

A new paradigm of policy analysis must recognize “[t]he primary sources of policy unsustainability aris[ing] from: (1) initial improper design of the policy; (2) after adoption of even a properly designed policy, changes internal or external to the policymaking system; and (3) the failure of the policymaking system to adapt.”<sup>25</sup> To address these sources of unsustainability, policymakers need to modify policy expectations. Policymakers must shift “emphasis from static optimization under constraints to adaptability,”<sup>26</sup> and not expect policies to achieve specific outcomes nor to eliminate uncertainty.<sup>27</sup> Instead, “policymakers need to accept the necessity to experiment and closely monitor the effects of adopted policies” as well as the inevitability of policy failures.<sup>28</sup> Policymakers must also be willing to use and develop new research tools. Finally, policymakers must be willing to evaluate and modify the institutional features of the policymaking system itself.<sup>29</sup> In summary, policymakers must embrace the challenge of developing greater regulatory resilience; that is, to create regulatory structures and policies that are more adaptive to the complexity and the increasing pace of technological innovation and ensuing economic and social changes.

#### B. Specific Challenges for Regulatory Resilience Under Deregulatory Telecommunications Policies

Recent research has utilized an understanding of important properties of complex adaptive systems to examine the relationship between sustainability problems and specific attributes of policymaking processes and policy rules.<sup>30</sup>

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<sup>22</sup> CHERRY & BAUER, *ADAPTIVE REGULATION*, *supra* note 16, at 5.

<sup>23</sup> *Id.* at 13.

<sup>24</sup> Cherry, *Implications for Federalism*, *supra* note 20, at 375.

<sup>25</sup> *Id.* at 384. A discussion of the points summarized in the text is found in CHERRY & BAUER, *ADAPTIVE REGULATION*, *supra* note 16, at 22–31.

<sup>26</sup> See Cherry, *Implications for Federalism*, *supra* note 20, at 384.

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

<sup>29</sup> *Id.* at 385.

<sup>30</sup> See *id.* at 370–71 (“[I]f the telecommunications sector and the legal/policymaking institutions are viewed as coevolving and complex adaptive systems, then there are important implications for regulatory policy.”).

As more fully described below, insights from this research include: (1) the general strength of federalism as a policymaking algorithm, given its mechanisms for both order and experimentation; (2) the need for specific legal rules to enable the evolution of certain emergent properties, such as the desired emergent properties of widespread availability, affordability, and reliability of critical communications infrastructures; (3) the criticality of conducting policy analysis in a historically accurate context, such as when evaluating the evolving interrelationship among general business and industry-specific legal regimes; and (4) the importance of liability rules for complex adaptive systems with the potential for catastrophic failures.

First is the recognition that the performance of policymaking systems is dependent on the decision-making algorithms embedded in the governance structure. In particular, the strength of federalism as a distinctive policymaking system—known as a patching algorithm<sup>31</sup>—lies in its mechanisms for both order (federal decision-making) and experimentation (state decision-making). These mechanisms of federalism’s patching algorithm enable the system to move to points of superior performance (beyond local maxima) along its fitness landscape.<sup>32</sup> Consequently, this strength increases appreciation of the potential negative consequences of federal preemption and full deregulation—particularly in industries under a rapid rate of technological change—because preemptive policies eliminate state authorities as adaptive policymaking mechanisms.<sup>33</sup>

The second insight gleaned from research on the relationship between sustainability and specific attributes of the policymaking and policy rules is the recognition that some behaviors or outcomes of complex adaptive systems are emergent properties. An emergent property is an order that spontaneously develops as collective properties from interacting system components.<sup>34</sup> Emer-

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<sup>31</sup> See *id.* at 391. A patching algorithm is a system where each element “is assigned to a single group of elements, or a patch.” *Id.* Individual elements of the patch are “permitted to move from one state to another if, but only if, the effect of the move is positive on the aggregate fitness of the members of [their] patch.” *Id.*

<sup>32</sup> See *id.* at 380–81. (“A fitness landscape—a concept developed in evolutionary biology—consists of varying fitness level potentials for an organism in a given environment, with peaks, valleys, and planes of the landscape representing the fitness potential of different combinations of behavioral schemata and organism structures.”).

<sup>33</sup> See *id.* at 400–02 (noting that when considering among policy options, “it may be advantageous to presume that regulatory power should be shared among the federal and state governments.”).

<sup>34</sup> See KARL-ERNST SCHENK, ECONOMIC INSTITUTIONS AND COMPLEXITY: STRUCTURES, INTERACTIONS AND EMERGENT PROPERTIES 55 (2003) (using as an example a corporate environment where “a decision on the management level may not be at all rational from the perspective of the governance body of a corporation . . . . Therefore an explanation may only be achievable when the nature of the relationship between the pertinent levels is included.”).

gent properties require an institutional infrastructure of rules to be sustained.<sup>35</sup> The “invisible hand” is an emergent property of a free market economy;<sup>36</sup> the dependence of a market economy on the existence of a legal infrastructure, such as property rights and contract principles, provide a governance structure for their enforcement.<sup>37</sup>

As for network infrastructures, a forthcoming article examines the fundamental question regarding the legal rules necessary for the sustainability of critical communications infrastructures that generate the desired emergent properties of widespread availability, affordability, and reliability.<sup>38</sup> The analysis shows that, in addition to a basic legal infrastructure to support market economies, a historically accurate understanding of legal developments in the United States reveals the importance of common law principles of common carriage and public utility law. Common carriage and public utility law include imposition of *ex ante* requirements on providers in the retail market, and they are important for generating the desired emergent properties of widely available, affordable, and reliable transportation and telecommunications infrastructures. The forthcoming analysis also shows how recent Federal Communications Commission (“FCC” or “Commission”) policy decisions affecting broadband access services—whereby common carriage obligations are not imposed in either the wholesale or retail markets—is a radical departure from the deregulatory policies that have been adopted for the transportation or narrow-band telecommunications networks.<sup>39</sup> Furthermore, “[i]t is the elimination of

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<sup>35</sup> *See id.*

<sup>36</sup> EDGAR E. PETERS, *COMPLEXITY, RISK, AND FINANCIAL MARKETS* 4, 44 (1999) (“A free market economy is an evolving structure with no central planner, but it does have coordinated activity by the participants.”).

<sup>37</sup> *See* NEIL FLIGSTEIN, *THE ARCHITECTURE OF MARKETS: AN ECONOMIC SOCIOLOGY OF TWENTY-FIRST-CENTURY CAPITALIST SOCIETIES* 3 (2001) (“As soon as one observes the formation and operation of real markets, it becomes obvious that none of this dynamism is possible without deep involvement by entrepreneurs, managers, workers, firms, and governments.”); *see also* HERNANDO DE SOTO, *THE MYSTERY OF CAPITAL: WHY CAPITALISM TRIUMPHS IN THE WEST AND FAILS EVERYWHERE ELSE* 153–72 (2000) (explaining that developing countries fail to open property to the poor because of five misconceptions regarding the rule of law); William E. Kovacic, *Institutional Foundations for Economic Legal Reform in Transition Economies: The Case of Competition Policy and Antitrust Enforcement*, 77 *CHI.-KENT L. REV.* 265, 269–72 (2001) (explaining the importance of supporting institutions for successful legal and economic reform).

<sup>38</sup> Barbara A. Cherry, *Maintaining Critical Rules to Enable Sustainable Communications Infrastructures*, 24 *GA. ST. U.L. REV.* (forthcoming 2008) [hereinafter Cherry, *Maintaining Critical Rules*].

<sup>39</sup> A more in-depth comparative analysis of the evolution of the legal regulatory regimes for the transportation and communications sectors is provided in another recent article. *See generally* Barbara A. Cherry, *Back to the Future: How Transportation Deregulatory Policies Foreshadow Evolution of Communications Policies*, 24 *THE INFORMATION SOCIETY* 273 (2008) (hereinafter Cherry, *Back to the Future*).

the common law scaffolding for application to broadband infrastructure that has triggered the current network neutrality debate. . . .<sup>40</sup> In this way, the network neutrality debate is symptomatic of the need for a deeper inquiry.

Yet at the same time, it is the misleading discourse of network neutrality that masks the significance of the inapplicability of the common law principles in the retail broadband market, and blocks inquiry into the legal rules in the retail market, which may be necessary for the desired network properties to emerge.<sup>41</sup> The conclusion of this analysis is that the elimination of common law principles applied to broadband through deregulation, but without replacement by some other legal rules to fulfill a similar function, may render the development of critical communications infrastructures unsustainable with the desired emergent properties.

The third insight is the recognition of the acute sensitivity of the performance trajectory of complex adaptive systems to initial conditions and that the performance trajectory is path dependent.<sup>42</sup> For this reason, it is critical that policy analysis is conducted in a historically accurate context. As previously stated, historical inaccuracies in many analyses of network neutrality have misdirected the inquiry. Appreciation of the significance of the misdirection is increased by historical research examining the comparative evolution of the legal regulatory regimes for the transportation and telecommunications sectors.<sup>43</sup>

A factually accurate understanding of the historical evolution of industry-specific and general business legal regimes is essential for purposes of analyzing how deregulatory telecommunications policies shift the boundaries among regimes and making policy recommendations for further evolution of the interrelationship among specific and general business regimes.<sup>44</sup> A factually accu-

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<sup>40</sup> See Barbara A. Cherry, *Rediscovering Critical Rules of Law for Sustainable Communications Infrastructures: Network Neutrality is Symptomatic of a Deeper Inquiry*, Address at EuroCPR 2008 1–4 (Mar. 31, 2008) (manuscript available from author). For a discussion of how the discourse of network neutrality is misleading, see generally Cherry, *Misusing Network Neutrality*, *supra* note 16 (arguing that that the net neutrality discourse improperly focuses on antitrust principles to address specific access problems, and that the misleading discussion affects the relationship between common carriage principles and free speech rights).

<sup>41</sup> Cherry, *Maintaining Critical Rules*, *supra* note 38, at.

<sup>42</sup> See Cherry, *Implications for Federalism*, *supra* note 20, at 371–72.

<sup>43</sup> See Cherry, *Misusing Network Neutrality*, *supra* note 16, at 510; Cherry, *Back to the Future*, *supra* note 39, at 275–281 (discussing the importance of correctly identifying the original regulatory regime under the common law from which deregulatory policies for transportation and telecommunications industries have evolved as well as the effects of analyses based on mischaracterizations of the original regulatory regime).

<sup>44</sup> See generally BARBARA A. CHERRY, AN INTERNATIONAL COMPARATIVE ANALYSIS OF CONSUMER SOVEREIGNTY IN TELECOMMUNICATIONS AND BROADBAND: THE EVOLVING INTERRELATIONSHIP AMONG INDUSTRY-SPECIFIC, CONSUMER PROTECTION, AND COMPETITION LAWS (2008), available at <http://www.canavents.com/its2008/abstracts/314.pdf> [hereinafter

rate understanding of the historical evolution also is essential for making policy recommendations for the further evolution of the interrelationship among the regimes.<sup>45</sup> More specifically, to address issues of consumer sovereignty,<sup>46</sup> the industry-specific regimes for common carriers and public utilities in the United States largely predates that of the general business regime based on antitrust and consumer protection laws.<sup>47</sup> This temporal sequencing—combined with the fact that the general business regime has been intermittently preempted by or applied to the industry-specific regimes—is critical for recognizing that the general business regime evolved as an adjunct to, and with a complex interface with the industry-specific statutory regimes. As a result, deregulatory policies that alter the interrelationship between the industry-specific and general business regimes may generate a “legal gap” for which some issues no longer are adequately addressed.<sup>48</sup> These issues fall through the gaps between the general business and the deregulatorily adjusted industry-specific regimes.

Conversely, in nations where regulatory oversight of private sector provision of telecommunications services and infrastructure is modern, the development of an industry-specific telecommunications regime largely postdates that of the general business legal regime.<sup>49</sup> This critical distinction in the temporal sequencing of the evolution of the industry-specific and general business legal regime confers institutional differences for such nations relative to the United States for developing and implementing deregulatory policies. For example, with a less lengthy and complex legal evolution in the initial interface between the industry-specific and general business regimes, other nations appear to be better able to both directly and holistically confront policy issues of consumer sovereignty. In the United States, however, policy issues confronting consumer sovereignty are dealt with through the consumption of resources in episodic and disjointed litigation.<sup>50</sup>

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CHERRY, COMPARATIVE ANALYSIS OF CONSUMER SOVEREIGNTY] (discussing the necessity of having a historically accurate understanding of policy evolution when examining deregulatory policy in the communications industry).

<sup>45</sup> *Id.* (analyzing the regulation of communications industries across countries by examining the history of the modern legal and policy framework).

<sup>46</sup> Here consumer sovereignty refers to “the state of affairs in which consumers have an unimpaired ability to make decisions in their individual interests and markets operate efficiently in responding to the collective effect of those decisions.” Neil W. Averitt & Robert H. Lande, *Consumer Sovereignty: A Unified Theory of Antitrust and Consumer Protection Law*, 65 ANTITRUST L.J. 713, 722–723 (1996).

<sup>47</sup> See CHERRY, COMPARATIVE ANALYSIS OF CONSUMER SOVEREIGNTY, *supra* note 44, at 10.

<sup>48</sup> *Id.* at 10.

<sup>49</sup> See *id.* at 3.

<sup>50</sup> See *id.* at 31–39. Similarly, differences in institutional endowments and historical telecommunications policies created differing feasible sets of rate rebalancing policy options between the U.S. and the European Union. See Cherry, *Deregulation Role Reversal*, *supra*

The fourth and final insight is the recognition that a complex adaptive system, due to its non-linearity, may experience sudden jumps in system behavior from seemingly small changes in circumstance.<sup>51</sup> Furthermore, for some complex adaptive systems, accidents of catastrophic potential may be inevitable or even normal.<sup>52</sup> A prominent example of a catastrophic accident in telecommunications networks occurred on January 15, 1990, when 114 AT&T switching stations blocked 70 million of the 138 million long distance and 800 number calls attempted during a nine-hour period.<sup>53</sup> The root cause was an error in an upgrade of signaling-system-seven (“SS7”) software in AT&T’s 4ESS switching stations.<sup>54</sup> The software was considered so complex that errors were deemed inevitable.<sup>55</sup> In addition, complex systems designed to be resilient against random events are particularly vulnerable to targeted attacks, a characteristic of scale-free networks which is referred to as the “Achilles heel.”<sup>56</sup>

The reality that telecommunications systems are tightly-coupled complex adaptive systems with the potential for catastrophic failures from normal accidents, much less planned attacks, is noteworthy. This reality was significant to research examining the consequences of detariffing on the liability regime for telecommunications carriers and resultant recommendations for policy reform.<sup>57</sup> Recent crises experienced in electricity and financial markets also are

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note 11, at 37.

<sup>51</sup> See generally JOHN L. CASTI, COMPLEXIFICATION: EXPLAINING A PARADOXICAL WORLD THROUGH THE SCIENCE OF SURPRISE 45–47(1994) (explaining catastrophe theory, where a small change in the original circumstances as an input lead to significant changes in the output).

<sup>52</sup> See CHARLES PERROW, NORMAL ACCIDENTS: LIVING WITH HIGH-RISK TECHNOLOGIES 356–357 (1999) (if the system is complex and “also tightly coupled . . . failures can cascade faster than any safety device or operator can cope with them . . . . If the accident brings down a significant part of the system, and the system has catastrophic potential, [there will be] a catastrophe.”).

<sup>53</sup> See LEONARD LEE, THE DAY THE PHONES STOPPED 91–92 (1991).

<sup>54</sup> *Id.* at 82–83 (“An old system called Signal System 6 in use since 1976 was being replaced by a new high-speed computer switching network known as Signaling System 7.”).

<sup>55</sup> See *id.* at 95–96 (“The software is growing in complexity beyond the ability of programmers to properly test it in all the conditions it will have to encounter once it begins operating.”).

<sup>56</sup> See ALBERT-LÁSZLÓ BARABÁSI, LINKED: NEW SCIENCE OF NETWORKS 113, 118, 121–122 (2002) (explaining that while some nodes of a scale-free network can be removed without failure, “the removal of the most connected nodes rapidly disintegrates these networks, breaking them into noncommunicating islands.”); see also ROMUALDO PASTOR-SATORRAS & ALESSANDRO VESPIGNANI, EVOLUTION AND STRUCTURE OF THE INTERNET: A STATISTICAL PHYSICS APPROACH 132 (2004) (explaining that while the scale-free nature of the Internet protects it, “it is easy to imagine that a targeted attack, aimed at the destruction of the most connected vertices, should have a very disruptive effect.”).

<sup>57</sup> See BARBARA A. CHERRY, THE CRISIS IN TELECOMMUNICATIONS CARRIER LIABILITY: HISTORICAL REGULATORY FLAWS AND RECOMMENDED REFORM 1–2, 39–40 (1999); see also Cherry, *Improving Network Reliability*, *supra* note 4, at 309–21.

examples of sudden changes in system behavior, which some argue were triggered, at least in part, from changes in legal rules and institutional governance.<sup>58</sup> The potential for catastrophic outcomes in essential industries explains why there is such great concern with designing institutional governance to address sustainability problems within such industries.

### III. REGULATORY RESILIENCE MUST BE CONSTRAINED BY THE SUSTAINABILITY OF THE RULE OF LAW

Notwithstanding the need for regulatory resilience, the adaptability of a policymaking process and its policies must not undermine the rule of law. This section provides an overview of the historical emergence of the rule of law, market capitalism, and liberal democracy and discusses interdependencies in their respective evolutions. Understanding these interdependencies allows better identification and anticipation of how sustainability problems arising in one affects the others. The rule of law is the fundamental emergent property upon which the subsequent emergence of both market capitalism and liberal democracy rely.<sup>59</sup> Yet, as will be discussed further in Parts III and IV, depending upon prevailing circumstances, further evolution within market capitalism either may support or undermine the sustainability of the rule of law as well as liberal democracy.

#### A. Emergence of the Rule of Law

The rule of law means different things to different people, but the core of the concept is “a government of laws and not of men.”<sup>60</sup> According to Brian

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<sup>58</sup> See, e.g., Rebecca Smith, *Deregulation Jolts Texas Electric Bills*, WALL ST. J., July 17, 2008, at A1 (“Texas’s [electricity] deregulation roller-coaster offers an example of how a well-intentioned policy can reap unintended consequences.”). See also WILLIAM D. BRANDT ET AL., 2003 MANIFESTO ON THE CALIFORNIA ELECTRICITY CRISIS 4, 10 (2003), available at <http://aei-brookings.org/admin/pdffiles/phpy1.pdf> (noting that the California electricity crisis arose from many factors including the regulatory characteristics of the spot market, the legal barrier against utility use of long term contracts with suppliers, and environmental regulations impeding the construction of new generation plants); David Einhorn, *Private Profits and Socialized Risk*, Remarks at Grant’s Spring Investment Conference 1–6 (Apr. 8, 2008), available at [http://www.designs.valueinvestorinsight.com/bonus/bonuscontent/docs/Einhorn\\_Speech.pdf](http://www.designs.valueinvestorinsight.com/bonus/bonuscontent/docs/Einhorn_Speech.pdf) (asserting that the recent credit crisis on Wall Street resulted from the investment banks’ ability to out-manuever the watchdogs as a result of deregulatory policies, such as the lowering of capital requirements under SEC rules); Steven L. Schwarcz, *Systemic Risk*, 97 GEO. L.J. (forthcoming 2008) (manuscript at 4, 71–72), available at <http://lsr.nellco.org/cgi/viewcontent.cgi?article=1099&context=duke/fs> (stating that deregulation in financial markets creates systemic risk due to the interrelationship between markets and institutions).

<sup>59</sup> See Parts IIIB and IIIC, *infra*.

<sup>60</sup> RONALD A. CASS, *THE RULE OF LAW IN AMERICA* 2 (2001) (quoting M.A. Const. art.

Tamanaha, “[t]he broadest understanding of the rule of law, a thread that has run for over 2,000 years . . . is that the sovereign, and the state and its officials, are limited by the law.”<sup>61</sup> Importantly, however, Tamanaha also notes “the rule of law is not itself a legal rule, but a political ideal.”<sup>62</sup> Moreover, “[t]he rule of law seems to be the most fundamental norm of governance, in both its legal and social norm versions.”<sup>63</sup> In other words, the rule of law is an emergent property of our legal and policymaking institutions.

Definitions of the rule of law vary with “thin” and “thick” conceptions of its meaning.<sup>64</sup> A thin conception tends to limit the definition of the rule of law “to a few spare, structural features common to virtually all legal systems . . . [such as] a system of rationally comprehensible rules bearing some instrumental relationship to the function of social coordination.”<sup>65</sup> Structural features of a thin conception of the rule of law include fidelity to rules, rules of principled predictability, rules from a valid authority, and rules from external authority.<sup>66</sup> A thick conception includes universal moral principles such as democracy and liberty.<sup>67</sup>

According to Tamanaha, the rule of law slowly emerged as a tradition in the West during the Middle Ages, arising from three contributing sources:

The rule of law tradition congealed into existence in a slow, unplanned manner that commenced in the Middle Ages, with no single source or starting point. Three contributing sources will be elaborated upon [in the book]: the contest between kings and popes for supremacy, Germanic customary law, and the Magna Carta, which epitomized the effort of nobles to use law to impose restraints on sovereigns.<sup>68</sup>

It is the strength of social institutions independent of the state—such as the Catholic Church and the nobleman, two sources identified by Tamanaha—that is considered essential for the rule of law to endure.<sup>69</sup> Although emerging first in the West, the rule of law has become “the preeminent legitimating political

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<sup>61</sup> BRIAN Z. TAMANAHA, *ON THE RULE OF LAW: HISTORY, POLITICS, THEORY* 114 (2004).

<sup>62</sup> *Id.* at 58.

<sup>63</sup> Amir N. Licht, *Social Norms and the Law: A Social Institutional Approach* 64 (Mar. 2005) (unpublished manuscript), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=710621](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=710621).

<sup>64</sup> Thom Ringer, *Development, Reform, and the Rule of Law: Some Prescriptions for a Common Understanding of the “Rule of Law” and its Place in Development Theory and Practice*, 10 *YALE HUM. RTS. & DEV. L.J.* 178, 190–195 (2007).

<sup>65</sup> *Id.* at 194.

<sup>66</sup> See CASS, *supra* note 60, at 4.

<sup>67</sup> See Ringer, *supra* note 64, at 190.

<sup>68</sup> TAMANAHA, *supra* note 61, at 15.

<sup>69</sup> See FAREED ZAKARIA, *THE FUTURE OF FREEDOM: ILLIBERAL DEMOCRACY AT HOME AND ABROAD* 34, 37–38 (2003) (explaining that the Catholic Church was the first institution independent of the “temporal authority and willing to challenge it,” while “the conflict between the aristocracy and the monarchy [was] the second great power struggle of European history . . .”).

ideal in the world today. . . .”<sup>70</sup> Government officials worldwide advocate the rule of law, although the reasons they articulate for supporting it may differ.<sup>71</sup>

## B. Emergence of a Market Economy

Referring to the rise of the Western World, Douglass North states that the “economic institutional structure was made possible by the evolution of polities that eventually provided a framework of law and its enforcement. Such a framework is an essential requirement for the impersonal exchange that is necessary for economic growth.”<sup>72</sup> As for modern markets, Fligstein asserts that “[o]ne cannot overestimate the importance of governments to modern markets. Without stable, more or less non-rent-seeking states, modern production markets would not exist.”<sup>73</sup>

A market economy also is an emergent property that requires an institutional infrastructure to sustain it.<sup>74</sup> Government is critical to providing societal solutions to sustain a market economy.<sup>75</sup> Moreover, historically the rule of law has been considered necessary for the sustainability of market capitalism:

Supporters of free markets often make the mistake of thinking of capitalism as something that exists in opposition to the state . . . . Although in the twentieth century many states grew so strong as to choke their economies, in a broader historical perspective, only a legitimate, well-functioning state can create the rules and laws that make capitalism work. At the very least, without a government capable of protecting property rights and human rights, press freedoms and business contracts, antitrust laws and consumer demands, a society gets not the rule of law but the rule of the strong.<sup>76</sup>

In fact, Karla Hoff and Joseph Stiglitz, the latter a Nobel laureate in economics,<sup>77</sup> assert that the mass privatization of state enterprises was premature in Russia because conditions of asset-stripping weakened the capacity of the state to enforce a rule of law.<sup>78</sup> Similarly, William Kovacic stresses the institu-

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<sup>70</sup> TAMANAHA, *supra* note 61, at 4.

<sup>71</sup> *See id.* at 3. (“This apparent unanimity in support of the rule of law is a feat unparalleled in history. No other single political ideal has ever achieved global endorsement.”).

<sup>72</sup> DOUGLASS C. NORTH, UNDERSTANDING THE PROCESS OF ECONOMIC CHANGE 133 (2005).

<sup>73</sup> FLIGSTEIN, *supra* note 37, at 3.

<sup>74</sup> *See id.* at 97 (“Markets are social constructions that reflect the unique political-cultural construction of their firms and nations. The creation of markets implies societal solutions to the problems of property rights, governance structures, conceptions of control, and rules of exchange.”).

<sup>75</sup> *See id.* at 3.

<sup>76</sup> ZAKARIA, *supra* note 69, at 76–77.

<sup>77</sup> *See* The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2001, [http://nobelprize.org/nobel\\_prizes/economics/laureates/2001/index.html](http://nobelprize.org/nobel_prizes/economics/laureates/2001/index.html) (last visited Sept. 9, 2008).

<sup>78</sup> *See* Karla Hoff & Joseph E. Stiglitz, *After the Big Bang? Obstacles to the Emergence of the Rule of Law in Post-Communist Societies*, 94 AM. ECON. REV. 753, 753–763 (2004).

tional prerequisites for transition economies to support economic development.<sup>79</sup> Furthermore, although constraints on government power provided by the rule of law are necessary to protect private investors from arbitrary administrative action that expropriates their investments, vulnerability to expropriation is acute particularly for investment in the sunk-cost of utility infrastructure, such as telecommunications networks.<sup>80</sup>

However, market capitalism may either support or undermine the rule of law. Zakaria stresses that earned wealth, rather than wealth in natural resources, supports the development of modern political institutions, laws, and bureaucracies.<sup>81</sup> Earned wealth supports the development of modern political institutions because a state with little natural resources must tax the earned wealth of its citizens, whereas a state with great wealth in natural resources does not.<sup>82</sup> He writes “[w]hen a government taxes people it has to provide benefits in return, beginning with services, accountability, and good governance but ending up with liberty and representation. This reciprocal bargain—between taxation and representation—is what gives governments legitimacy in the modern world.”<sup>83</sup> In this way, a market economy can reinforce the rule of law. On the other hand, Scheuerman argues that the historical process he refers to as the social acceleration of time, of which market capitalism is a driving force, is undermining the rule of law as well as threatening liberal democracy.<sup>84</sup>

### C. Emergence of Liberal Democracy

The meaning of liberal democracy used here is consistent with Scheuerman’s usage:

I consider liberal democracy consistent with a broad range of institutional variations. At its core, however, it refers to a constitutionally based (primarily) representative government, resting on the separation of powers and *the rule of law*. Based also on the principle of the accountability of power holders to the people, it requires free and relatively frequent elections as well as the effective protection of basic civil liberties. Ultimately, liberal democracy must rest on a plausible conception of the fundamental

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<sup>79</sup> See Kovacic, *supra* note 37, 269–272 (“Achieving economic growth in transition economies often demands simultaneous efforts to weaken the state’s capacity to control economic activity and to increase its ability to execute public functions necessary to the operations of a market system.”).

<sup>80</sup> See generally Brian Levy & Pablo Spiller, *A Framework for Resolving the Regulatory Problem*, in REGULATIONS, INSTITUTIONS, AND COMMITMENTS: COMPARATIVE STUDIES OF TELECOMMUNICATIONS, 34 (Brian Levy & Pablo T. Spillers, eds., 1996) (discussing the vulnerability of telecommunications networks to arbitrary administrative expropriation).

<sup>81</sup> See ZAKARIA, *supra* note 69, at 74–75 (noting a study that found “natural endowments were strongly correlated with economic failure.”).

<sup>82</sup> See *Id.* at 75–76.

<sup>83</sup> *Id.*

<sup>84</sup> See discussion, *infra* Part IV.

equality of all human beings.<sup>85</sup>

To appreciate the meaning of liberal democracy and how it emerges, it is important to distinguish between liberty and democracy. The distinction is that “[l]iberty in the modern world is first and foremost the freedom of the individual from arbitrary authority, which has meant, for most of history, from the brute power of the state.”<sup>86</sup> This form of liberty—which Tamanaha refers to as personal liberty—preceded democracy in the West.<sup>87</sup> On the other hand, democracy refers to a form of government characterized by free and fair elections,<sup>88</sup> where citizens have “consented to, indeed authored, the rules they are obliged to follow.”<sup>89</sup> Tamanaha refers to self-rule as political liberty, noting that “[r]epresentative democracy is the modern manifestation of self-rule in the West.”<sup>90</sup>

Zakaria states that people in the West assume that democracy means “liberal democracy,” or in other words, “a political system marked not only by free and fair elections but also by the rule of law, a separation of powers, and protection of the basic liberties of speech, assembly, religion, and property.”<sup>91</sup> He challenges this assumption on historical grounds, asserting “this bundle of freedoms—what might be termed ‘constitutional liberalism’—has nothing intrinsically to do with democracy and the two have not always gone together, even in the West.”<sup>92</sup> Indeed, as Zakaria notes:

[L]iberty came to the West centuries before democracy. Liberty led to democracy and not the other way around . . . [L]iberty in the West was born of a series of power struggles. The consequences of these struggles—between church and state, lord and king, Protestant and Catholic, business and the state—embedded themselves in the fabric of Western life, producing greater and greater pressures for individual liberty, particularly in England and, by extension, in the United States.<sup>93</sup>

Furthermore, some of the power struggles that Zakaria identifies as supporting the emergence of liberty in the West—between church and state as well as the lord and king—are identified by Tamanaha as sources contributing to the emergence of the rule of law.<sup>94</sup>

Thus, contrary to the Western view, Zakaria stresses the tension between constitutional liberalism and democracy, where the former is about the limita-

<sup>85</sup> SCHEUERMAN, *supra* note 7, at 229–230 n. 3 (emphasis added).

<sup>86</sup> ZAKARIA, *supra* note 69, at 31–32.

<sup>87</sup> *Id.* at 31–33; *see also* TAMANAHA, *supra* note 61, at 34–36.

<sup>88</sup> *See* ZAKARIA, *supra* note 69, at 17 (noting that “liberal democracy” is marked by “free and fair elections” among other things).

<sup>89</sup> TAMANAHA, *supra* note 61, at 34.

<sup>90</sup> *Id.*

<sup>91</sup> ZAKARIA, *supra* note 69, at 17. Zakaria’s description of liberal democracy is encompassed by the term as used by Scheuerman. *See supra* note 85 and accompanying text.

<sup>92</sup> ZAKARIA, *supra* note 69, at 17.

<sup>93</sup> *Id.* at 31.

<sup>94</sup> *See id.*; TAMANAHA, *supra* note 61, at 15.

tion of power and the latter is about its accumulation.<sup>95</sup> For this reason, democracy can undermine liberty, as evidenced by experiences in the twentieth century in Latin America, the former Soviet Union, and Africa in the twentieth century.<sup>96</sup> Tamanaha also stresses the potential conflict between democracy and personal liberty.<sup>97</sup>

Importantly, both Scheuerman and Zakaria assert that one of the fundamental attributes of liberal democracy is the existence of the rule of law.<sup>98</sup> However, the rule of law may exist without democracy or liberty: “The relationship between the rule of law and democracy is asymmetrical: the rule of law can exist without democracy, but democracy needs the rule of law, for otherwise democratically established laws may be eviscerated at the stage of application by not being followed.”<sup>99</sup> Likewise, the relationship between the rule of law and liberty is asymmetrical: “[P]ersonal liberty cannot exist without the rule of law, at least when the former is framed in terms of legally enforceable rights.”<sup>100</sup> Thus, the relationship between the rule of law and liberal democracy is asymmetrical: liberal democracy cannot exist without the rule of law, but the rule of law can exist without liberal democracy.

The relationship between capitalism and liberal democracy, however, is more complex. Zakaria stresses the importance of earned wealth to the success of liberal democracy because economic development scaffolds the development of liberal democracy in two ways.<sup>101</sup> First is the ability of “key segments of society—most important, private businesses and the broader bourgeoisie—to gain power independent of the state.”<sup>102</sup> Second, “the state tends to become less . . . capricious and more rule-oriented and responsive to society’s needs.”<sup>103</sup> In this way, market capitalism can reinforce liberal democracy.<sup>104</sup>

By contrast, Scheuerman asserts, “liberal democracy entails no necessary commitment to capitalism. Indeed, to the extent that capitalism represents one of the main driving forces behind social acceleration, capitalism potentially

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<sup>95</sup> See ZAKARIA, *supra* note 69, at 101–102.

<sup>96</sup> *Id.* at 102–105 (examining the different democratic governing structures of multiple regions and why they fail to ensure liberty).

<sup>97</sup> See TAMANAHA, *supra* note 61, at 37.

<sup>98</sup> See *supra* notes 85 and 97 and accompanying text. Scheuerman and Zakaria’s references to the rule of law arguably apply to both the thin and thick conceptions of the rule of law. See *supra* notes 60–67 and accompanying text. However, for purposes of my analysis, it is sufficient if their references to the rule of law apply only to the narrower, thin conception.

<sup>99</sup> TAMANAHA, *supra* note 61, at 37.

<sup>100</sup> *Id.*

<sup>101</sup> See ZAKARIA, *supra* note 69, at 71.

<sup>102</sup> See *id.* at 72.

<sup>103</sup> *Id.*

<sup>104</sup> See *id.* at 74.

conflicts with liberal democracy.<sup>105</sup> As will be discussed further, Scheuerman argues that the historical process he refers to as the social acceleration of time, of which market capitalism is a driving force, is undermining the rule of law and threatening liberal democracy.<sup>106</sup> Therefore, it appears that market capitalism either may support or undermine liberal democracy.

#### D. Interdependencies among the Rule of Law, Market Capitalism, and Liberal Democracy

The rule of law is an emergent property of some legal and policymaking institutions. Although deemed to have emerged first in the West during the Middle Ages, it is considered the “preeminent legitimating political ideal in the world today . . . .”<sup>107</sup> Market capitalism is also an emergent property of some economies, but it requires an institutional infrastructure, including the rule of law, to create and sustain it.<sup>108</sup> However, the rule of law may exist without market capitalism as it did when it first emerged during the Middle Ages under feudalism. Thus in a foundational sense, the rule of law and market capitalism have an asymmetrical relationship.

However, as the economy and the legal and policymaking systems co-evolve, the interrelationship among the rule of law, market capitalism, and liberal democracy increases in complexity. Depending upon the circumstances, such as the varying situations of economic success and political failure contrasted by Zakaria and Scheuerman, market capitalism may support or undermine the rule of law as well as liberal democracy.<sup>109</sup>

Therefore, the sustainability of the rule of law is the most fundamental requirement of a legal and policymaking system, and it is the ultimate constraint on designing institutional governance with greater regulatory resilience. Without the rule of law, neither market capitalism nor liberal democracy is sustainable. Yet, evolution within market capitalism can undermine liberal democracy, and even the rule of law itself.<sup>110</sup> To the extent that it undermines the rule of law, in the long run, market capitalism undermines its own sustainability.

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<sup>105</sup> SCHEUERMAN, *supra* note 7, at 230 n.3.

<sup>106</sup> See discussion, *infra* Part IV.

<sup>107</sup> TAMANAHA, *supra* note 61, at 4.

<sup>108</sup> See Kovacic, *supra* note 37, 269–272 (“Achieving economic growth in transition economies often demands simultaneous efforts to weaken the state’s capacity to control economic activity and to increase its ability to execute public functions necessary to the operations of a market system.”).

<sup>109</sup> See ZAKARIA, *supra* note 69, at 69 (establishing that economic success is the simplest explanation for political success); *but see* SCHEUERMAN, *supra* note 7, at 124–125 (explaining that the social acceleration inherent in efficient capitalism tends to encourage a reactionary government not necessarily conducive to the rule of law or liberal democracy).

<sup>110</sup> See SCHEUERMAN, *supra* note 7, at 124–125.

#### IV. THE THREAT OF THE SOCIAL ACCELERATION OF TIME TO INSTITUTIONAL GOVERNANCE

A fundamental challenge for institutional governance under deregulatory policies is for government to develop greater regulatory resilience while still preserving the rule of law. In addition to the sustainability problems already laid bare by the recent phase of deregulatory policies, a recent historical process is generating an even deeper set of core sustainability problems. This historical process—which Scheuerman refers to as the social acceleration of time<sup>111</sup>—is threatening the sustainability of the rule of law, market capitalism, and liberal democracy.

##### A. Social Acceleration of Time Undermines the Rule of Law

Policy analyses of deregulatory policies and recommendations for policy reform assume the existence of the preconditions enabling the sustainability of the rule of law, market capitalism, and at least in the United States and many other nations, liberal democracy.<sup>112</sup> This assumption may not be justified. Rather, the very preconditions for the rule of law, market capitalism, and liberal democracy may not be sustainable. The difficulties in fulfilling these preconditions largely arise from the consequences of technological innovations, particularly communications technologies, which produce the historical process of the social acceleration of time.<sup>113</sup> The preconditions include, for example, temporal presuppositions.<sup>114</sup>

Scheuerman argues that the social acceleration of time undermines the rule of law for both the modern state and for a transnational economy. For this purpose, he asserts that “[t]he rule of law is best defined as requiring that state action should rest on norms that are relatively general, clear, public, prospective, and stable.”<sup>115</sup> As for the modern state, the temporal presuppositions apply to the division of powers and are summarized simplistically: the legislature is deliberate and future-oriented, the executive is expeditious and present-

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<sup>111</sup> See *id.* at xv (defining social acceleration as constituting three elements including technological acceleration, acceleration of social change, and the acceleration of everyday life).

<sup>112</sup> See, e.g., Cherry, *Implications for Federalism*, *supra* note 20, at 376 (explaining that an economy requires legally enforceable rules and private property rights); Kovacic, *supra* note 37, at 270 (noting five legal reforms that are prerequisites for economic development).

<sup>113</sup> See SCHEUERMAN, *supra* note 7, at xv (noting that technological acceleration is the “heightening of the rate of innovation”).

<sup>114</sup> See *id.* at 27 (explaining that temporal presuppositions are generally improperly neglected).

<sup>115</sup> *Id.* at 151. This definition is consistent with a thin conception of the rule of law. See *supra* notes 60–67 and accompanying text.

oriented, and the judiciary is retrospective and past-oriented.<sup>116</sup> These temporal presuppositions underlie the separation of powers within a traditional liberal democracy.<sup>117</sup> Scheuermann argues that the social acceleration of time undermines these temporal presuppositions.<sup>118</sup>

Scheuerman asserts that a high-speed society creates a temporal mismatch between the temporal presuppositions underlying the separation of powers of a traditional liberal democratic government.<sup>119</sup> A legislature is intended to move slowly and be future-oriented, whereas the social acceleration of time increases the difficulty for a legislature to safely predict future trends and to satisfy the demand for prospective and stable legislative rules.<sup>120</sup> Furthermore, the executive is expected to be “expeditious,” “capable of dispatch,” and “present oriented.”<sup>121</sup> The social acceleration of time, however, increases pressure for the executive branch to augment its power to address “exigencies of [a] rapidly changing . . . universe.”<sup>122</sup> The judiciary is supposed to be retrospective, or past-oriented, however, the social acceleration of time creates pressure for the courts to take on forward-looking legislative tasks.<sup>123</sup> The resulting conflation among the temporal roles of the various branches of government poses great difficulties for the maintenance of the rule of law within a government structure intended to support liberal democracy.

As for the transnational economy, Scheuerman disputes the idea of an elective affinity between capitalism and the rule of law.<sup>124</sup> He bases his claim on implicit assumptions about “the temporal preconditions of economic activity,” which historically entailed “risky forms of time-consuming exchange.”<sup>125</sup> The uncertainties and difficulties of time and distance for economic activity inex-

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<sup>116</sup> See SCHEURERMAN, *supra* note 7, at 26–27.

<sup>117</sup> See *id.* The temporal sequence affects the distinction between the different branches of government; the function of the branch to some extent relies on the temporal sequence. As Scheuerman notes “legislation refers to the making of new laws, execution means putting those laws into effect, and judicial power entails declaring what the law is in the case of controversies.” *Id.* at 27.

<sup>118</sup> See *id.* at xvi–xvii (“The temporal contours of our increasingly fast-paced social and economic world render the chief legislative task of successfully predicting future social trends . . . a necessary presupposition of . . . prospective legislation—an ever more uphill battle.”).

<sup>119</sup> See *id.* at 26–27.

<sup>120</sup> *Id.* at xvi, 44–46 (“[L]awmakers are left with the strenuous job of foreseeing change not only where it seems least predictable but also where its tremors are often the most unsettling.”).

<sup>121</sup> *Id.* at xvi.

<sup>122</sup> *Id.* at xvii.

<sup>123</sup> See *id.* at 47–49 (“The intensification of social acceleration connotes an increased likelihood that legislatures simply will not have sufficient time to respond competently to a cacophony of legitimate demands for state action.”).

<sup>124</sup> See *id.* at 144–145.

<sup>125</sup> *Id.* at 156.

trically linked time and space, “and a slow-paced social universe entails correspondingly limited possibilities for the successful economic management of geographical distance.”<sup>126</sup> These societal conditions led to a preference for traditional rule of law virtues such as clarity, transparency, and predictability, in order to reduce economic insecurity.<sup>127</sup>

Referring to a temporal mismatch between reality and implicit assumptions based on historical preconditions of economic activity, Scheuerman argues “the ongoing process of economic globalization threatens core features of the rule of law.”<sup>128</sup> Scheuerman goes on to explain:

Contemporary capitalism is different in many ways from its historical predecessors: economies driven by huge transnational corporations that make effective use of high-speed communications, information, and transportation technologies represent a relatively novel development. *The relationship of capitalism to the rule of law is thereby transformed as well.* . . . [B]y incessantly revolutionizing the temporal horizons of economic action, *capitalism tends to diminish its reliance on a robust model of the rule of law* . . . . *Capitalism contributes to an intense process of social acceleration which ultimately works to limit its dependence on traditional rule of law virtues.*<sup>129</sup>

In this way, economic globalization also undermines the rule of law essential to liberal democracy.<sup>130</sup> Scheuerman concludes that “[t]he fundamental paradox at hand is clear enough: we need the rule of law, yet social acceleration of time appears to undermine it.”<sup>131</sup>

Due to the social acceleration of time, the challenge for government to develop greater regulatory resilience while maintaining the rule of law—which is critical to the support of essential industries and modern capitalism—transcends the need to merely respond to the effects of deregulatory policies. Instead, the challenge for government needs to be viewed more generally. The challenge for government needs to be viewed in terms of new developments in the co-evolution of markets and policymaking systems, which are pressing for a phase transition in their interrelationship.

## B. At the Brink of a Phase Transition in Policymaking Systems

A phase transition refers to “breakpoints where the nature of a process suddenly changes”<sup>132</sup> or “a sudden change in the character of a system.”<sup>133</sup> A clas-

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<sup>126</sup> *Id.* As an example, Scheuerman recalls the image of a “merchant trading in the backwoods of North America in the late eighteenth century, whose business relied on long and risky voyages from a port on the coast . . . to the frontier.” *Id.*

<sup>127</sup> *See id.* at 156–157.

<sup>128</sup> *Id.* at 145.

<sup>129</sup> *Id.* at 145 (emphasis added).

<sup>130</sup> *See id.* at 184.

<sup>131</sup> *Id.* at 186.

<sup>132</sup> PETERS, *supra* note 36, at 189.

<sup>133</sup> ERICK D. BEINHOCKER, *THE ORIGIN OF WEALTH* 143 (2006).

sic example in physics is the phases for water as it changes from solid ice, to liquid water, and to gaseous steam.<sup>134</sup> The Internet is an example of a technology that experienced a phase transition as “[i]t percolated along in obscurity for twenty years, used mostly by academics. Then, in the 1990s, its usage suddenly exploded.”<sup>135</sup>

Policymaking systems also have phase transitions. For example, a political revolution resulted in the creation of the United States and the adoption of the U.S. Constitution based on the legal innovation of federalism.<sup>136</sup> Throughout history, legal institutions have adapted to limitations imposed by the preexisting legal regime in response to technological changes. For example, in the nineteenth century in the United States, laws increasingly were codified in response to technological innovations during the Industrial Revolution of the nineteenth century, because codification compensated for the inadequacies of the common law system.<sup>137</sup> Also, administrative agencies were created to regulate specific industries in light of the limitations of legislative responses.<sup>138</sup>

The recent wave of deregulatory policies is another phase in the further evolution of policymaking systems in response to technological changes and the attendant economic and societal effects.<sup>139</sup> Experience under deregulatory policies reveals important sustainability problems arising from unintended consequences and market instabilities, some resulting in catastrophic failures or disruptions.<sup>140</sup> Examples in the United States include electricity crises, the subprime mortgage and cascading financial sector crisis, chronic insolvencies of

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<sup>134</sup> See STUART KAUFFMAN, *AT HOME IN THE UNIVERSE: THE SEARCH FOR THE LAWS OF SELF-ORGANIZATION AND COMPLEXITY* 26 (1995).

<sup>135</sup> BEINHOCKER, *supra* note 133, at 143.

<sup>136</sup> See FORREST McDONALD, *NOVUS ORDO SECLORUM: THE INTELLECTUAL ORIGINS OF THE CONSTITUTION* 262 (1985) (“They [the Framers] introduced an entirely new concept to the discourse [of the Constitutional Convention of 1787], that of federalism, and in the doing, created a *novus ordo seclorum*: a new order of the ages.”). The U.S. Constitution contributed to different trajectories for the governance and role of communications in the United States relative to Europe that significantly narrowed only in the late twentieth century. See PAUL STARR, *CREATION OF THE MEDIA: POLITICAL ORIGINS OF MODERN COMMUNICATIONS* 71, 73 (2004) (explaining the value in communications during the period of the constitutional convention, and the subsequent adoption of the idea of freedom of the press).

<sup>137</sup> See GUIDO CALABRESI, *A COMMON LAW FOR THE AGE OF STATUTES* 3–4 (1982); *THE ECONOMIC REGULATION OF BUSINESS AND INDUSTRY: A LEGISLATIVE HISTORY OF U.S. REGULATORY AGENCIES* 3–4 (Bernard Schwartz ed., 1973).

<sup>138</sup> See LEGISLATIVE HISTORY OF U.S. REGULATORY AGENCIES, *supra* note 137, at 3–4.

<sup>139</sup> See John E. Kwoka, Jr., *Twenty-Five Years of Deregulation: Lessons for Electric Power*, 33 *LOY. U. CHI. L.J.* 885, 885 (2001) (“[A] deregulation movement . . . has swept through the airline, brokerage services, telecommunications, trucking, railroads, cable TV, baking, petroleum, and natural gas industries.”).

<sup>140</sup> Alfred E. Kahn, *Deregulation: Looking Backward and Looking Forward*, 7 *YALE J. ON REG.* 325, 344–345 (1990) (“There remain three glaring apparent exceptions to the beneficent consequences of deregulation—the deterioration in the quality of air travel, a sharp increase in certain kinds of price discrimination, and . . . the savings and loan fiasco.”).

airlines, and the burst of the dot-com bubble and the related telecommunications sector downturn.

Stiglitz refers to the recent deregulatory era in the United States as “deregulation run amok.”<sup>141</sup> Stiglitz asserts: “There needs to be a balance between the role of government and the market. A country can suffer from underregulation just as it can from overregulation.”<sup>142</sup> North argues that the Enron and World-com scandals show that *laissez faire* will not perform well without adjustment once efficient property rights and the rule of law are in place.<sup>143</sup>

The United States appears to be at the brink of a phase transition in policy-making systems as they attempt to meet the challenge of institutional governance under deregulatory policies. Debates regarding the development of new policies represent struggles for increasing regulatory resilience to address sustainability problems. As for communications, these policy debates include network neutrality, the applicability of general business versus sector-specific regulation, issues of federal preemption (such as of VoIP services and cellular termination fees), and adjustments to federalism (e.g. whether to have a supranational regulatory authority in the European Union).<sup>144</sup>

Yet, the problems revealed under deregulatory policies may be symptomatic of a deeper, more fundamental set of sustainability problems; the effect of the social acceleration of time on the interdependent sustainability of the rule of law, market capitalism, and liberal democracy. An unresolved issue is what further innovations to policymaking systems can be made to address the temporal challenges of the social acceleration of time.

The co-evolution of the economy and policymaking system is entering a new phase under which the circumstances of a high-speed society are transforming the relationship between capitalism and the rule of law. The rule of law—which has been historically so essential to support the market economy—is now being undermined by global capitalism.

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<sup>141</sup> JOSEPH STIGLITZ, *THE ROARING NINETIES: A NEW HISTORY OF THE WORLD’S MOST PROSPEROUS DECADE 87* (2003). Stiglitz devotes an entire chapter in his book to the topic of “deregulation run amok.” *Id.* at 87–114.

<sup>142</sup> *Id.* at xxxvi.

<sup>143</sup> See NORTH, *supra* note 72, at 122.

<sup>144</sup> See, e.g., Press Release, U.S. Dept. of Justice, Department of Justice Comments on “Network Neutrality” in FCC Proceedings (Sept. 6, 2007), available at [http://www.usdoj.gov/opa/pr/2007/September/07\\_at\\_682.html](http://www.usdoj.gov/opa/pr/2007/September/07_at_682.html) (cautioning against regulations “that could hamper the development of the Internet”); Marguerite Reardon, *California Judge Rules Sprint’s Early Termination Fees Illegal*, CNET July 31, 2008, [http://news.cnet.com/8301-1035\\_3-10004049-94.html](http://news.cnet.com/8301-1035_3-10004049-94.html) (explaining that the FCC may ultimately preempt state regulation of early termination fees, and therefore enforcement (or invalidation) state laws); Xénophon A. Yataganas, *Two Different But Convergent Federal Systems* 1–14 (Jean Monnet Working Paper, No. 3/01, 2001), available at <http://www.jeanmonnetprogram.org/papers/01/010301-03.html> (last visited Aug. 21, 2008).

## V. MEETING THE FUNDAMENTAL CHALLENGE OF INSTITUTIONAL GOVERNANCE UNDER THE SOCIAL ACCELERATION OF TIME

Given the fundamental paradox—we need the rule of law but social acceleration of time appears to undermine it<sup>145</sup>—the fundamental challenge for institutional governance becomes providing regulatory resilience while preserving the rule of law under the social acceleration of time. This challenge is important not only as a general matter, but particularly for essential industries—such as communications—that are underlying technologies fueling the social acceleration of time.

Legal theorists have been exploring potential models to improve the adaptability of policymaking processes. These include democratic experimentalism,<sup>146</sup> reflexive law,<sup>147</sup> and adaptive management.<sup>148</sup> However, legal theorists have not addressed the question of “how can we refigure liberal democratic institutions so that they have a real chance of successfully confronting the awesome problems posed by social acceleration?”<sup>149</sup>

This article does not claim to have definitive answers to this challenge; its primary goal is to contribute to the proper framing of the inquiry for designing institutional governance to support sustainable policies in the current high-speed world. However, identification of the types of policy and governance questions arising under recent deregulatory communications policies may provide insights into the inquiry. The insights include the need to consider changes to existing governance apparatus, modifications to the existing interrelationship among bodies of law, and the need for specific types of legal rules designed to serve basic functions.

First, changes to existing governance structures must be considered. For example, modification can be made within existing governance structures based

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<sup>145</sup> See SCHEUERMAN, *supra* note 7, at 186.

<sup>146</sup> See Jamison E. Colburn, “Democratic Experimentalism”: *A Separation of Powers for Our Time?* 37 SUFFOLK U. L. REV. 287 (2004) (“[Democratic experimentalism] proposes to recreate a participatory democracy out of the technocratic and impenetrable pieces of the administrative state.”); see also Michael C. Dorf & Charles F. Sabel, *A Constitution of Democratic Experimentalism*, 98 COLUM. L. REV. 267 (1998).

<sup>147</sup> See generally Sanford E. Gaines, *Reflexive Law as a Legal Paradigm for Sustainable Development*, 10 BUFF. ENVTL. L.J. 1, 1–3 (2003) (“[R]eflexive law teaches that law works best by specifying procedures for regulated entities to observe in striving for a complex objective . . . without defining in advance a required substantive outcome from those procedures.”); Scheuerman, *supra* note 7, at 210–227 (discussing the impact of reflexive law on the rule of law, specifically in regard to the combined effect on globalization).

<sup>148</sup> See J.B. Ruhl, *Regulation by Adaptive Management – Is it Possible?* 7 MINN. J.L. SCI. & TECH. 21, 21–28 (2005) (“[Adaptive management’s] essence is an iterative, incremental decisionmaking process built around a continuous process of monitoring the effects of decisions and adjusting decisions accordingly.”).

<sup>149</sup> SCHEUERMAN, *supra* note 7, at 227.

on federalism—a distinctive policymaking algorithm with an inherent strength for regulatory resilience—through further changes in the allocation of powers among the federal government and the sovereign states. Evolution in the allocation of federal and state powers has occurred throughout history in the United States, including under the Telecommunications Act of 1996, which responded to numerous changes in communications technologies.<sup>150</sup> The European Union already is considering whether it should alter its federalism structure to create a new supranational European Electronic Communications Market Authority (“EECMA”) to address inconsistent regulatory approaches by twenty-seven national regulatory authorities.<sup>151</sup> The objective for establishing the EECMA is to facilitate regulatory harmony in electronic communications in order to develop an effective singular telecommunications market.<sup>152</sup>

Another type of change to existing governance structures deals with modifying sector-specific agencies. For example, former FCC Commissioner Harold Furchtgott-Roth asserts that the FCC’s current lack of separation of powers, exacerbated by the vague “public interest” standard, has undermined the rule of law.<sup>153</sup> Furchtgott-Roth also claims that under the United States Supreme Court’s application of the *Chevron* doctrine<sup>154</sup> in *AT&T v. Iowa Utilities Board*,<sup>155</sup> “[t]he rule of law was reduced to what the FCC saw at any given moment in time.”<sup>156</sup> He concludes that, since the other branches of government have not been able to reliably discipline the Commission under the Telecommunications Act of 1996, communications regulation will improve only when the concentration of powers in the FCC is addressed.<sup>157</sup> However, Furchtgott-Roth’s analysis needs to be considered further in the context of social acceleration. Does the institution of separation of powers within an agency exacerbate or reduce the tendency for the social acceleration of time to undermine the rule

<sup>150</sup> See Cherry, *Implications for Federalism*, *supra* note 20, at 386–388.

<sup>151</sup> See *Commission Proposal for a Regulation of the European Parliament and of the Council Establishing the European Electronic Communications Market Authority*, at 2 COM (2007) 699 final (Nov. 13, 2007) (“[T]he inconsistent regulatory approaches by 27 national regulatory authorities—which vary significantly in terms of competences, independences and financial and human resources—stand in the way of technological developments and are increasingly felt by businesses as obstacles to the delivery of trans-national or pan-European services.”).

<sup>152</sup> *See id.*

<sup>153</sup> HAROLD W. FURCHTGOTT-ROTH, A TOUGH ACT TO FOLLOW? THE TELECOMMUNICATIONS ACT OF 1996 AND THE SEPARATION OF POWERS 17–20, 29 (2006). For examples of the FCC’s public interest standard, see 47 U.S.C. § 201(b) (2000) (instituting a public interest standard for common carrier regulation); 47 U.S.C. § 303 (instituting a public interest standard for spectrum regulation).

<sup>154</sup> See *Chevron U.S.A., Inc. v. Nat’l Res. Def. Council, Inc.*, 467 U.S. 837 (1984); FURCHTGOTT-ROTH, *supra* note 153, at 49–53.

<sup>155</sup> See *AT&T Corp., v. Iowa Utils. Bd.*, 525 U.S. 366 (1999).

<sup>156</sup> FURCHTGOTT-ROTH, *supra* note 153, at 49.

<sup>157</sup> *Id.* at 150–151.

of law?

The second insight gained from examining recent communications deregulation is that policymakers need to consider modifications to the existing interrelationship among bodies of law. For example, in *FCC v. Nextwave Personal Communications*,<sup>158</sup> the Supreme Court was required to resolve a conflict between communications and bankruptcy statutes regarding the validity of an FCC's decision to re-auction spectrum recovered through revocation of the spectrum licenses held by a debtor in bankruptcy.<sup>159</sup> The Court ruled that bankruptcy law preempted the Commission's actions.<sup>160</sup>

Another example of modification of the interrelationship among bodies of law is the debate over how to modify the interrelationship of the general business and industry-specific legal regimes as applied to telecommunications and broadband services. As briefly discussed in Part II.B, an appropriate analysis requires careful attention to the historical evolution of the relevant bodies of law, which likely will lead to important differences among nations.<sup>161</sup>

The third insight gained from recent communications deregulation is that policymakers must consider the need for specific types of legal rules designed to serve basic functions. For example, throughout history there has been the need for institutional infrastructure to support a market economy, with rules designed to address specific functions such as private property rights, contractual terms to support commercial transactions, and some enforcement mechanisms.<sup>162</sup>

As briefly discussed in Part II.B, policymakers need to determine if additional specific types of legal rules are necessary to support critical communications infrastructures that generate sustainably the desired emergent properties of widespread availability, affordability, and reliability. Historically, in addressing characteristics that are distinctive of networks, common law principles of common carriage and public utility have served an important role in the sustainability of these emergent properties for essential infrastructures in the United States. What is unclear, however, is how the recent tendency for market capitalism to undermine the rule of law under the social acceleration of time also affects the sustainability of rules to address specific needs of network infrastructures. Conversely, policymakers need to consider how changes in legal rules applied to essential network infrastructures might affect the social acceleration of time.

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<sup>158</sup> *FCC v. Nextwave Pers. Commc'ns, Inc.*, 537 U.S. 293 (2003).

<sup>159</sup> *See id.* at 304.

<sup>160</sup> *Id.*

<sup>161</sup> *See supra* Part II.B and accompanying notes 43–48.

<sup>162</sup> *See supra* text accompanying note 36.

## VI. CONCLUSION

The recent financial crisis in the United States and its global diffusion are illustrative of the catastrophic consequences that may arise from deregulatory policies and a continuing failure of government adaptation through regulatory resilience.

Our nation's financial markets are in the midst of their darkest hour in 76 years. We are in this situation because of an adherence to a deregulatory approach to the explosive growth and expansion of America's major financial institutions. Our regulatory system failed to adapt to important, dynamic and potentially lethal new financial instruments as the storm clouds gathered. There is now a total breakdown in the trust necessary for a free and functioning market.<sup>163</sup>

Language describing the turbulence in the financial markets intuitively reflects the chaos of catastrophic potential that may arise from the behavior of complex systems.<sup>164</sup> For example, as the crisis intensified in September 2008, in a single Wall Street Journal article the following quotes are provided from various financial executives, traders, and analysts: "Monday will be a day of reckoning for the financial markets"; "We are in uncharted waters here"; "We have never seen anything like this"; "It is utter chaos here".<sup>165</sup> On the same day, the Wall Street Journal also reported that Treasury Secretary Henry Paulson's refusal to support a government bailout for Lehman Brothers "set off a weekend of brinkmanship and drama unseen on Wall Street in modern times."<sup>166</sup>

Some characterizations of the challenges of institutional governance to address the financial crisis also reflect properties of complex systems. In March 2008, the U.S. Federal Reserve aided J.P. Morgan in taking over Bear Stearns, because "[o]fficials grimly concluded that while Bear Stearns wasn't too big to fail, it was too interconnected to be allowed to fail in just one day."<sup>167</sup> In testimony presented before the U.S. Committee on Banking, Housing, and Urban Affairs on April 3, 2008, several top financial regulators justified this government intervention on the basis that the systemic risk to the economy offset concerns of moral hazard.<sup>168</sup>

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<sup>163</sup> Arthur Levitt, *How to Restore Confidence in Our Markets*, Wall St. J., Oct. 22, 2008, at A15.

<sup>164</sup> See notes 51-56, *supra*, and accompanying text, for a discussion of the catastrophic potential of sudden jumps in behavior of complex systems from seemingly small changes in circumstances.

<sup>165</sup> Carrick Mollenkamp, Susanne Craig, & Serena Ng, *Crisis on Wall Street as Lehman Totters, Merrill Seeks Buyer, AIG Hunts for Cash*, Wall St. J., Sept. 15, 2008, at A1.

<sup>166</sup> *Ultimatum By Paulson Sparked Frenzied End*, Wall St. J., Sept. 15, 2008, at A1.

<sup>167</sup> Greg Ip, *Central Bank Offers Loans to Brokers, Cuts Key Rate*, Wall St. J., March 17, 2008, at A1.

<sup>168</sup> See Kara Scannell & Sudeep Reddy, *Officials Say They Sought To Avoid Bear Bailout*, Wall St. J., April 4, 2008, available at <http://online.wsj.com/article/SB120722972567886357.html>.

But, six months later, even though the U.S. government had also seized control of mortgage giants, Fannie Mae and Freddie Mac,<sup>169</sup> it drew a line in the sand to curb moral hazard and declined to broker a sale of investment bank, Lehman Brothers.<sup>170</sup> Yet, Lehman's subsequent collapse triggered further, unintended consequences.<sup>171</sup>

The genesis and aftermath of Lehman's downfall illustrate the difficult position policy makers are in as they grapple with a deepening financial crisis. They don't want to be seen as too willing to step in and save financial institutions that got into trouble by taking big risks. *But in an age where markets, banks and investors are linked through a web of complex and opaque financial relationships, the pain of letting a large institution go has proved almost overwhelming.*<sup>172</sup>

Within two weeks, Treasury Secretary Henry Paulson and Federal Reserve Chairman Bernard Bernanke proposed a \$700 billion bailout plan because they "decided that the fallout presented too great a threat to the financial system and the economy."<sup>173</sup>

Other challenges of institutional governance are attributed to government's failure to adapt regulation despite the existence of warnings and calls for intervention. For example, as early as 1997, the Commodity Futures Trade Commission (CFTC) began exploring derivatives regulation due to perceived threat of unfettered, opaque trading to regulated markets and the economy.<sup>174</sup> Yet, upon the urging of then Federal Reserve Chairman Alan Greenspan, Securities and Exchange Commission Chairman Arthur Levitt, and Treasury Secretary Robert Rubin, Congress passed and President Clinton signed legislation that blocked CFTC oversight of derivatives.<sup>175</sup>

More recently, Warren E. Buffet raised alarms in 2003, referring to derivatives as "financial weapons of mass destruction, carrying dangers that, while now latent, are potentially lethal."<sup>176</sup> Ideological reliance on markets to self-regulate, particularly by Alan Greenspan, is considered the primary cause for continued political resistance to regulatory oversight of derivatives.<sup>177</sup> In testimony before the U.S. House Committee of Government Oversight and Reform on October 23, 2008, Greenspan referred to the financial crisis as "a once-in-a-century credit tsunami", and stated "those of us who have looked to the self-

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<sup>169</sup> See James R. Hagerty, Ruth Simon, & Damian Paletta, *U.S. Seizes Mortgage Giants*, Wall St. J., September 8, 2008, at A1.

<sup>170</sup> See *Ultimatum By Paulson Sparked Frenzied End*, Wall St. J., Sept. 15, 2008, at A1.

<sup>171</sup> See *Lehman's Demise Triggered Cash Crunch Around Globe*, Wall St. J., Sept. 29, 2008, at A1.

<sup>172</sup> *Id.* (emphasis added).

<sup>173</sup> *Id.*

<sup>174</sup> Peter S. Goodman, *Taking Hard New Look at a Greenspan Legacy*, N. Y. Times, Oct. 9, 2008, available at <http://www.nytimes.com/2008/10/9/business/economy/09greenspan.html>.

<sup>175</sup> *Id.*

<sup>176</sup> *Id.*

<sup>177</sup> *Id.*

interest of lending institutions to protect shareholder's equity (myself especially) are in a state of shocked disbelief."<sup>178</sup> Moreover, under questioning by Representative Henry Waxman of California, Chairman of the Committee, Greenspan conceded a flaw in his ideology of placing faith in the self-correcting power of free markets and that his belief in deregulation had been shaken.<sup>179</sup>

Still other challenges of institutional governance are attributed to inherent problems with the political system's ability to respond in the form of emergency legislation. Noteworthy are statements concerning the temporal difficulties faced by Congress. For example, upon hearing that Mr. Bernanke and Mr. Paulson wanted bailout legislation passed in a matter of days, Senate majority leader, Harry Reid, is reported to have been astonished, stating "[t]his is the United States Senate. We can't do it in that time frame."<sup>180</sup> In addition, the Congress' initial failure to pass the proposed rescue plan, "even if temporary, pointed up the difficulties of dealing with fast-moving emergencies through the slow-moving and inherently political legislative process."<sup>181</sup> These observations reflect concerns similar to those raised by Scheuerman, who asserts that the temporal presuppositions underlying the legislature's role are being undermined by the conditions of economic activity under the social acceleration of time.<sup>182</sup>

Furthermore, some statements refer to the importance of preserving the rule of law while pursuing short-term, emergency legislation. For example, three professors at prestigious universities jointly state that, in any solution proposed in U.S. emergency bailout legislation, "the solution should respect the rule of law."<sup>183</sup> Similarly, fearing the loss of the rule of law, Sen. Christopher Dodd asserted that the proposed bailout plan would allow Treasury Secretary Paulson "to act with utter and absolute impunity—without review by any agency or court of law. After reading the proposal, I can only conclude that it is not just

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<sup>178</sup> *Greenspan Testimony on Sources of Financial Crisis*, available at <http://blogs.wsj.com/economics/2008/10/23/greenspan-testimony-on-sources-of-financial-crisis/> (text of prepared remarks).

<sup>179</sup> See Edmund L. Andrews, *Greenspan Concedes Error on Regulation*, N.Y. Times, Oct. 24, 2008, available at <http://www.nytimes.com/2008/10/24/business/economy/24panel.html>.

<sup>180</sup> Joe Nocera, *As Credit Crisis Spiraled, Alarm Led to Action*, N.Y. Times, Oct. 2, 2008, available at <http://www.nytimes.com/2008/10/2/business/02crisis.html>.

<sup>181</sup> Jackie Calmes, *In Bailout Vote, a Leadership Breakdown*, N.Y. Times, Sept. 30, 2008, available at <http://www.nytimes.com/2008/09/30/business/30assess.html>.

<sup>182</sup> See Part IV.A., *supra*.

<sup>183</sup> R. Glenn Hubbard, Hal Scott & Luigi Zingales, *Let's Get the Bank Rescue Right*, Wall St. J., Sept. 24, 2008, at A29. Hubbard is the dean of Columbia Business School; Scott is professor of international financial systems at Harvard Law School; and Zingales is professor of finance at the Graduate School of Business at the University of Chicago,

our economy that is at risk, Mr. Secretary, but our Constitution, as well.”<sup>184</sup> Such statements recognize the need to ultimately constrain regulatory resilience by maintenance of the rule of law.

Finally, in addition to the difficulties of pursuing emergency measures, some challenges of institutional governance are attributed to the problems of reforming the regulatory system to provide greater, prospective stability in financial markets. “[W]e are in a crisis of economic institutions, not just a financial crisis...The next [U.S.] administration will need to engineer a thoroughgoing overhaul of the regulatory system.”<sup>185</sup> Furthermore, the problems are magnified by the need not only for national regulatory reform but also for international coordination.<sup>186</sup> Such coordination will require “either a reform of one of the existing [international] institutions, or the creation of a new one.”<sup>187</sup> This is because “[y]ou can’t deal with the problems of global financial markets within national systems of regulation.”<sup>188</sup>

To respond to these challenges will require a phase transition in institutional governance, both domestically and internationally.

For 30 years, the nation’s [U.S.] political system has been tilted in favor of business deregulation and against new rules. But that is about to change, now that the government has been forced to intervene in the once high-flying financial industry to avert an economywide crash....An expansion of the government’s role in financial markets is certain...<sup>189</sup>

U.S. federal officials intuitively recognize this reality by characterizing the challenge they face as a “regime change,”<sup>190</sup> as does U.K. Prime Minister Gordon Brown in his call for a new Bretton Woods.<sup>191</sup>

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<sup>184</sup> Gregg Hitt, Sudeep Reddy, & Deborah Solomon, *Congress Turns Up Heat on Bailout*, Wall St. J., Sept. 24, 2008, at A3 (quoting Sen. Dodd during a U.S. Senate Banking Committee hearing held on Sept. 23, 2008).

<sup>185</sup> Gerald F. Davis, *Who’s to blame?*, Michigan Today, Oct. 14, 2008, available at <http://michigantoday.umich.edu/2008/10/econ-blame.php?t=y&auid=4120539>.

<sup>186</sup> Gerald F. Seib, *Global Crisis Coordination Takes Shape—Slowly*, Wall St. J., Oct. 11-12, 2008, at A2.

<sup>187</sup> *Id.*

<sup>188</sup> Alistair MacDonald, *While the World Is Listening, Brown Touts Global Oversight*, Wall St. J., Oct. 15, 2008, at A7 (quoting U.K. Prime Minister Gordon Brown).

<sup>189</sup> Jackie Calmes, *Both Sides of the Aisle See More Regulation*, N.Y. Times, Oct. 14, 2008, available at <http://www.nytimes.com/2008/10/14/business/economy/14regulate.html>.

<sup>190</sup> Edmund L. Andrews & Mark Landler, *U.S. May Take Ownership Stake in Banks*, N.Y. Times, Oct. 9, 2008, available at <http://www.nytimes.com/2008/10/09/business/economy/09econ.html> (“This regime change refers to a change in the economic environment so radical that, at least for a while, economic policy makers will need to suspend what are usually sacred principles: minimal interference in free markets, gradualism and predictability.”).

<sup>191</sup> *EU to Push Global Oversight of Top Financial Firms*, Wall St. J., Oct. 16, 2008, at A5 (Bretton Woods refers to the 1944 conference in New Hampshire that set forth basic rules

The challenges for institutional governance presented in this article are clearly mirrored in the preceding overview of the public discourse related to the recent financial crisis. Regulatory resilience must be constrained by the rule of law, yet the sustainability of the rule of law is threatened by the conditions of economic activity under the social acceleration of time. However, the challenges for institutional governance laid bare by deregulatory policies, and intensified by the adverse effects of the social acceleration of time, are not confined to the financial sector. Rather, the challenge for institutional governance needs to be viewed more generally in terms of new developments in the co-evolution of markets and policymaking systems that are pressing for a phase transition in their interrelationship. Meeting the challenge of institutional governance in this broader context should be the focus of future research, particularly for other essential industries such as telecommunications.

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for international banking, finance and monetary policy and established the International Monetary Fund).