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8

The Diffusion of Regulatory Oversight

Jonathan B. Wiener

The idea of cost-benefit analysis has been spreading internationally for centuries—at least since an American named Benjamin Franklin wrote a letter in 1772 to his British friend, Joseph Priestley, recommending that Priestley weigh the pros and cons of a difficult decision in what Franklin dubbed a “moral or prudential algebra” (Franklin 1772) (more on this letter below). Several recent studies show that the use of benefit-cost analysis (BCA), for both public projects and public regulation of private activities, is now unfolding in countries on every habitable continent around the world (Livermore and Revesz 2013; Quah and Toh 2012; De Francesco 2012; Livermore 2011; Cordova-Novion and Jacobzone 2011). This global diffusion of BCA is intermingled with the global diffusion of regulatory capitalism, in which privatized market actors are supervised by expert regulatory agencies (Levi-Faur 2005; Simmons et al. 2008), and with the international spread of *ex ante* regulatory precautions to anticipate and prevent risks despite uncertainty (Wiener et al. 2011).

The spread of regulatory precautions to govern markets and risks, and the spread of BCA as an analytic method to evaluate public projects and regulatory policies, have led in turn to the global diffusion of institutional systems for regulatory oversight. This chapter addresses the diffusion of such regulatory oversight systems, which often employ BCA as a tool for policy evaluation (typically under the rubric of regulatory impact assessment, RIA).

The diffusion of regulatory oversight systems using RIA, closely following the diffusion of regulation and precaution, makes intuitive sense as a mechanism for accountability and guidance of regulatory power. But this pattern also challenges conventional claims. First, it shows that orthodox notions of discrete “national styles of regulation” (Vogel 1986) and early “legal origins” of modern regulation (la Porta et al. 2008) are belied or at least markedly eroded by the modern reality of the exchange of ideas across complex interconnected and increasingly hybrid regulatory systems. History matters, but it is not destiny; modern regulatory systems exist in global networks and evolve through learning, borrowing, and hybridization (Levi-Faur 2005; Wiener et al. 2011). Second, precaution and RIA/BCA, though often portrayed as antagonists, are better understood as complementary components of a deeper trend: the diffusion of regulatory foresight. Both precaution and RIA are efforts to forecast the future consequences of current choices.

Such regulatory foresight is increasingly demanded as societies prosper and, ironically, as they become safer.

Both hybridization and foresight are essential strategies for risk management in a changing world. To make the most of these strategies, this chapter suggests, we should consciously construct a global policy laboratory—which in turn involves a bit of regulatory hindsight.

Regulatory Oversight

Regulations can be necessary to correct market failures such as externalities (e.g., health, safety, and environmental risks), asymmetric information, and market power. Regulation can help solve such social problems, but it can also induce its own problems, including compliance costs, inhibition of innovation, ancillary risks, and rent-seeking. As a result, wherever states deploy regulation, demand arises for oversight of the regulatory system to reduce the costs and side effects of regulation, increase the benefits of regulation, and promote transparency and accountability.

Regulatory oversight systems go further than academic or episodic project-oriented BCA by creating institutions for broad application of RIA (typically using BCA) to evaluate all significant regulatory actions, with a body to review the RIAs prepared by regulatory agencies (OECD 2009a). The function of regulatory oversight may be located in the judiciary (judicial review of administrative agency action), the executive (center-of-government regulatory review, typically in the presidency or head of government, sometimes in an agency or a multiagency council), the legislature (an expert body assisting the legislature, or legislative review of administrative action), or an independent entity (such as a neutral review board, auditor, or ombudsman).

A “regulatory oversight body” (ROB) typically means a centralized government unit atop the executive hierarchy that uses expertise to supervise regulatory action by agencies (Lindseth, Aman, and Raul 2008; Wiener and Alemanno 2010; Cordova-Novion and Jacobzone 2011). ROB provides both expertise (through expert staff and analytic methods) and political accountability (such as to the president or prime minister); these objectives may be mutually reinforcing but may pose tensions at times (Shapiro 2006).

ROBs may have a variety of functions and powers, including commenting on (and assisting in improving) the quality of an agency’s RIA; constraining agency action when an RIA is deemed inadequate or when the benefits of an agency’s proposed regulation do not justify the costs; calling on agencies to review existing regulations for their benefits and costs; prompting agency action when BCA identifies a socially promising regulation that agencies are not yet promulgating; and fostering transparency in the reporting of regulatory impacts. And ROB’s functions and powers may differ across polities, in part because ROB’s may be located in different branches or units of different constitutional structures accorded different roles and powers, such as parliamentary versus presidential systems. A key

point here is that the ROB's authority to guide regulatory decision-making will depend on its institutional role among the branches or power centers of government (Wiener and Alemanno 2010). (For more detailed analyses of ROB's legal bases, functions, powers, and constitutional structures, see Wiener and Alemanno 2010; Cordova-Novion and Jacobzone 2011).

For example, in the United States, the Office of Information and Regulatory Affairs (OIRA), created in 1980, located within the Office of Management and Budget (OMB) in the Executive Office of the President, performs all of these functions pursuant to a series of executive orders issued by several presidents of both political parties (notably Jimmy Carter's Executive Order 12,044 of 1978, preceding OIRA; Ronald Reagan's Executive Order 12,291 of 1981; and Bill Clinton's Executive Order 12,866 of 1993, which remains in force today and has been extended by Barack Obama's Executive Orders 13,563 and 13,579 of 2011, and 13,609 of May 2012). OIRA regularly exercises its authority to "return" agency regulatory proposals that do not meet the analytic and net benefits criteria set forth in the executive order, and OIRA has occasionally sent a "prompt" to agencies to pursue regulations that promise net benefits (Graham 2007; Revesz and Livermore 2008). BCA had been employed in the United States to assess public projects for decades before the creation of OIRA, including for flood control projects and military procurement (Quah and Toh 2012). Following the wave of regulatory legislation and the expansion of the administrative state during the 1960s and 1970s, the advent of RIA in the 1970s and OIRA review in the 1980s created an institutional structure for regulatory oversight—a system that has been reaffirmed in a bipartisan consensus across every subsequent presidential administration (Kagan 2001; Wiener and Alemanno 2010). Many of the U.S. member states have also adopted RIA systems (Schwartz 2010). But in the United States, RIAs and OIRA review are evaluations of agency rulemakings—agency actions to implement authority delegated by the legislature through statutes—not appraisals of the bills initially proposed in the legislature.

In the European Union, impact assessment was launched by the Better Regulation Initiative over 2001–2006 (Wiener 2006), and the EU Impact Assessment Board (IAB) was then created in 2006. The IAB, a five-member board, is located within the Secretariat General in the Presidency of the European Commission. It began as a commenter on RIA quality and has grown to play a wider role (Wiener and Alemanno 2010). Since 2010, the president of the European Commission has required new regulatory proposals to obtain a positive opinion from the IAB before going forward (European Commission 2010, 11–12), giving the IAB an authority more akin to OIRA's "return letter" than the IAB had previously had. Strikingly, while the IAB returned for "resubmission" only 9 percent of regulatory proposals in 2007, by 2010 it was returning 42 percent (and then 36 percent in 2011, perhaps indicating a plateau) (European Commission 2012, fig. 4). And in the EU, impact assessment and IAB review includes evaluations of proposals for legislation—that is, proposals by the Commission that will be forwarded to the European Parliament and Council. Similarly, in France, the new Organic Law of April 15, 2009 (Loi organique n° 2009–403 du 15 avril 2009

relative à l'application des articles 34–1, 39 et 44 de la Constitution) requires an impact analysis reviewed by the Conseil d'Etat before a bill can be proposed to the National Assembly.

Diffusion

Regulatory oversight is now being “diffused throughout the globe” (Radaelli and De Francesco 2008). Just as the number of regulatory agencies worldwide has grown, especially rapidly since about 1990 (Levi-Faur 2011, fig. 1.4), so the number of ROBAs has also grown over that period. Institutions for regulatory oversight have spread from about half of the twenty-seven OECD members in 1998, to virtually all of the now thirty-one OECD members in 2010 (Cordova-Novion and Jacobzone 2011, fig. 3) and to virtually all EU members (De Francesco 2012). Mechanisms for regulatory oversight are also appearing in international organizations (see the chapter by Alberto Alemanno in this volume).

The creation in 2006 of the ROB at the EU level, the IAB, followed at least five years of development of an RIA system—starting with the EU’s Better Regulation initiative and its impact assessment guidelines (Wiener 2006). Additional examples of ROBAs in OECD member states include the Productivity Commission and the Office of Best Practice Regulation (OBPR) in Australia (where RIA has been employed since 1985); the Simplification and Better Regulation Unit in Denmark; the function of the Conseil d’Etat in supervising impact analyses pursuant to the Organic Law of April 15, 2009, in France; the Administrative Burdens Board in the Netherlands; the Better Regulation Unit in Germany; the Administrative Evaluation Bureau in Japan; the Comisión Federal de Mejora Regulatoria (COFEMER) in Mexico; the Regulatory Reform Committee (RRC) and Regulatory Reform Bureau in South Korea; and the Better Regulation Executive and associated regulatory committees in the United Kingdom (a survey is provided in Cordova-Novion and Jacobzone 2011). In South Korea, spurred by an economic crisis in the 1990s, the government enacted the Basic Act on Administrative Regulations in 1998, and the RRC then undertook an extensive review of existing regulations resulting in thousands of revisions and repeals, as well as RRC oversight of RIAs for newly proposed regulations (Truen 2011; Cordova-Novion and Jacobzone 2011). In Chile, the economic evaluation requirement for environmental regulations (pursuant to Law 19,300 of 1994) has been supplemented by an RIA process created in Law 20,416 of 2010, though it remains unclear whether a ROB will supervise this RIA process (OECD 2011). Related systems exist or are being developed in other OECD members, including New Zealand, Poland, Portugal, Sweden, and Turkey (Cordova-Novion and Jacobzone 2011).

We can expect the spread of ROBAs using RIA, and the collaborative dialogue among those institutions, to continue. In March 2012, the OECD issued a major set of twelve recommendations to all governments, including on evaluating regulatory quality, using RIA for both *ex ante* (prospective) and *ex post* (retrospective) regulatory review, creating ROBAs, and engaging in international regulatory

cooperation (OECD 2012). In May 2012, President Obama issued Executive Order 13,609 to promote international regulatory cooperation.

The legal bases, constitutional structures, and powers of these ROBs differ across countries. Just more than half (so far) of the ROBs in the OECD member states are empowered to review agency RIAs (Cordova-Novion and Jacobzone 2011, fig. 3). Some, like US OIRA, review agencies' proposed regulations to implement statutes already enacted by the legislature; others, like the EU IAB, review initial proposals for legislation (usually within the branch of government that initiates such proposals); this difference in structure entails differences in interbranch (executive vs. legislative) relations over policymaking and power (Wiener and Alemanno 2010). The U.S. OIRA, the EU IAB, the OBPR in Australia, the RRC in Korea, and COFEMER in Mexico must generally give a positive opinion for a proposed regulation to proceed, or they have the power to return regulatory proposals (though there are exceptions in each system) (Cordova-Novion and Jacobzone 2011, table A.1). Many or all ROBs can request analytic improvements in a draft RIA. Japan's Administrative Evaluation Bureau, the Administrative Burdens board in the Netherlands, and Germany's Better Regulation Unit can review the quality of RIAs but do not return proposed regulations (Cordova-Novion and Jacobzone 2011, table A.1). Review of the existing stock of regulations (also known as *ex post*, retrospective, or "lookback" review) is being emphasized in the Australian regulatory oversight system (Australian Productivity Commission 2011) and in the United States (under Executive Order 13,563 issued in 2011).

RIA and ROBs are also beginning to spread beyond the OECD to developing countries (Truen 2011; World Bank Group 2010; Jacobs 2006; Kirkpatrick and Zhang 2004). In many countries, as was the case in the United States and EU, the development of BCA as an analytic exercise by academics and project-funding agencies has preceded the creation of governmental RIA systems and the establishment of ROBs to supervise regulation. Some developing countries are now moving to adopt formal systems of RIA and to establish ROBs.

Countries seeking to join the EU are adopting RIA: Serbia adopted Rules of Procedure requiring RIA for new legislation in 2005, after having established a Council for Regulatory Reform and Quality Control in 2003 (OECD 2009b, 245); and Croatia required RIA beginning in 2005 and in 2007 created an RIA Coordination Office (OECD 2009b, 210–11). But Bulgaria has hesitated to adopt RIA, despite internal support (Truen 2011). Turkey has adopted significant administrative reforms, partly in response to encouragement from the EU and partly for domestic reasons, but apparently has not yet instituted RIA (Sezen 2011).

Elsewhere, in Russia in 2008 and South Africa in 2009, the OECD held informational workshops on RIA. South Africa has moved ahead to develop a pilot RIA process supported by the Cabinet Office (Truen 2011). RIA was adopted for environmental regulations in Uganda in 2003 (UNEP 2005), and in Kenya in 2007 (World Bank Group 2010). In Brazil, the Secretariat of Economic Monitoring (SEAE) has recently adopted RIA for some sectors (OECD 2008), although some observers predict that a broader RIA process in Brazil may turn out to be significantly influenced by political forces (Peci and Sobral 2011). The use of BCA

has also become widespread across numerous countries in Asia (Quah and Toh 2012, offering numerous case studies). BCA for both project evaluation and regulatory policy evaluation has been employed in China and India (Livermore 2011), although the development of an RIA process for China's regulatory agencies has lagged (Hu 2009). The Philippines has an RIA process supervised by its National Economic and Development Authority, and is considering establishing an Office of Best Regulatory Practice to provide expert oversight and advice on this RIA process (Bird, Plunkett, and Bosworth 2010). Vietnam adopted RIA in 2008–9, with support from its Administrative Procedure Control Agency, the German GTZ, and the USAID's Vietnam Competitiveness Initiative (PERQ 2011; Truen 2011); an RIA is now required in Vietnam before a bill may be presented to the National Assembly (Truen 2011).

More generally, several key concepts in environmental law and risk regulation have experienced considerable diffusion and borrowing around the world, including BCA through RIA, environmental impact assessment (EIA), emissions trading (cap and trade), public participation and access to government information, and information disclosure requirements on industry (Busch and Jorgens 2005; Wiener and Richman 2010; Ellerman et al. 2010; Wiener et al. 2011; Sand 2011).

Diffusion is a multifaceted concept of the spread of ideas (Levi-Faur 2005). Ideas can spread across numerous nodes in complex networks, including among individuals, groups, civil society, business coalitions, political parties, regions, agencies, countries, and international organizations (Lazer 2005). And ideas may evolve as they spread and be employed differently in different institutional settings. The literature on the diffusion of policy ideas is large (see generally Rose 1993; Dolowitz and Marsh 2000; James and Lodge 2003; Elkins and Simmons 2005; Berry and Berry 2007). Closely related concepts of diffusion as an evolutionary process have been developed in sociology (Hagerstrand 1968), economics (Rogers 2003), law (Sand 1971; Watson 1993; Tushnet 1999), political science (Walker 1969; Lazer 2005; Weyland 2005; Simmons et al. 2008), biology (Arnold 1997; Grant 1999; Deakin 2002), and history of science (Galison 1997). Legal scholars have borrowed from biologists the notion of “memes” as the unit, and counterpart of genes, in the evolution of ideas (Dawkins 1976; Deakin 2002). In biology, evolution was first understood to occur through competition among individuals within a species; later, through field studies, biologists began to appreciate that evolution also occurs through the exchange of genetic material across species via interbreeding (called “hybridization”) (Arnold 1997; Grant 1999). Likewise, in law, evolution was initially understood to occur through competition among individual rules within a legal system (Priest 1977; Elliott 1985; Farber 1994; but for doubts about the efficiency of such legal evolution, see Hadfield 1993; Roe 1996); later, through the equivalent of field studies, legal scholars came to appreciate that legal evolution also occurs through the exchange of legal concepts across legal systems via borrowing (Watson 1993; Elliott 1997; Wiener 2001; Deakin 2002; Wiener 2003), also called “hybridization” (Wiener 2003, 254–61; Wiener 2006; Wiener et al. 2011, 541–44; Delmas-Marty 2006, 101–12).

There are reasons to expect the diffusion of regulatory policy approaches to have increased in recent years. The reality of contemporary international relations and information technology is a world of interconnectedness: networks and the transnational diffusion of ideas. Slaughter (2009, 1) argues:

We live in a networked world...In this world, the measure of power is connectedness...The twentieth-century world was, at least in terms of geopolitics, a billiard-ball world, described by the political scientist Arnold Wolfers as a system of self-contained states colliding with one another...The emerging networked world of the twenty-first century, however, exists above the state, below the state, and through the state.

Interconnectedness enables the more fluid spread of ideas, and thereby offers increased opportunities to borrow and collaborate on policy solutions (Lazer 2005). Regulatory ideas are increasingly being borrowed across the Atlantic, and worldwide, in an evolving web of global administrative law (Kingsbury et al. 2005; Rose-Ackerman and Lindseth 2010). Levi-Faur (2005, 20) writes:

[T]he new order [of regulatory capitalism] is diffused rather than reproduced independently as a discrete event in each country and sector. Diffusion is a reflection of an increasingly interdependent world. Beyond economic interdependencies, there is a growth of “horizontal” channels of diffusion and an increase in the export and import of institutions and knowledge.

But the fact that we observe similar legal rules, policies, or institutions arising in multiple places does not necessarily mean that the identical idea has been (or should be) adopted in every place. There may be variation in the content of the idea as it is adopted in different places. RIA adopted in one country may have a different institutional role and analytic content than RIA adopted in other countries (Radaelli 2005; Wiener and Alemanno 2010). Careful comparison of the elements of each RIA system and ROB will be helpful in distinguishing what precisely was borrowed from where. And even if the idea is essentially the same in each place we observe it arising, that does not necessarily mean that the idea was learned and eagerly borrowed by one place from another; it might, for example, have been imposed coercively by a colonial power (Elkins and Simmons 2005; Simmons et al. 2008), or imitated unthinkingly as a passing fad (Lazer 2005), or arisen independently in each place in response to similar but independent conditions (as in “convergent evolution” and related concepts in biology, see Losos 2011). Dobbin, Simmons, and Garrett (2007, 462–63) warn:

One weakness of many of the studies in this arena is that they take simple diffusion to be evidence of learning, without looking at whether there was evidence of the efficacy of a policy innovation before second- and third- movers adopted it...[R]ational learning theory implies a kind of cost-benefit analysis...People may draw lessons by observing the effects of policies other countries adopt, and they may engage in Bayesian updating, in which they constantly add new bits of evidence to the existing knowledge

base . . . the overarching theme here is that countries learn to pursue effective policies.

A similar point is that successful legal borrowing involves a kind of cost-benefit calculus: an evaluation of policies and institutions in other jurisdictions and a decision to borrow or translate the version that appears most promising for one's own needs (Wiener 2001; Levi-Faur 2005; Stone 2012). This kind of calculus—essentially what Benjamin Franklin advised—may be applied in horizontal legal borrowing across countries and in vertical legal borrowing across local, national, and international levels of governance (Wiener 2001; Levi-Faur 2005; Ovodenko and Keohane 2012).

The borrowing calculus that drives the diffusion of RIA and ROBs is undoubtedly based on a combination of factors. One source appears to be a demand, at least among presidents, to manage the growing regulatory state. Consider the adoption of the U.S. Administrative Procedure Act in 1946 following the New Deal, and the executive orders on regulatory review in the 1970s and 1980s following the burst of regulatory legislation of the preceding decade. Similarly, in Europe, Better Regulation and the IAB arose after the growth of EU regulation in the 1990s. A similar pattern may be at work in other countries. The presidential impetus to manage the regulatory state through BCA, RIA, and ROBs can focus on reducing costs and cutting red tape, but it can also seek to increase social net benefits through promotion of desirable new regulations (Kagan 2001; Graham 2007; Revesz and Livermore 2008). In addition, economic crises and fears about economic competitiveness appear to spur regulatory reform efforts—for example, in the United States after the stagflation of the late 1970s, in Europe with the Lisbon Agenda of jobs and growth since 2000, and in Korea and Mexico after economic crises in the 1990s (Cordova-Novion and Jacobzone 2011, Truen 2011). Looking ahead, RIA and ROBs will be more likely to be adopted if their methods can be made less costly and more beneficial, especially in lower-income countries facing constraints on administrative capacity.

Evidence is accumulating that policy approaches to RIA and regulatory oversight have actually been borrowed, based on learning about efficacy, across countries. Research on the emergence of “global administrative law” reflects both hybridization and the role of purposive actors consciously borrowing ideas (Kingsbury et al. 2005). There is clearly an epistemic community of experts sharing experiences about RIA and ROBs across countries; examples include Radaelli (2005), Renda (2006), Jacobs (2006), Cordova-Novion and Jacobzone (2011), Quah and Toh (2012), Truen (2011), Wiener (2006), Wiener and Alemanno (2010), and this volume itself. The OECD has been a major supplier of information and encouragement on regulatory quality improvement not only in OECD member states but around the world, as have the overseas development agencies of key countries like the United States and Germany. Direct testimonial evidence is also available; consider this express account of borrowing in the EU Better Regulation initiative by the prime minister of Ireland:

Better Regulation is a core theme of our EU Presidency and featured prominently at the recent Spring Economic Council . . . There is a long tradition in

American Public Administration of focusing on the quality and impact of regulation. Many of the policies, institutions, and tools that support Better Regulation have their origins in the U.S.A....There is much that we have learned from the United States in relation to regulatory management and, through occasions like this, much that we can continue to learn....We hope too that there will be shared learning. While we in the European Union are newer to the game, I hope that we have moved beyond our rookie season! The Union is making up ground quickly in respect of Better Regulation. This is as it should be. There is a deeper understanding within the European Institutions and Member States of the need for regulatory reform.

—AHERN 2004

A further kind of evidence is statistical analysis of the timing and location of the adoption of RIA across countries. De Francesco (2012) tested the historical pattern for the influence of several plausible variables. He found that trade relations and the country's legal system family were not significant predictors of RIA adoption; prior adoption of other information access laws helped predict RIA adoption; the OECD was important more for its information-sharing facility than for its nudging efforts; and the most influential factor in adoption of RIA, in De Francesco's model, was a country's connection to transnational information networks offering knowledge about regulatory innovations.

From National Styles to Regulatory Evolution

This pattern of diffusion has important implications for the comparison and evolution of law. Comparative law has traditionally presumed that important differences across countries are explained by discrete "national styles of regulation" (Vogel 1986), "families" of legal systems (Zweigert and Kotz 1998), and early "legal origins" (La Porta et al. 2008). The economic analysis of "legal origins" (La Porta et al. 2008) draws broad generalizations about modern business rules by grouping countries into ancient legal families (English, French, German, etc.) (for critiques of the "legal origins" literature, see Roe 2006; Curran 2009; Michaels 2009). Comparative law scholars have long recognized the possibilities for legal borrowing (Watson 1993), though often these transplants are individual doctrines, which may take root in the other system, or wither, or act as irritants—rare grafts from one discrete legal system into another, whose reception in the second legal system is precarious.

But as Reimann (2001) pointed out, extensive diffusion of legal ideas can erode the traditional categories of comparative law that are based on discrete national legal systems. The reality of major reforms of regulatory systems around the world, through BCA, RIA and ROBs, suggests that the model of stable discrete national styles of regulation, or early legal origins determining modern regulation, needs substantial rethinking. De Francesco (2012) finds little or no evidence that national legal origin explains modern adoption of RIA. Vogel (2012) concedes that national regulatory systems are far more open to wholesale change than he had

previously argued (Vogel 1986). Even the “legal origins” advocates allow (in passing) that “legal origins” may not account for regulations in what they label “new spheres of social control,” nor for regulations adopted following crisis events (La Porta et al. 2008, 307, 326)—two of the leading characteristics of risk regulation and regulatory reform.

Diffusion and hybridization are powerful forces in regulatory evolution. Hybridization, in law as in biology, exchanges genes or memes, and thereby interpenetrates the boundaries of “species,” “systems,” “families,” and “styles.” Hybridization creates hybrid offspring that are neither convergent with nor divergent from the prior populations, but new; they do not always succeed and are often less fit, but they prosper when conditions change, opening niches for which the hybrids are well adapted. Undertaking both a dozen qualitative in-depth case studies and a quantitative analysis of a large-N sample of risks, Wiener et al. (2011) find that U.S. and European systems of risk regulation are undergoing substantial hybridization, exchanging ideas on many topics, including precaution, better regulation, impact assessment, regulatory oversight, economic incentive instruments, information disclosure, and other key elements. Risk regulation lives in an unfolding network society (Castells 2000; Slaughter 2004; De Francesco 2012). The result is that it becomes increasingly difficult to distinguish or generalize about separate regulatory systems with discrete characters. Countries and cultures caricatured as sharply different turn out to share a great deal (Baldwin 2009). Amid such hybridization, claims of discrete national legal systems or families become stereotypes of a bygone era (if it ever existed).

This does not mean that no comparisons can be made. (Such a claim would itself be a hasty generalization drawn from inadequate data.) The view that comparative law is impossible because legal systems are so intrinsically different from each other that rules cannot be compared—what Siems (2007, 1, 6) critiques as the “strong form” of the claim of the “end of comparative law”—is both self-negating (it depends on the very kind of sharp comparison that it purports to deny) and empirically unsupported (because the United States, Europe, and, increasingly, other countries are sharing legal ideas, not veering off on separate paths). As Hiram Chodosh has nicely shown, those who assert that “comparing apples and oranges” is impossible are committing three errors: first, people do in fact compare apples and oranges at the grocery store every day (in terms of taste, color, shape, price, and so on); second, using the phrase “apples and oranges” itself requires a comparison between the two fruits (to deem them so different); and third, such an assertion itself rests on a comparison between the degree of contrast between the two fruits and the degree of contrast between the other two items sought to be compared (Chodosh 1999). (This defense of comparison applies not only to comparative law but to critiques of BCA as well.) Comparisons can and must be made, but on the basis of much more systematic empirical study, rather than generalizing to “national styles” based on a small and biased sample. The real tableau is a complex and evolving landscape that defies easy generalization—the busy world depicted with evident affection by both Pieter Brueghel (a medieval European) and Richard Scarry (a more modern American). An improved understanding will

involve comparison of rules and institutions as modules or memes that can be exchanged across interconnected legal systems, rather than of categorical generalizations about national legal systems or legal origins.

Regulatory Foresight

Many of the contemporary debates over BCA and RIA were foreseen, of course, by Benjamin Franklin. He wrote to his friend, the English scientist Joseph Priestley, about whether Priestley should accept a new job (Franklin 1772):

In the Affair of so much Importance to you, wherein you ask my Advice, I cannot for want of sufficient Premises, advise you what to determine, but if you please I will tell you how. When those difficult Cases occur, they are difficult, chiefly because while we have them under Consideration, all the Reasons pro and con are not present to the Mind at the same time; but sometimes one Set present themselves, and at other times another, the first being out of Sight. Hence the various Purposes or Inclinations that alternately prevail, and the Uncertainty that perplexes us.

To get over this, my Way is, to divide half a Sheet of Paper by a Line into two Columns; writing over the one Pro, and over the other Con. Then during three or four Days Consideration, I put down under the different heads short Hints of the different Motives, that at different Times occur to me, for or against the Measure. When I have thus got them all together in one View, I endeavour to estimate their respective Weights; and where I find two, one on each side, that seem equal, I strike them both out. If I find a Reason pro equal to some two Reasons con, I strike out the three. If I judge some two Reasons con, equal to some three Reasons pro, I strike out the five; and thus proceeding I find at length where the Ballance lies; and if after a Day or two of farther consideration, nothing new that is of Importance occurs on either side, I come to a Determination accordingly. And, tho' the Weight of Reasons cannot be taken with the Precision of Algebraic Quantities, yet, when each is thus considered, separately and comparatively, and the whole lies before me, I think I can judge better, and am less liable to make a rash Step; and in fact I have found great Advantage from this kind of Equation, in what may be called Moral or Prudential Algebra.

Franklin appears to have anticipated so many core aspects of BCA and RIA: the pitfalls of neglecting important impacts; the need for a structured approach to identifying and weighing the pros and cons; the inevitability of uncertainty; the need to “estimate their respective weights” but the inability to achieve mathematical precision (yet still an “Equation... Algebra”); the issue of commensurability (crossing out like items); the avowedly normative (“moral or prudential”) exercise; the use of BCA as a tool to help us “judge better,” not an arithmetic rule; the cognitive approach to BCA as a tool to get all key aspects (“the whole”) to appear “present to the Mind at the same time”; the behavioral role of BCA as a tool to avoid “a rash Step.”

The letter itself illustrates the transatlantic diffusion of BCA via epistemic communities. It also records the diffusion of BCA preceding the establishment of RIA and ROBs. Franklin wrote to Priestley, and Priestley was in communication with Jeremy Bentham, who later wrote that he learned key elements of utilitarianism from Priestley (Bentham 1843); at least one historian suggests that Bentham got the idea of dividing and weighing the pros and cons from Franklin (Viner 1949, 368), though it is difficult to find evidence that Franklin and Bentham communicated directly (perhaps through Priestley). An intriguing additional possibility, difficult to document, is that Franklin, Priestley, and Bentham influenced the French engineer-economist Jules Dupuit, who developed the mathematics of marginal BCA in the early 1800s (Ekelund and Hebert 1975). Among other possible connections to Dupuit are that Franklin and Bentham each spent considerable time in Paris (Franklin was the American ambassador to France from 1776 to 1785), and Bentham's work was published in French by Etienne Dumont in the early 1800s. (Franklin's algebra was also later employed by Charles Darwin, to decide whether to marry, in 1838; a possible link is that Franklin had known Darwin's grandfathers, Erasmus Darwin and Josiah Wedgwood.) Franklin also helped send French engineers to America to assist with the Revolutionary War—a role that soon after contributed to the formation of the U.S. Army Corps of Engineers, modeled on the French Corps des Ponts et Chaussées, the group that included Jules Dupuit. And much later, of course, BCA was apparently first applied in the U.S. government by the Army Corps of Engineers under the Flood Control Act of 1936 (Quah and Toh 2012; Hines 1973).

The foresight needed in regulation is not only Ben Franklin's foresight about how to do BCA, but foresight about risks and regulatory impacts. In order to weigh the pros and cons, we need ways to foresee those pros and cons. That is the function of risk assessment, and of RIA. Foresight is also the ambition of precaution. Although precaution and RIA are often portrayed as antagonists, they are better understood as complementary components of a deeper phenomenon: the diffusion of regulatory foresight. Both precaution and RIA are efforts to forecast the future consequences of current choices.

Humans have a capacity to envision future scenarios, but these scenarios tend to be constructed in the brain out of fragments of our memories, and so are partly rooted in what is mentally available (Gilbert and Wilson 2007; Schachter, Addis, and Buckner 2008). This property of bounded foresight helps explain the observation that public risk perceptions are often galvanized by "available" recent crisis events (Sunstein and Kuran 1999). Precaution is an effort to foresee and prevent such risks before they occur. On the other side of the same coin, RIA is an effort to foresee the impacts of risk regulatory policies and ensure they are desirable. Meanwhile, policy diffusion itself can be vulnerable to the availability heuristic if policymakers adopt what they happen to see rather than what careful study would recommend (Elkins and Simmons 2005).

Regulatory foresight is increasingly demanded as societies prosper and, ironically, as they become safer. Increased demand for regulation is spurred by factors including prosperity, impersonal commerce, advancing science, crisis events,

and rising safety itself. Prosperity reduces immediate risks to survival and extends longevity. But prosperity also feeds a rising demand for amenities such as environmental quality and risk protection, enhances the scientific methods used to detect more subtle and latent risks, and brings new technologies that reduce some risks but may create new risks. These factors help explain the increasing demand for precautionary policies in prosperous, safer countries—a phenomenon criticized by Wildavsky (1979), but perhaps understandable if demand for risk protection increases with income. Lower risk and greater longevity might also shift the demand for risk protection toward greater emphasis on latent risks, because even though greater longevity reflects decreasing risks, longer life spans may also lead people to care more about risks that may arise farther into the future. And, in a decreasing-risk world, those risks that do occur may be seen as more unusual and more outrageous by the public, spurring greater demand for protective measures (Godard et al. 2002, 29).

But precautionary regulations to reduce those risks can impose their own costs and ancillary impacts (risk-risk trade-offs) (Wiener 2002). Hence the rising demand for RIA—a companion form of foresight. International diffusion of RIA and ROBs are manifestations of the demand for regulatory foresight.

As a society becomes even safer through the joint effects of prosperity, precaution, and better regulation, that society may come to confront even lower-probability, higher-consequence risks—extreme catastrophic risks that would otherwise escape attention but that could be highly worth preventing (Posner 2004; Sunstein 2007). Scientific detection capabilities improve with prosperity and continuing research. Longer life spans mean that extreme risks become more plausible within one's own lifetime and the lifetime of one's children and grandchildren. And the bequest value to the living of protecting future generations may increase with wealth, safety, and foresight. (Whereas the Environmental Kuznets Curve hypothesis suggests that pollution levels would rise and then fall as a society becomes ever wealthier, this risk-prosperity-foresight hypothesis suggests that risks would shift toward the tail of remote risks as a society prospers and reduces familiar risks.) But these extreme risks may nonetheless go neglected where they are so rare that no present or memorable incident triggers the “availability” heuristic (Weber 2006). Furthermore, catastrophic risks may be neglected where the losses would be so large that the public becomes numb to their magnitude (Slovic 2007), and where the catastrophe would wipe out the very institutions meant to provide remedies and ex post sanctions (thus weakening ex ante incentives for prevention). These are “tragedies of the uncommons” (Wiener 2005; Wiener 2011), and they pose the strongest case for precaution. Still, precaution against tragedies of the uncommons must confront the twin challenges of priority-setting (choosing which extreme scenario to address, even as such scenarios multiply when the probability worth worrying about becomes ever smaller) and risk-risk trade-offs (because measures to prevent one catastrophic risk might induce another). Thus, even in cases where precaution is strongly warranted against uncertain catastrophic risks, the full foresight of RIA remains crucial.

To succeed, societies must manage both emerging risks (through precaution) and the ancillary impacts of their own risk protection measures (through impact assessment).

Both are forms of foresight. The international diffusion of these strategies enables more countries to take advantage of their benefits, and enables researchers to study variations across countries from which we can learn and improve such policies. Both hybridization and regulatory foresight are essential strategies for risk management in a changing world. But diffusion can go awry if policymakers are not good students or are not well informed about other policy measures and impacts (Elkins and Simmons 2005). To make the most of these strategies, we should consciously construct a global policy laboratory (Greenstone 2009; Wiener 2011)—which in turn involves a bit of regulatory hindsight. We will need *ex post* evaluation of regulatory policies and of the diffusion of regulatory oversight systems, in order to see what difference those policies and oversight systems actually make (Coglianese and Benneer 2005). These retrospective assessments will help us revise those policies and oversight systems, foster smarter diffusion, and improve our methods of *ex ante* prospective regulatory foresight and policy choice.

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Bibliography

- Ahern, Bertie. 2004. Speech by the Taoiseach (head of government of Ireland), Bertie Ahern, at the IBEC Conference on EU-U.S. Perspectives on Regulation. April 19, Dublin. www.betterregulation.ie/index.asp?docID_57_ (accessed May 24, 2010).
- Arnold, M. L. 1997. *Natural Hybridization and Evolution*. Oxford: Oxford University Press.
- Australian Productivity Commission. 2011. *Identifying and Evaluating Regulation Reforms*. Research Report, Canberra, December.
- Baldwin, Peter. 2009. *The Narcissism of Minor Differences: How America and Europe Are Alike*. Oxford: Oxford University Press.
- Bentham, Jeremy. 1843. “Extracts from Bentham’s Commonplace Book.” In *The Works of Jeremy Bentham*, edited by William Tait, 10: 142. London: Simpkin, Marshall & Co.
- Berkowitz, Daniel, Katharina Pistor, and Jean-Francois Richard. 2003. “Economic Development, Legality, and the Transplant Effect.” *European Economic Review* 47: 165–95.
- Berry, Frances Stokes, and William D. Berry. 2007. “Innovation and Diffusion Models in Policy Research.” In *Theories of the Policy Process*, ed. Paul A. Sabatier, 223–60. Boulder: Westview Press.

- Bird, Kelly, Herb Plunkett, and Malcolm Bosworth. 2010. *Philippines: Options for Establishing an Office of Best Regulatory Practice*. ADB Technical Assistance Consultant's Report, Project Number: 40538-01. Manila: Asian Development Bank.
- Busch, Per-olof, and Helge Jorgens. 2005. "The International Sources of Policy Convergence: Explaining the Spread of Environmental Policy Innovations." *Journal of European Public Policy* 12: 860-84.
- Castells, Manuel. 2000. *The Information Age: Economy, Society, and Culture*. 2nd ed. 3 vols. Oxford: Blackwell.
- Chodosh, Hiram . 1999. "Comparing Comparisons: In Search of Methodology." *Iowa Law Review* 84: 1025-1131.
- Coglianesi, Cary, and Lori Snyder Bennear. 2005. "Program Evaluation of Environmental Policies: Toward Evidence-Based Decision Making." In *Social and Behavioral Science Research Priorities for Environmental Decision Making*, 246-73. Washington, DC: National Research Council, National Academies Press.
- Cordova-Novion, Cesar, and Stephane Jacobzone. 2011. "Strengthening the Institutional Setting for Regulatory Reform: The Experience from OECD Countries." OECD Working Papers on Public Governance, No. 19.
- Curran, Vivian G. 2009. "Comparative Law and the Legal Origins Thesis." *American Journal of Comparative Law* 57: 863-76.
- Dawkins, Richard. 1976. *The Selfish Gene*. Oxford: Oxford University Press.
- De Francesco, Fabrizio. 2012. "Diffusion of Regulatory Impact Analysis among OECD and EU Member States." *Comparative Political Studies*. <http://cps.sagepub.com/content/early/2012/02/15/0010414011434297>.
- Deakin, Simon. 2002. "Evolution for Our Time: A Theory of Legal Memetics." *Current Legal Problems* 55: 1-42.
- Delmas-Marty, Mirelle . 2006. *Le Pluralisme Ordonné*. Paris: Seuil.
- Dobbin, Frank, Beth Simmons, and Geoffrey Garrett. 2007. "The Global Diffusion of Public Policies: Social Construction, Coercion, Competition, or Learning?" *Annual Review of Sociology* 33: 449-72.
- Dolowitz, David, and David Marsh. 2000. "Learning from Abroad: The Role of Policy Transfer in Contemporary Policy Making." *Governance* 13 (1): 5-24.
- Eeckhoudt, Louis R., and James K. Hammitt. 2001. "Background Risks and the Value of a Statistical Life." *Journal of Risk and Uncertainty* 23: 261-79.
- Ekelund, Robert B., Jr., and Robert F. Hebert, 1975. "Dupuit and Marginal Utility: Context of the Discovery." *History of Political Economy* 8: 266-73.
- Elkins, Zachary, and Beth Simmons. 2005. "On Waves, Clusters, and Diffusion: A Conceptual Framework." *Annals of the American Academy of Political and Social Science* 598: 33-51.
- Ellerman, A. Denny, Frank Convery, and Christian de Perthuis. 2010. *Pricing Carbon: The European Union Emissions Trading Scheme*. Cambridge: Cambridge University Press.
- Elliott, E. Donald . 1985. "The Evolutionary Tradition in Jurisprudence." *Columbia Law Review* 85: 38-94.
- Elliott, E. Donald . 1997. "Law and Biology: The New Synthesis?" *St. Louis University Law Journal* 41: 595-624.
- European Commission. 2010. *Communication from the President: The Working Methods of the Commission 2010-2014*. C(2010) 1100 (February 10). http://ec.europa.eu/commission_2010-2014/president/news/documents/pdf/c2010_1100_En.pdf.

- European Commission. 2012. *Impact Assessment Board, Report for 2011*. SEC(2012) 101 Final (January 2). http://ec.europa.eu/governance/impact/key_docs/docs/sec_2012_0101_En.pdf.
- Farber, Daniel A. 1994. "Environmental Protection as a Learning Experience." *Loyola of Los Angeles Law Review* 7: 791–807.
- Franklin, Benjamin . 1772. "Letter to Joseph Priestley, September 19." Reprinted in *Benjamin Franklin: Representative Selections, with Introduction, Bibliography and Notes*, ed. Frank Luther Mott and Chester E. Jorgenson, 348–49. New York: American Book Company.
- Galison, Peter . 1997. *Image and Logic: A Material Culture of Microphysics*. Chicago: University of Chicago Press.
- Gilbert, Daniel T., and Timothy D. Wilson. 2007. "Prospection: Experiencing the Future." *Science* 317: 1351–54.
- Godard, Olivier, Claude Henry, Patrick Lagadec, and Erwann Michel-Kerjan. 2002. *Traité des Nouveaux Risques: Précaution, Crise, Assurance*. Paris: Gallimard.
- Graham, John D. 2007. "The Evolving Regulatory Role of the U.S. Office of Management and Budget." *Review of Environmental Economics and Policy* 1: 171–91.
- Graham, John D., and Jonathan B. Wiener, eds. 1995. *Risk vs. Risk: Tradeoffs in Protecting Health and the Environment*. Cambridge: Harvard University Press.
- Grant, Peter R. 1999. *Ecology and Evolution of Darwin's Finches*. Princeton: Princeton University Press.
- Greenstone, Michael . 2009. "Toward a Culture of Persistent Regulatory Experimentation and Evaluation." In *New Perspectives on Regulation*, ed. David Moss and John Cisternino, 111–25 . Cambridge: Tobin Project.
- Hadfield, Gillian . 1993. "Bias in the Evolution of Legal Rules." *Georgetown Law Journal* 80: 583–616.
- Hagerstrand, Torsten. 1968. "The Diffusion of Innovations." In *International Encyclopedia of the Social Sciences*, ed. David L. Sills, 4: 174–78. New York: Macmillan.
- Hines, Lawrence G. 1973. "Precursors to Benefit-Cost Analysis in Early United States Public Investment Projects." *Land Economics* 49: 310–17.
- Hu, Jiabin. 2009. "Assessing the Governance of the Independent Regulatory Agencies in China." PhD diss., University of Southern California.
- Jacobs, Scott. 2006. *Current Trends in Regulatory Impact Analysis: The Challenges of Mainstreaming RIA into Policy-Making*. New York: Jacobs & Associates.
- James, Oliver, and Martin Lodge. 2003. "The Limitations of 'Policy Transfer' and 'Lesson Drawing' for Public Policy Research." *Political Studies Review* 1: 179–93.
- Kagan, Elena. 2001. "Presidential Administration." *Harvard Law Review* 114: 2245–2385.
- Kingsbury, Benedict, Nico Krisch, and Richard B. Stewart. 2005. "The Emergence of Global Administrative Law." *Law and Contemporary Problems* 68 (3): 15–62.
- Kirkpatrick, C ., and Y. Zhang . 2004. "Regulatory Impact Assessment in Developing and Transition Economies: A Survey of Current Practice." Working Paper Series, No. 83, Centre on Regulation and Competition, Institute for Development Policy and Management, University of Manchester.
- La Porta, Rafael, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2008. "The Economic Consequences of Legal Origins." *Journal of Economic Literature* 46: 285–332.
- Lazer, David. 2005. "Regulatory Capitalism as a Networked Order." *Annals of the American Academy of Political and Social Science* 598: 52–66.

- Levi-Faur, David . 2005. "The Global Diffusion of Regulatory Capitalism." *Annals of the American Academy of Political and Social Science* 598: 12–32.
- Levi-Faur, David . 2011. "Regulation and Regulatory Governance." In *Handbook on the Politics of Regulation*, ed. David Levi-Faur, 3–21. Cheltenham: Edward Elgar.
- Lindseth, Peter L., Alfred C. Aman Jr., and Alan C. Raul. 2008. *Administrative Law of the European Union: Oversight*. Ed. George A. Bermann et al. Washington, D.C.: American Bar Association.
- Livermore, Michael A. 2011. "Can Cost-Benefit Analysis of Environmental Policy Go Global?" *New York University Environmental Law Journal* 19: 146–93.
- Livermore, Michael A., and Richard L. Revesz, eds. 2013. *Cost-Benefit Analysis, Environmental Policy, and Emerging Economies*. Oxford: Oxford University Press.
- Losos, Jonathan B. 2011. "Convergence, Adaptation, and Constraint." *Evolution* 65 (7): 1827–40.
- Michaels, Ralf. 2009. "Comparative Law by Numbers? Legal Origins Thesis, Doing Business Reports, and the Silence of Traditional Comparative Law." *American Journal of Comparative Law* 57: 765–95.
- Organisation for Economic Co-operation and Development (OECD). 2008. *Government Capacity to Assure High Quality Regulation in Brazil*. Paris: OECD.
- Organisation for Economic Co-operation and Development (OECD). 2009a. *Regulatory Impact Analysis—Tool for Policy Coherence*. Paris: OECD.
- Organisation for Economic Co-operation and Development (OECD). 2009b. *Part III: Profiles of the Western Balkan Countries and Kosovo under UNSCR 1244/99*. Paris: OECD.
- Organisation for Economic Co-operation and Development (OECD). 2011. *Regulatory Management Indicators: Chile 2011*. Paris: OECD.
- Organisation for Economic Co-operation and Development (OECD). 2012. Recommendation of the Council on Regulatory Policy and Governance (22 March), at http://www.oecd.org/document/33/0,3746,en_2649_34141_48081633_1_1_1_1,00.html.
- Ovodenko, Alexander, and Robert O. Keohane. 2012. "Institutional Diffusion in International Environmental Affairs." *International Affairs* 88 (3): 523–41.
- Peci, Alketa, and Felipe Sobral. 2011. "Regulatory Impact Assessment: How Political and Organizational Forces Influence Its Diffusion in a Developing Country." *Regulation & Governance* 5: 204–20.
- Program for Enhancing Regulatory Quality (PERQ). 2011. *RIA Compliance Manual*. Hanoi: PERQ.
- Posner, Richard A. 2004. *Catastrophe: Risk and Response*. Oxford: Oxford University Press.
- Priest, George L. 1977. "The Common Law Process and the Selection of Efficient Rules." *Journal of Legal Studies* 6 (October): 65–82.
- Quah, Euston, and Raymond Toh. 2012. *Cost-Benefit Analysis: Cases and Materials*. New York: Routledge.
- Radaelli, Claudio M. 2005. "Diffusion without Convergence: How Political Context Shapes the Adoption of Regulatory Impact Assessment." *Journal of European Public Policy* 12: 924–43.
- Radaelli, Claudio M., and Fabrizio De Francesco. 2008. "Regulatory Impact Assessment." In *The Oxford Handbook of Regulation*, ed. Martin Cave, Robert Baldwin, and Martin Lodge, 279–301. Oxford: Oxford University Press.
- Reimann, Mathias . 2001. "Beyond National Systems: A Comparative Law for the International Age." *Tulane Law Review* 75: 1103–19.

- Renda, Andrea. 2006. *Impact Assessment in the EU*. Brussels: Center for European Policy Studies.
- Revesz, Richard L., and Michael A. Livermore. 2008. *Retaking Rationality: How Cost-Benefit Analysis Can Better Protect the Environment and Our Health*. Oxford: Oxford University Press.
- Roe, Mark J. 1996. "Chaos and Evolution in Law and Economics." *Harvard Law Review* 109: 641–71.
- Roe, Mark J. 2006. "Legal Origins, Politics, and Modern Stock Markets." *Harvard Law Review* 120: 460–527.
- Rogers, M. Everett . 2003. *The Diffusion of Innovations*. 5th ed. (1st ed. 1963). New York: Free Press.
- Rose, Richard . 1993. *Lesson-Drawing in Public Policy*. Chatham: Chatham House.
- Rose-Ackerman, Susan, and Peter Lindseth, eds. 2010. *Comparative Administrative Law*. Northampton, Mass.: Edward Elgar.
- Sand, Peter H. 1971. "Current Trends in African Legal Geography: The Interfusion of Legal Systems." *African Legal Studies* 5: 1–27.
- Sand, Peter H. 2011. "Information Disclosure." In *The Reality of Precaution: Comparing Risk Regulation in the United States and Europe*, ed. Jonathan B. Wiener, Michael D. Rogers, James K. Hammitt, and Peter H. Sand, 323–360 . Washington, D.C.: RFF Press/Earthscan.
- Schachter, Daniel L., Donna Rose Addis, and Randy L. Buckner. 2008. "Episodic Simulation of Future Events: Concepts, Data, and Applications." *Annals of the New York Academy of Sciences* 1124: 39–60.
- Schwartz, Jason. 2010. *52 Experiments with Regulatory Review: The Political and Economic Inputs into State Rulemaking*. NYU Institute for Policy Integrity, Report No. 6.
- Sezen, Seriyi. 2011. "International versus Domestic Explanations of Administrative Reforms: The Case of Turkey." *International Review of Administrative Sciences* 77: 322–46.
- Shapiro, Stuart . 2006. "Politics and Regulatory Policy Analysis." *Regulation* 29 (2): 40–45.
- Siems, Mathias M. 2007. "The End of Comparative Law." *Journal of Comparative Law* 2: 133–50.
- Simmons, Beth A., Frank Dobbin, and Geoffrey Garrett, eds. 2008. *The Global Diffusion of Markets and Democracy*. Cambridge: Cambridge University Press.
- Slaughter, Anne-Marie . 2004. *A New World Order*. Princeton: Princeton University Press.
- Slaughter, Anne-Marie . 2009. "The Networked Century." *Foreign Affairs* 88 (January–February): 94–113.
- Slovic, Paul . 2007. "If I Look at the Mass I Will Never Act: Psychic Numbing and Genocide." *Judgment and Decision Making* 2 (2): 79–95.
- Stone, Diane . 2012. "Transfer and Translation of Policy." *Policy Studies* 33 (4): 1–17.
- Sunstein, Cass R. 2007. *Worst-Case Scenarios*. Cambridge: Harvard University Press.
- Sunstein, Cass R., and Timur Kuran. 1999. "Availability Cascades and Risk Regulation." *Stanford Law Review* 51: 683–768.
- Truen, Sarah . 2011. *Regulatory Impact Assessment in SADC: Improving Regional Regulatory Outcomes*. Los Angeles: AECOM International Development for USAID/Southern Africa.
- Tushnet, Mark . 1999. "Possibilities of Comparative Constitutional Law." *Yale Law Journal* 108: 1225–1309.

- United Nations Environment Programme (UNEP). 2005. *Regulatory Impact Assessment and Cost-Benefit Analysis in Uganda*. Nairobi: UNEP.
- Viner, Jacob . 1949. "Bentham and J.S. Mill: The Utilitarian Background." *American Economic Review* 39: 360–82.
- Vogel, David. 1986. *National Styles of Regulation: Environmental Policy in Great Britain and the United States*. Ithaca: Cornell University Press.
- Vogel, David. 2012. *The Politics of Precaution: Regulating Health, Safety and Environmental Risks in the United States and Europe*. Princeton: Princeton University Press.
- Walker, Jack L. 1969. "The Diffusion of Innovation among the American States." *American Political Science Review* 63: 880–89.
- Watson, Alan. 1993. *Legal Transplants: An Approach to Comparative Law*. 2nd ed. Athens: University of Georgia Press.
- Weber, Elke U. 2006. "Experience-Based and Description-Based Perceptions of Long-Term Risk: Why Global Warming Does Not Scare Us (Yet)." *Climatic Change* 77: 103–20.
- Weyland, Kurt. 2005. "Theories of Policy Diffusion." *World Politics* 57: 262–95.
- Wiener, Jonathan B. 2001. "Something Borrowed for Something Blue: Legal Transplants and the Evolution of Global Environmental Law." *Ecology Law Quarterly* 27: 1295–1371.
- Wiener, Jonathan B. 2002. "Precaution in a Multirisk World." In *Human and Ecological Risk Assessment: Theory and Practice*, ed. Dennis D. Paustenbach, 1509–31. New York: Wiley and Sons.
- Wiener, Jonathan B. 2003. "Whose Precaution after All? A Comment on the Comparison and Evolution of Risk Regulatory Systems." *Duke Journal of International and Comparative Law* 13: 207–62.
- Wiener, Jonathan B. 2005. "Reviews of Catastrophe by Richard Posner and Collapse by Jared Diamond." *Journal of Policy Analysis and Management* 24: 885–90.
- Wiener, Jonathan B. 2006. "Better Regulation in Europe." *Current Legal Problems* 59: 447–518.
- Wiener, Jonathan B. 2011. "The Real Pattern of Precaution." In *The Reality of Precaution: Comparing Risk Regulation in the United States and Europe*, ed. Jonathan B. Wiener, Michael D. Rogers, James K. Hammitt and Peter H. Sand, 519–65 . Washington, D.C.: RFF Press/Earthscan.
- Wiener, Jonathan B., and Alberto Alemanno. 2010. "Comparing Regulatory Oversight Bodies across the Atlantic: The Office of Information and Regulatory Affairs in the U.S. and the Impact Assessment Board in the EU." In *Comparative Administrative Law*, ed. Susan Rose-Ackerman and Peter Lindseth, 309–35 . Northampton, Mass.: Edward Elgar.
- Wiener, Jonathan B., and Barak D. Richman. 2010. "Mechanism Choice." In *Research Handbook on Public Choice and Public Law*, ed. Daniel Farber and Anne Joseph O'Connell, 363–96 . Northampton, Mass.: Edward Elgar.
- Wiener, Jonathan B., Michael D. Rogers, James K. Hammitt, and Peter H. Sand, eds. 2011. *The Reality of Precaution: Comparing Risk Regulation in the United States and Europe*. Washington, D.C.: RFF Press/Earthscan.
- Wildavsky, Aaron. 1979. "No Risk is the Highest Risk of All." *American Scientist* 67: 32–37.
- Investment Climate Advisory Services of the World Bank Group (World Bank Group). 2010. *Better Regulation for Growth: Institutions for Regulatory Governance*. Washington, D.C.: World Bank.
- Zweigert, Konrad, and Hein Kotz. 1998. *An Introduction to Comparative Law*. 3rd ed. Trans. Tony Weir. Oxford: Oxford University Press.