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# Adaptation and Resiliency in Legal Systems: Introduction

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# INTRODUCTION TO THE NORTH CAROLINA LAW REVIEW SYMPOSIUM, *ADAPTATION AND RESILIENCY IN LEGAL SYSTEMS\**

MARIA SAVASTA-KENNEDY\*\*

In October 2010, a group of scholars from diverse legal fields gathered at the University of North Carolina School of Law in Chapel Hill, North Carolina, to talk about the shock waves of recent events hitting the environment, financial markets, and the criminal justice system, and to consider how the law can make these systems better able to deal with unanticipated challenges. The symposium discussion, and the resulting articles presented in this eighty-ninth volume of the *North Carolina Law Review*, addressed ways in which our current legal systems might be made more resilient in response to the increasingly dynamic landscape of the twenty-first century.

The symposium opened with a brief description of how the evolution of “earthquake ready” building designs in the San Francisco Bay area might serve as an example of creating a resilient system in response to anticipated but unpredictable—and potentially destructive—events. The steel, concrete, and glass high-rise buildings in downtown San Francisco survived the 1989 Loma Prieta earthquake because they were built on rollers that allowed the buildings to move with the tremors, rather than strain and break against them. Understanding that the San Francisco Bay area is subject to unpredictable and potentially violent earthquakes, architects and builders created a structural system resilient enough to withstand and respond to changes and shifts in the earth itself.<sup>1</sup>

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\*\* Clinical Professor of Law, the University of North Carolina School of Law. Thanks to colleagues Victor Flatt and Donald Hornstein for the opportunity to collaborate on this extraordinary symposium.

1. Several months after the October 2010 symposium, a devastating earthquake and tsunami hit the nation of Japan, leaving a trail of destruction and human suffering compounded by the failure of the country’s nuclear reactors. While the disaster demonstrates the limits of structural adaptability and will provoke questions about safe energy supply and disaster planning for years to come, the Japanese people themselves provide the most powerful example of the adaptability and resilience of the human spirit in the face of unimaginable tragedy.

How do we translate this notion of fostering resiliency and the ability to adapt to change to our legal systems? How do we build resiliency into our regulation of the financial markets and our environmental resources to ensure recovery from the next set of shocks? How do we resolve the tension between our dependence on notice and predictability in defining criminal behavior with the need for flexibility in the face of unexpected challenges?

The articles in this symposium issue explore the notions of adaptation and resilience in these specific areas of the law and across disciplines. The discussion begins with an overview of this timely issue by J.B. Ruhl, a scholar in the field of environmental law and the emerging literature on adaptation and resiliency. In his article, *General Design Principles for Resilience and Adaptive Capacity in Legal Systems — with Applications to Climate Change Adaptation*,<sup>2</sup> Professor Ruhl looks to the disciplines of natural and social sciences to provide a working definition of resiliency as “the capacity of a system to experience shocks while retaining essentially the same function, structure, feedbacks, and therefore identity.”<sup>3</sup> Adaptive capacity in a system, Professor Ruhl explains, encompasses the notion that the system will sense and respond to “threats to system equilibrium . . . by changing resilience strategies without changing fundamental attributes.”<sup>4</sup> Professor Ruhl explores these attributes in the context of designing law responsive to the challenges of climate change, examining adaptive management theory as an example of a systemic adaptive approach, and drawing inspiration from the theories of dynamic federalism, new governance, and transgovernmental networks.

Next, Professor Alejandro Camacho considers the procedural and substantive limitations of our current model of natural resource governance which hinder the law’s ability to adequately respond to climate change in *Transforming the Means and Ends of Natural Resources Management*.<sup>5</sup> Procedurally, existing regulatory institutions are not designed to cultivate systematic inter-agency or inter-jurisdictional learning, nor are they suited to manage uncertainty.

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2. J.B. Ruhl, *General Design Principles for Resilience and Adaptive Capacity in Legal Systems — with Applications to Climate Change Adaptation*, 89 N.C. L. REV. 1373 (2011).

3. *Id.* at 1375–76 (quoting Brian Walker et al., *A Handful of Heuristics and Some Propositions for Understanding Resilience in Social-Ecological Systems*, *ECOLOGY & SOC’Y* (June 2006), <http://www.ecologyandsociety.org/vol11/iss1/art13/ES-2005-1530.pdf>).

4. *Id.* at 1388 (citation omitted).

5. Alejandro E. Camacho, *Transforming the Means and Ends of Natural Resources Management*, 89 N.C.L. REV. 1405 (2011).

Moreover, because natural resource law is premised on the substantive ideal of valuing the preservation of the status quo, it is ill equipped to deal with a literally dynamic, shifting landscape. Professor Camacho reveals the way in which these procedural and substantive restrictions reinforce one another, and argues for the transformation of both the ends and the means of natural resource management and preservation goals in order to better adapt to the realities of a volatile climate.<sup>6</sup>

Adaptive management is premised on the notion that opportunities for learning and adjustment should be built in and drive resource management systems.<sup>7</sup> However, gathering and effectively using information to manage natural resources is costly and sometimes ineffective. In *Adaptive Management as an Information Problem*, Professor Holly Doremus critically examines the systemic information flaws inherent in adaptive management systems.<sup>8</sup> Noting that adaptive management may not be an appropriate resource management approach in every circumstance, Professor Doremus advocates for an ex ante analysis of the potential barriers which may hinder decision makers from gathering and analyzing information crucial to successful adaptive management of natural resources. Professor Doremus explores methods for improving information diffusion, specifically looking at data architecture and information flow, as well as the role of “trusted intermediaries” in transmitting critical information.<sup>9</sup>

How might we harness other existing resilient capacities in the law to address novel challenges created by shifts in natural resources? Professor Victor Flatt and his coauthor Jeremy Tarr present a detailed analysis of one of the ways we might expand the flexibility and resiliency of current law in *Adaption, Legal Resiliency, and the U.S. Army Corps of Engineers: Managing Water Supply in a Climate-Altered World*.<sup>10</sup> In this case study, Flatt and Tarr focus on the “multiple use” paradigm of resource management, which affords the U.S. Army Corps of Engineers (“the Army Corps”) wide latitude to balance competing water needs. The flexibility built into this water

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6. *Id.* at 1407–08.

7. See Ruhl, *supra* note 2, at 1374–75.

8. Holly Doremus, *Adaptive Management as an Information Problem*, 89 N.C. L. REV. 1455, 1458–59 (2011).

9. *Id.* at 1490–96.

10. Victor B. Flatt & Jeremy M. Tarr, *Adaption, Legal Resiliency, and the U.S. Army Corps of Engineers: Managing Water Supply in a Climate-Altered World*, 89 N.C. L. REV. 1499 (2011).

management regime allows it to adapt to changing water resources and evolving water uses and needs. The Army Corps, however, has opted to forgo an adaptive approach, instead perpetuating prior policies and creating a rigid legal system where flexibility is available and warranted. Flatt and Tarr suggest opportunities to revitalize the flexibility built into the Army Corps' management system, noting the unique characteristics of decision making at regional and local levels.

In his essay, *Resiliency, Adaptation, and the Upsides of Ex Post Lawmaking*,<sup>11</sup> Professor Donald Hornstein examines retroactive lawmaking as an essential component of resilient legal systems. Using the example of the *Chenery* cases<sup>12</sup>—which affirmed the ability of the Securities and Exchange Commission to choose ex post facto adjudicatory decision making over ex ante regulation as a means to reel in a public utility attempting to maneuver around the Public Utility Holding Company Act of 1935—Professor Hornstein makes the case that retroactive laws are uniquely suited to respond to regulatory gaming. Ex post facto adjudication, Professor Hornstein tells us, allows incremental responses to unanticipated challenges, thus providing a legal response that is more adaptable to a shifting landscape. “In short, an element of retroactivity is necessary to ensure the resilience of legal systems by allowing implementing agencies to adapt (ex post) to unforeseen challenges.”<sup>13</sup>

Continuing the examination of ways in which adaptive capacity might succeed or fail in the realm of financial regulation, Professor Douglas Arner examines the recent financial crisis in *Adaptation and Resilience in Global Financial Regulation*.<sup>14</sup> Professor Arner discusses the root cause of the 2008 financial crisis as a global failure to prevent and address system risk, and analyzes post-crisis attempts by organizations such as the Group of 20 (“G-20”) and the Financial Stability Board to reform international financial regulation. While noting the progress made in regulation and infrastructure reform, Professor Arner concludes that efforts to create a resilient global financial system have far to go, and in their current iteration could not prevent or effectively address future global financial crisis.

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11. Donald T. Hornstein, *Resiliency, Adaptation, and the Upsides of Ex Post Lawmaking*, 89 N.C. L. REV. 1549 (2011).

12. SEC v. *Chenery Corp.* (*Chenery II*), 332 U.S. 194 (1947); SEC v. *Chenery Corp.* (*Chenery I*), 318 U.S. 80 (1943).

13. Hornstein, *supra* note 11, at 1568.

14. Douglas W. Arner, *Adaptation and Resilience in Global Financial Regulation*, 89 N.C. L. REV. 1579 (2011).

In *Regulatory Contrarians*,<sup>15</sup> Professors Brett McDonnell and Daniel Schwarcz posit that examination of the financial crisis must encompass more than the insufficiency of the regulatory structures erected to contain risk; the crisis was also a product of the failure of regulators to carry through on their mandates in the face of evolving market risk. McDonnell and Schwarcz explore the role of “regulatory contrarians” in enhancing the ability of financial regulators to adapt to emerging challenges in the financial sector. A regulatory contrarian is “an entity that is affiliated with, but independent of, a financial regulator [charged] with the task of monitoring that regulator and the regulated marketplace and publicly suggesting new initiatives or potential structural or personnel changes.”<sup>16</sup> Ombudsmen such as the Taxpayer Advocate Service of the Internal Revenue Service, consumer representatives appointed by the National Association of Insurance Commissioners, and agency-affiliated inspectors general successfully fulfill this role in various arenas.<sup>17</sup> McDonnell and Schwarcz explore the role of regulatory contrarians in the Dodd-Frank Act as a potential means to improve financial regulation.

In her detailed study, *From Gramm-Leach-Bliley to Dodd-Frank: The Unfulfilled Promise of Section 23A of the Federal Reserve Act*,<sup>18</sup> Professor Saule Omarova exposes the inadequacies of current financial regulation—as expressed in section 23A of the Federal Reserve Act—in providing statutory firewalls between financial institutions to protect depository institutions from market risk. Through comprehensive examination of the interpretive letters issued by the Board of Governors of the Federal Reserve System (the “Board”) between 1996 and 2010, Omarova documents the Board’s decisions to exempt individual banking institutions from section 23A’s limits on extensions of credit and other transactions between banks and their affiliates. Professor Omarova argues that recent amendments to section 23A under the Dodd-Frank Act fail to address this regulatory inadequacy and perpetuate a system of risk exposure for depository financial institutions.<sup>19</sup>

The allegedly poor performance of thrift-chartered institutions during the financial crisis is explored by Professors Dain Donelson

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15. Brett McDonnell & Daniel Schwarcz, *Regulatory Contrarians*, 89 N.C. L. REV. 1629 (2011).

16. *Id.* at 1632–33.

17. *Id.* at 1633.

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

19. *Id.* at 1688–91.

and David Zaring in *Requiem for a Regulator: The Office of Thrift Supervision's Performance During the Financial Crisis*.<sup>20</sup> Donelson and Zaring provide an empirical study and analysis comparing publicly traded thrift institutions with publicly traded bank-chartered institutions during the 2008 financial crisis. The authors reach several key conclusions, including a finding that, controlling for size, thrifts required bailouts to the same degree as banks during the financial crisis. Donelson and Zaring reveal that thrift supervision was perhaps not as inadequate as supposed, and suggest that misplaced disappointment with the federal thrift regulator may have contributed to the decision to eliminate that office in the post-crisis Dodd-Frank Act.

The symposium issue concludes with two articles exploring notions of adaptability in the criminal justice context. These articles explore the tension between the long-held norms of notice and predictability in criminal law, and a perceived need for greater flexibility in responding to changing conceptions of criminal behavior in a world where the law is increasingly less ordered and unpredictable. In *The Federal Common Law Crime of Corruption*,<sup>21</sup> Professor Lisa Kern Griffin considers the expanded role common law crime definition should play in corruption cases, particularly with regard to evolving notions of harm. "Common law interpretation is incremental and potentially inconsistent, but it is also patient and flexible enough to operationalize subtle limiting principles like harm."<sup>22</sup> Professor Griffin focuses on the prosecution of public corruption offenses as fraud cases under the honest services provision of 18 U.S.C. § 1346, and the continued evolution of those cases in the aftermath of the Supreme Court's 2010 decision in *Skilling v. United States*.<sup>23</sup>

In response to the rising complexity and multifaceted nature of our society, legislatures have increasingly delegated to regulatory agencies the task of defining criminal offenses. Professor Richard Myers cautions against the creation of "regulatory crime" and expanded definitions of criminal behavior in his essay, *Complex*

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20. Dain C. Donelson & David Zaring, *Requiem for a Regulator: The Office of Thrift Supervision's Performance During the Financial Crisis*, 89 N.C. L. REV. 1777 (2011).

21. Lisa Kern Griffin, *The Federal Common Law Crime of Corruption*, 89 N.C. L. REV. 1815 (2011).

22. *Id.* at 1847.

23. 130 S. Ct. 2896 (2010).

*Times Don't Call for Complex Crimes.*<sup>24</sup> Criminal law, suggests Professor Myers, already encompasses abundant “resilient, well-understood crimes, albeit ones that might be committed in new ways.”<sup>25</sup> Professor Myers asserts that because regulatory agencies lack political accountability, adaptation in this arena calls for increased legislative oversight of the criminalization of behavior and an improved system of checks and balances.<sup>26</sup>

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24. Richard E. Myers II, *Complex Times Don't Call for Complex Crimes*, 89 N.C. L. REV. 1849 (2011).

25. *Id.* at 1851.

26. *Id.*



