

REGULATORY TRUST

Rebecca M. Bratspies*

“Trust begins where prediction ends.”¹

When regulators make decisions in the face of uncertainty, what gives legitimacy to their decisions? This question arises more and more frequently as globalized markets and new technologies crash through pre-existing social and political fault lines. In the myriad contexts of regulation, the same refrain plays over and over—governments must make high-stakes regulatory choices that implicate poorly understood risks. Trust clearly plays a role in facilitating agency legitimacy, but what is the relationship between law and trust?

While trustworthy regulators may enhance social resilience, uncertainty erodes public trust and alienates citizens. This grim reality is reflected in declining levels of trust in government institutions. Loss of trust undermines not only regulatory effectiveness, but also society’s resilience—its capacity to persevere and even to thrive in the face of multiple, unpredictable risks.

This Article offers a framework for “regulatory trust”—the unique form of social trust invoked when regulatory agencies make decisions under conditions of uncertainty. In doing so, it examines what regulatory trust means, why it matters, and how it can be produced, maintained, and restored. The resulting framework identifies the key components of regulatory trust and explores means to cultivate the trust necessary to allow regulatory agencies to govern effectively in the face of fundamental uncertainty.

* Professor, CUNY School of Law. This paper benefitted from feedback faculty forums at CUNY and at St. Johns School of Law, as well as discussions at the 2007 University of Louisville Law, Ethics and Life Sciences Conference, the 2008 University of Kansas Biolaw 2.0 Conference and the 2009 Washington and Lee Climate Policy for the Obama Administration Symposium. Thanks to Dean Michelle Anderson, Hari Osofsky, Russell Miller, Julie Goldscheid, Carlos Ball, June Carbone, Andrea McArdle, Allen Schulz, Wendy Bach, Joel Mintz, Tony Arnold, Stephanie Stern, Marcilynn Burke, Marc Poirier, Tim Mulvaney, Mary Lyndon, Judith Wise, and Margaret Montoya for valuable feedback, to librarians Jonathan Saxon, Ricardo Pla, and Kathy Williams for their ready assistance, and to Pamela Bradford and Laura Mott for very helpful research assistance. I owe a debt of gratitude to Brian Steinwand at the EPA for providing me with some otherwise hard-to-locate documents. As always, I am deeply grateful to Naomi Florence Schulz and Bernard Allen Schulz for their endless patience and support.

1. J. David Lewis & Andrew Weigert, *Trust as Social Reality*, 63 SOC. FORCES 967, 976 (1985).

INTRODUCTION

Trust clearly plays a role in the democratic legitimacy of government decisions,² but the relationship between law and trust continues to be ambiguous. Thinkers have staked out positions at almost every point along the continuum from “law cannot produce trust”³ to trust requires law.⁴ Significantly less attention has been devoted to the role that trust plays in regulatory systems. Nevertheless, trust is critically important in the regulatory context. Because the complexity and uncertainty embedded in modern society force regulators to make decisions at the frontiers of human knowledge, the level of trust (or not) in the regulators making those decisions helps shape the regulatory process itself.

Ulrich Beck captured this relationship between uncertainty, complexity, and trust when he wrote about the “unseen side-effects of industrial production” morphing into “a profound institutional crisis of industrial society itself.”⁵ Beck explains that unceasing technological innovation significantly contributes to risk and uncertainty in modern industrial society by forcing a constant reassessment of the relationships between scientific knowledge, technology, and public policy.⁶ In particular, new technologies underscore a growing divergence between market incentives and social welfare. As a society, we often turn to regulation to bridge that gap. But, in contexts as diverse as the licensing of agricultural biotechnology,⁷

2. See, e.g., ANTHONY GIDDENS, *RUNAWAY WORLD* 67–82 (2002). This idea dates back to at least de Tocqueville, who articulated the psychological and intellectual link between trust and liberty. ALEXIS DE TOCQUEVILLE, *SELECTED LETTERS ON POLITICS AND SOCIETY* 115 (R. Boesche ed., 1985); John A. Hall, *Trust in Tocqueville*, 5 *POL’Y ORG. & SOC.* 16 (1992). Quoting the Federalist Papers, some argue that the Constitution’s design obviates the need for trust by channeling individual self-interest into collectively beneficial outcomes. “The constant aim is to divide and arrange the several offices in such a manner that each may be a check on the other[—]that the private interests of every individual may be a sentinel over the public rights.” *THE FEDERALIST* NO. 51, at 322 (James Madison) (Clinton Rossiter ed., 1961). Certainly the Constitution’s structure allows self-interest to serve as a check on power, but that does not eliminate the need for trust in the system itself. As described later in this Article, there are numerous examples of individual self-interested behavior that, in the absence of a trusted social system for channeling and checking those behaviors, fail to maximize public welfare. Moreover, resource and power asymmetries make it likely that, without social safeguards, certain interests will predictably triumph at the expense of other interests.

3. Larry E. Ribstein, *Law v. Trust*, 81 *B.U. L. REV.* 553, 556 (2001) (italics omitted).

4. Tamar Frankel, *Trusting and Non-Trusting*, 81 *B.U. L. REV.* 457, 459 (2001) (arguing that without the bedrock of legitimizing law, trust on the Internet will not develop).

5. ULRICH BECK ET AL., *REFLEXIVE MODERNIZATION* 8 (1994); ULRICH BECK, *ECOLOGICAL ENLIGHTENMENT* 38–40 (1995).

6. See generally ULRICH BECK, *RISK SOCIETY: TOWARDS A NEW MODERNITY* (Mark Ritter trans., Sage Publications 1992) (1986) (describing an expanding unpredictability rooted in the interactions of technology, nature, and society as a primary source of perceived vulnerability.); see also ADAM SELIGMAN, *THE PROBLEM OF TRUST* 7–8 (1997).

7. Rebecca Bratspies, *Some Thoughts on the American Approach to Regulating Genetically Modified Organisms*, 16 *KAN. J.L. & PUB. POL’Y* 393, 396–97 (2007) [hereinafter Bratspies, *Some Thoughts*].

the approval of new drugs⁸ or oversight of new financial instruments,⁹ the same refrain plays over and over—regulators must make high-stakes regulatory choices that implicate poorly understood risks. Not only are particular regulatory decisions woven together from strands of uncertainty, but so, too, are the scope and direction of the regulatory endeavor itself.¹⁰

Trustworthy regulators have the potential to enhance society's overall resilience,¹¹ but uncertainty erodes the public's trust and alienates citizens from the regulatory institutions intended to serve them.¹² Declining levels of trust in government institutions both document and reflect this grim reality.¹³ Loss of trust undermines regulatory effectiveness and diminishes society's overall capacity to persevere and even thrive in the face of multiple, unpredictable risks.

8. The revelations surrounding Vioxx highlight the trust aspects of this problem. See, e.g., Anahad O'Connor, *Vioxx. Celebrex. Now Aleve. What's a Patient to Think?*, N.Y. TIMES, Dec. 28, 2004, at F5 (noting the corrosive effects on trust in the FDA).

9. Gretchen Morgenstern, *Regulators in Need of Rehab*, N.Y. TIMES, Oct. 12, 2008, at BU1 (“[T]he leading lights of finance, whether in Washington or on Wall Street, have completely squandered any trust that taxpayers may have had in them. Earning it back is going to take time and a commitment to transparency.”).

10. Because such regulatory decisions affect almost every aspect of daily life, reverberations from these choices about the proper scope of government are widely felt. As the Supreme Court noted, interactions with some aspect or other of the regulatory state are the primary ways in which most citizens have contact with their government. *Idaho v. Coeur d'Alene Tribe*, 521 U.S. 261, 276 (1997).

11. “Resilient social systems have the capacity to anticipate, prepare, and adapt to change to minimize the effects on social and economic well-being.” Heidi Schuttenberg & Paul Marshall, *Managing for Mass Coral Bleaching: Strategies for Supporting Socio-Ecological Resilience*, in STATUS OF CARIBBEAN CORAL REEFS AFTER BLEACHING AND HURRICANES IN 2005 115, 116 (Clive Wilkinson & David Souter eds., 2008), available at http://www.icriforum.org/library/Caribbean_Status_Report_2005.pdf. Trustworthy institutions make society more resilient. See *id.* at 121.

12. IAN AYRES & JOHN BRAITHWAITE, RESPONSIVE REGULATION 19–35 (1992).

13. For example, the number of individuals expressing the belief that government is run for the benefit of a few special interests, rather than for the benefit of all, has increased markedly over the past few decades. AM. NAT'L ELECTION STUDIES, IS THE GOVERNMENT RUN FOR THE BENEFIT OF ALL: 1964-2004 (2005), http://www.electionstudies.org/nesguide/graphs/g5a_2_1.htm. See also Carl Weiser, *Survey: Young People Losing Trust in Government*, USA TODAY, Jan. 15, 2004, http://www.usatoday.com/news/politicselections/nation/2004-01-16-youngvoters-gns_x.htm. See generally Robert V. Robinson & Elton F. Jackson, *Is Trust in Others Declining in America? An Age-Period-Cohort Analysis*, 30 SOC. SCI. RES. 117 (2001) (discussing decline in trust of others). This problem is most notable in the context of new technologies. For example, 95% of respondents in one survey did not trust the government or industry to manage the risks associated with nanotechnology. JANE MACOUBRIE, INFORMED PUBLIC PERCEPTIONS OF NANOTECHNOLOGY AND TRUST IN GOVERNMENT 5–6 (2005), available at <http://www.wilsoncenter.org/news/docs/macoubriereport.pdf>; see also Jane Macoubrie, *Nanotechnology, Public Concerns, Reasoning and Trust in Government*, 15 PUB. UNDERSTANDING SCI. 221 (2006). By contrast, the Pew Research Center asserts that although trust levels declined in the 1990s, they have remained relatively stable over the past few decades. PEW RESEARCH CTR., AMERICANS AND SOCIAL TRUST: WHO, WHERE AND WHY (2007), available at <http://pewresearch.org/assets/social/pdf/SocialTrust.pdf>.

Combating uncertainty's corrosive effects on social resilience therefore demands that we rebuild trust in regulatory systems. But first, we need some agreement about what we mean by trust. Despite its centrality to regulatory legitimacy,¹⁴ trust in administrative systems is surprisingly under-theorized.

This Article begins to remedy that situation by constructing a framework for "regulatory trust"—the unique form of social trust invoked when regulatory agencies make decisions under conditions of uncertainty. After surfacing and naming regulatory trust's components, this Article explores the reflexive relationship between trust and regulatory legitimacy, and grounds that exploration in emerging scholarly theories of the state and social legitimacy.¹⁵ Finally, this Article proposes a new model for regulatory decision-making, one better able to build, maintain, and restore regulatory trust in the face of uncertainty. In doing so, this Article argues that regulatory trust can help mediate the inherent tensions between expertise and uncertainty. By structuring regulatory institutions with an eye toward facilitating regulatory trust, we can create a more inclusive and transparent regulatory system. A revitalized, trustworthy regulatory system is, in turn, the first step toward cultivating the social resilience needed to navigate modernity's profound uncertainty without dwindling into gloom, chaos, and defeat.

Part I offers a brief overview of the broader legitimacy crisis as regulatory systems struggle to cope with uncertainty. Part II explores the relationship among legitimacy, trust, and expertise. It provides an overview of existing scholarly treatments of trust—highlighting the commonalities and differences between various approaches, and disaggregating trust from cooperation. Part III lays out an analytical framework for understanding regulatory trust as a special form of social trust. This Section begins by identifying the three core components of regulatory trust: expertise, stewardship, and transparency. It then shows how these three trust components underscore the need for a regulatory framework firmly grounded in the progressive and participatory generation of expert knowledge. To that end, this Section claims that an inclusive vision of expertise makes regulatory decision-

14. See, e.g., E. ALLAN LIND & TOM R. TYLER, *THE SOCIAL PSYCHOLOGY OF PROCEDURAL JUSTICE* 106 (1988) (reporting that citizens participating in the legal system have increased respect for the system); Tom R. Tyler, *Public Mistrust of the Law: A Political Perspective*, 66 U. CIN. L. REV. 847, 856–60, 867–70 (1998) (suggesting that trust in legal institutions determines whether parties perceive the law as legitimate); Mark E. Warren, *Introduction*, in *DEMOCRACY AND TRUST* 1–21 (Mark E. Warren ed., 1999) (exploring the complex relationship between trust and democratic processes); see also Lisa B. Bingham, *Self-Determination in Dispute System Design and Employment Arbitration*, 56 U. MIAMI L. REV. 873, 907 (2002) (emphasizing the role that stakeholder participation plays in perceived legitimacy). But see Steven Zeidman, *Policing the Police: The Role of Courts and the Prosecution*, 32 FORDHAM URB. L.J. 315, 342 (2005) (emphasizing that not all court proceedings meet this standard).

15. Stephen Weatherford crafted a model of legitimacy that dovetails with some aspects of the regulatory trust model this Article proposes. M. Stephen Weatherford, *Measuring Political Legitimacy*, 86 AM. POL. SCI. REV. 149, 160 (1992). While Weatherford only explicitly references trust in its interpersonal capacity, his representational procedures and government performance indicators overlap, sometimes conspicuously, with the components of regulatory trust.

making better and is a critical means of generating trust in the midst of uncertainty.¹⁶ At the same time, this Section emphasizes that encouraging a wide swath of citizenry to share the burden of governance requires a rethinking of the processes and perspectives that traditionally surround administrative decision-making. Together, these critical changes—re-conceptualizing expertise, expanding opportunities for participation, and increasing transparency—can provide a crucial source for regulatory legitimacy in an uncertain world. The Article concludes by offering some thoughts about how to use this regulatory trust framework to enhance social resilience.

Organizational studies report that trust is correlated with the ability to accept unfavorable decisions, particularly those deviating from one's normative preference.¹⁷ My hope is that understanding the social dynamics that underpin trust in regulatory institutions will be the first step toward developing a reservoir of trust sufficient to weather the disagreements that specific regulatory decisions can, from time to time, generate. If so, public discourse can be shifted away from personal attacks on those who support or oppose particular regulatory decisions to focus more on the social variables that continually create and recreate the same (dis)trust dynamics.¹⁸ This Article begins that process.

16. See, e.g., LIND & TYLER, *supra* note 14, at 106 (emphasizing how the opportunity to participate critically influences perceptions of legitimacy); TOM R. TYLER, WHY PEOPLE OBEY THE LAW 163 (1990) [hereinafter TYLER, WHY PEOPLE OBEY] (arguing that “an opportunity to take part in the decision-making process” shapes perceptions of fairness).

17. See Eric M. Uslaner, *Democracy and Social Capital*, in DEMOCRACY AND TRUST 122 (Mark E. Warren ed., 1999); Joel Brockner et al., *When Trust Matters: The Moderating Effect of Outcome Favorability*, 42 ADMIN. SCI. Q. 558, 558 (1997).

18. To be sure, some have posited that distrust can be an organizing principle that can serve as a rival, or even as a replacement, for trust. BERNARD BARBER, THE LOGIC AND LIMITS OF TRUST 22–23, 91–94 (1983). See generally VIVIEN HART, DISTRUST AND DEMOCRACY (1978). Indeed, Luhmann acknowledges that distrust can be the functional equivalent of trust. NIKLAS LUHMANN, TRUST AND POWER 71 (1979). Distrust as an organizing principle attempts to reduce complexity through suspicion, monitoring, and safeguards. In some ways, feedback loops and mechanisms designed in response to distrust might be indistinguishable from those that reinforce trust. For example, there is significant argument as to whether contracts are an emblem of distrust or a vehicle of trust formation. See, e.g., Frank B. Cross, *Law and Trust*, 93 GEO. L.J. 1457, 1487 (2005) (characterizing contracts as the antithesis of trust); Ribstein, *supra* note 3, at 553 (positing that law undermines trust). *But see* Carol M. Rose, *Trust in the Mirror of Betrayal*, 75 B.U. L. REV. 531, 554 (1995) (describing law and contracts as reinforcing trust and making agreement possible in situations where it otherwise would not occur).

As Luhmann and Barber suggest, the dynamics of systems built on trust and distrust are likely to differ significantly. LUHMANN, *supra*, at 71–72; BARBER, *supra*, at 20–21. To my mind, Barber's description of the weaknesses in the argument that society can be organized around distrust is persuasive—the kind of vigilant and constant monitoring that distrust requires would be overwhelming. BARBER, *supra*, at 20–21. Indeed, as Luhmann points out, strategies of distrust “often absorb the strength of the person who distrusts to an extent which leaves him little energy to explore and adapt to his environment.” LUHMANN, *supra*, at 72. I do not, however, discount the importance that healthy skepticism plays in maintaining trust relationships.

I. THE PROBLEM: UNCERTAINTY AND REGULATORY DECISION-MAKING

Conventional wisdom holds that government can promote social trust by providing fair, impartial, and procedurally sound methods for resolving disputes. By spreading the mantle of good government over its citizens, and thereby sheltering them from an otherwise arbitrary and Hobbesian world, the state creates conditions for social trust.¹⁹ Whatever capacities the state has for action, in turn, draw upon this trust.

Trust, or its absence, is often invoked to justify government regulatory action.²⁰ Headlines bemoaning the fallout from the unfolding financial crisis highlight regulation's role in restoring broken trust,²¹ but also hint at a more fundamental issue: when government actors²² make official decisions in the face of uncertainty, what gives legitimacy to those decisions?²³ This question arises more and more frequently as the "boundary shattering forces"²⁴ of globalized markets and new technologies crash through pre-existing social and political fault lines. The accelerating tempo of change magnifies uncertainty, in part by disrupting

19. ROBERT AXELROD, *THE EVOLUTION OF COOPERATION* 155–57 (1984).

20. For an expansion on this point, see generally David Kennedy, *Challenging Expert Rule: The Politics of Global Governance*, 27 SYDNEY L. REV. 1 (2005).

21. David Leonhardt, *Lesson from a Crisis: When Trust Vanishes, Worry*, N.Y. TIMES, Oct. 1, 2008, at A1; Sarah Knapton, *Financial Crisis: Home Safe Sales Soar as Trust in Banks Collapses*, TELEGRAPH, Oct. 10, 2008, <http://www.telegraph.co.uk/finance/personalfinance/savings/3163645/Financial-crisis-Home-safe-sales-soar-as-trust-in-banks-collapses.html>; Theresa Tedesco, *Trust in Short Supply During Financial Crisis*, FIN. POST, Sept. 17, 2008, <http://www.financialpost.com/story.html?id=798071>.

22. While acknowledging that law does not have a "monopoly . . . across a whole regulatory 'space,'" and that a multiplicity of possible decisionmakers continually jockey for influence, this Article intentionally limits its definition of "regulation" while acknowledging the question raised by global legal pluralism about how to define the term. Christine Parker, *The Pluralization of Regulation*, 9 THEORETICAL INQUIRIES L. 349, 351 (2008). With the caveat that the resulting definition is incomplete, this project intentionally limits use of the term "regulation" to the activities of state institutions and state actors prescribing and proscribing conduct. For an exploration of the expansive views of regulation posited by legal pluralism, see Julia Black, *Decentering Regulation, Understanding the Role of Regulation and Self-Regulation in a "Post-Regulatory" World*, 54 CURRENT LEGAL PROBS. 103, 134–35 (2001). For a more general exploration of this point, see Paul Schiff Berman, *Global Legal Pluralism*, 80 S. CAL. L. REV. 1155 (2007). An exploration of trust in the context of a more pluralist vision of regulation awaits another day. Nor does this Article pretend to confront the profound challenge to the very notion of public law posed by privatization of government functions. For a discussion on this point, see Laura A. Dickinson, *Public Law Values in a Privatized World*, 31 YALE J. INT'L L. 383, 384–86 (2006).

23. See generally HAROLD D. LASSWELL & MYRES S. MCDUGAL, *JURISPRUDENCE FOR A FREE SOCIETY* (1992) (exploring the question of authoritative decision-making in exhaustive, and sometimes excruciating, detail); see also Rebecca M. Bratspies, *Rethinking Decisionmaking in International Law: A Process-Oriented Approach to Sustainable Development*, 32 YALE J. INT'L L. 363, 370–77 (2007).

24. Ulrich Beck et al., *The Theory of Reflexive Modernization*, 20 THEORY, CULTURE & SOC., Apr. 2003, at 1, 2.

existing social structures. Time-tested evaluative paradigms suddenly seem inadequate to address society's most pressing concerns.

Modern societies continually wrestle with this conundrum as they confront the profound indeterminacy of a rapidly changing world. When storied institutions can collapse overnight, there can be no sense of certainty. We have seen yesterday's scientific miracles become today's health and environmental disasters. Disgraced heroes abound, and former truths can suddenly be revealed as an edifice of lies. "Things fall apart; the centre cannot hold . . ." ²⁵

As parents, uncertainty about whether to trust agency veracity makes us reluctant to vaccinate our children. As investors, uncertainty about whether to trust agency competence makes us reluctant to commit our capital. As citizens, overwhelming uncertainty makes us cynical about the capacity of government to address our collective problems. The constellation of uncertainties woven into the very fabric of the modern human condition erodes the social capacity for trust. ²⁶ This situation has produced a "crisis of faith in the grand stories that have justified our history and legitimized our knowledge." ²⁷

At least in theory, regulation can offer an alternative to the cynicism that might otherwise result. Credible regulators can provide a durable framework for social cooperation, one that transcends the particular individuals involved. ²⁸ The regulatory processes they create may be a tool for managing the otherwise unfathomable complexity of modern life. ²⁹ But as the uncertainties compound, can regulators really play this role?

There is already an uneasy relationship between the definiteness of regulatory decisions (*X* facility can emit *Y* tons of pollutant *Z*) and the uncertainties of information and circumstance that shape a regulatory problem (chronic low-level exposure to pollutant *Z* may or may not cause endocrine disruption). ³⁰ Add to

25. William Butler Yeats, *The Second Coming* (1920). Although he was writing about World War I and its aftermath, these lines give voice to the indeterminacy at the heart of the modern dilemma.

26. This ontological uncertainty is in many ways the hallmark of modernity. For a thought-provoking historical investigation of this issue, see DOROTHY ROSS, MODERNIST IMPULSES IN THE HUMAN SCIENCES 1870–1930, 2–25 (1994).

27. Gerald Torres & Kathryn Milun, *Translating Yonnindio by Precedent and Evidence: The Mashpee Indian Case*, 1990 DUKE L.J. 625, 629 (1990).

28. Tom Tyler has documented a link between perceptions of legitimacy and adherence to the law. See TYLER, WHY PEOPLE OBEY, *supra* note 16, at 170–78 (defining a link between trust in authorities and institutions and compliance with the law). This observation has been repeated in experimental studies—trust judgments tend to be more affected by perceptions of procedural fairness than by distributive justice or outcome favorability. Joel Brockner & Phyllis Siegel, *Understanding the Interaction Between Procedural and Distributive Justice: The Role of Trust* 390, 401–03, in TRUST IN ORGANIZATIONS: FRONTIERS OF THEORY AND RESEARCH (Roderick M. Kramer & Tom Tyler eds., 5th ed. 1995).

29. LUHMANN, *supra* note 18, at 26 (describing how trust reduces complexity).

30. ULRICH BECK, ECOLOGICAL ENLIGHTENMENT 89–93 (1995) (using the question "is formaldehyde poisonous" as a jumping off point for discussing the disconnect between the experimental method and the risks posed by new technologies).

that the somewhat murky relationship between expertise and democracy,³¹ and the need for a new perspective on the purposes and goals of regulatory power becomes clear. The ontological challenge is to replace the quest for certainty with the acceptance of contingency, while at the same time preserving the ability to make legitimate administrative decisions.

These nested uncertainties have prompted some post-modern thinkers to argue that there is no system of social trust at all.³² For these thinkers, any conversation about social structure or culture misunderstands the fragmented nature of contemporary society.³³ Under this view, ideas of a social order, or of stability connoted by regulatory institutions, are merely illusions. In a world without social systems, the idea of regulatory trust must necessarily be an absurdity. A related attack on the regulatory state comes from instrumental rationalism. Although motivated by a vastly different theoretical framing, instrumental rationalism shares post-modernism's profound skepticism about the existence of a shared normative orientation, and thus similarly discounts a vision of collective—as opposed to individual—motivations or interests.³⁴ Despite their often opposing theoretical visions, the two critiques reach much the same endpoint—denial that legal or social structures can shape, support, or sustain a public sphere of interest, or more fundamentally, that a social system can and should be based on a common vision of the good society.³⁵ In rejecting this conclusion, this Article instead proposes that social resilience under conditions of uncertainty hinges on successful development of regulatory trust.

Substantive discussions about choices in the face of uncertainty, particularly those surrounding choices of whether and how to embrace new technologies, easily devolve into ad hominem attacks that further strain the social fabric while adding little to the decisional process. In the debate over the use of genetically modified food crops, for example, opponents routinely label each other as “Luddites” or as proponents of “Frankenfoods.”³⁶ The conventional story of

31. Stephen Turner, *What is the Problem with Experts?*, 31 SOC. STUD. SCI. 123, 125–29 (2001); 1 JÜRGEN HABERMAS, *THE THEORY OF COMMUNICATIVE ACTION*, at 397 (Thomas McCarthy trans., Beacon Press 1987) (1985).

32. ZYGMUNT BAUMAN, *SOCIETY UNDER SIEGE* 26 (2002). Bauman refers to this situation as “liquid . . . modernity” and dismisses the possibility of trust in anything other than the self. *Id.* at 27. He thus rejects the vision of society as “the ‘common property’ of its members which at least in principle can conceivably be tended to, run and managed in common.” *Id.* at 49.

33. *Id.*

34. For an exploration of this point, see *infra* Part II.

35. Habermas describes this common vision as “an intuition about forms of solidarity that link not only relatives, friends and neighbors within private spheres of life, but also unite citizens as members of a political community beyond merely legal relations.” Jürgen Habermas, *Equal Treatment of Cultures and the Limits of Postmodern Liberalism*, 13 J. POL. PHIL. 1, 2 (2005). Habermas urged against the “colonization” of the lifeworld by “an unleashed functionalist reasoning” that focuses exclusively on means. HABERMAS, *supra* note 31, at 398–99.

36. Elsewhere, I have described this destructive cycle in the context of biotechnology. Bratspies, *Some Thoughts*, *supra* note 7, at 393–97; Rebecca Bratspies, *Bridging the Genetic Divide: Confidence-Building Measures for Genetically Modified*

such disputes—as rationality pitted against fear and emotion—drastically oversimplifies, and in the process misrepresents, what is actually at stake. Too often, regulators and politicians invoke the putative irrationality of their opponents as a screen to obscure the political choices embedded in regulatory decisions. At the same time, regulators must responsibly evaluate new technologies and scientific developments as they unfold. The continuing allegations of political meddling in scientific reporting, particularly around issues of global warming³⁷ and abortion,³⁸ underscore the need both to protect and to project scientific integrity as part of a broader exploration of regulatory legitimacy.³⁹

Crops, 44 JURIMETRICS 62, 65–67 (2003). Beck, Giddens, and Lash describe the distributional struggle over “bads” that cannot be determined by science, particularly issues of the standards of responsibility, safety, monitoring, damage limitation, and distribution of the consequences of damage in an industrial society. BECK ET AL. *supra* note 5, at 141.

37. Allegations have swirled for years that political appointees in the Bush Administration heavily edited scientific testimony and government publications concerning climate change. In 2007, a House Committee Investigation concluded that the Administration systematically manipulated climate change science to minimize the dangers of global warming. COMM. ON OVERSIGHT & GOV'T REFORM, 110TH CONG., POLITICAL INTERFERENCE WITH CLIMATE CHANGE SCIENCE UNDER THE BUSH ADMINISTRATION 16–32 (2007), available at <http://oversight.house.gov/documents/20071210101633.pdf>. Among the study's conclusions, political appointees edited agency reports “to exaggerate or emphasize scientific uncertainties or to deemphasize or diminish the importance of the human role in global warming.” *Id.* at ii.

38. For example, in July 2008, the Department of Health and Human Services proposed redefining abortion to include many forms of contraception. The proposed definition runs counter to how medical science defines pregnancy and abortion as recognized by the American Medical Association and the American College of Obstetricians and Gynecologists. If adopted, the proposal would have enabled health care providers receiving federal funding to refuse to provide contraception to women requesting it under a moral conscience theory. See Robert Pear, *Abortion Proposal Sets Conditions on Aid*, N.Y. TIMES, July 15, 2008, at A16. After an enormous public outcry, HHS omitted this definition. See Dept. of Health and Human Servs., Final Rule: Ensuring That Department of Health and Human Services Funds Do Not Support Coercive or Discriminatory Policies or Practices in Violation of Federal Law, 73 Fed. Reg. 78,072 (Dec. 19, 2008) (to be codified at 45 C.F.R. pt. 88). Nevertheless, over strenuous objections, the agency included a definition of “assist in performance” in the final rule ambiguous enough to keep the question alive. See David G. Savage, *‘Conscience’ Medical Rule to Take Effect*, L.A. TIMES, Dec. 19, 2008, at A18 (paraphrasing HHS Secretary Levitt's description that the rule's scope “includes abortion and other aspects of healthcare where moral concerns could arise . . . such as birth control”). This rule was rushed through the rulemaking process in order to present the incoming Obama Administration with *fait accomplis*. In his inaugural address, President Obama promised to “restore science to its rightful place.” President Barack Obama, Inaugural Address (Jan. 20, 2009). Those looking for an in-depth discussion of the misuses of science in the abortion context might turn to Caitlin E. Borgmann, *Judicial Evasion and Disingenuous Legislative Appeals to Science in the Abortion Controversy*, 17 J.L. & POL'Y 15 (2008) [hereinafter Borgmann, *Judicial Evasion*].

39. BIPARTISAN POLICY CTR., SCIENCE FOR POLICY PROJECT: FINAL REPORT 11 (Aug. 5 2009), available at http://www.eenews.net/public/25/12023/features/documents/2009/08/05/document_gw_01.pdf (characterizing the U.S. regulatory system as “plagued by charges that science is being ‘politicized’ and that regulation lacks a solid scientific basis”). For a thorough exploration of this problem, see RESCUING SCIENCE FROM POLITICS:

II. TRUST AS AN ANTIDOTE FOR UNCERTAINTY

Contemporary social challenges make issues of trust especially salient. In the face of ever-increasing rates of change, which many consider to be the hallmark of modern societies,⁴⁰ regulators need new ways to account for uncertainties and risks. Trust can help.⁴¹ Imperfect information is all that is available and yet important decisions must still be made in an array of human situations. A reservoir of social trust helps societies to remain stable even as administrators make decisions against this overwhelming net of uncertainty.⁴²

At the boundary between confidence and contingency,⁴³ social trust becomes a crucial resource for responding to uncertainty, and for enhancing the legitimacy of decisions made under those conditions. The ideal version of that trust narrative goes something like this:

*I know the Food and Drug Administration (FDA) is dedicated to keeping foods and drugs safe. The FDA has a good track record; after all, they kept Thalidomide off the market despite European approval and tremendous pressure. I trust the FDA. Therefore, I feel confident taking this potentially lifesaving, but also potentially deadly medicine prescribed by my doctor and produced by a drug company under the watchful eye of the FDA.*⁴⁴

REGULATION AND THE DISTORTION OF SCIENTIFIC RESEARCH 24–45, 61–85 (Wendy Wagner & Rena Steinzor eds., 2006) (documenting the ways in which interest groups distort the available science to support political positions); *see also* CHRIS MOONEY, *THE REPUBLICAN WAR ON SCIENCE* 102–20 (2005).

40. For an explanation of modernity, see generally MARSHALL BERMAN, *ALL THAT IS SOLID MELTS INTO AIR: THE EXPERIENCE OF MODERNITY* (1982); ROSS, *supra* note 26, at 2–14. In using the term “modern” I do not mean to suggest endorsement of a vision of an evolutionary progress towards an ultimate end that is labeled modernity. I instead use the term to acknowledge the spread of one specific type of civilization—with its attendant economic, political, and ideological factors—from its origin in Europe to the rest of the world. S.N. Eisenstadt, *A Reappraisal of Theories of Social Change and Modernization*, in *SOCIAL CHANGE AND MODERNITY* 412 (Hans Haferkamp & Neil J. Smelser eds., 1992). A great variety of modern societies developed as this spreading modernity interacted with various cultures around the world. Although the resulting societies share many common characteristics that justify the label “modern,” they also evince marked differences.

41. As noted earlier, some argue that distrust can serve a similar simplifying role. *See, e.g.*, HART, *supra* note 18, at xii (characterizing distrust as “democratic and thoughtful, not an anti-democratic outburst of emotion” and as “potentially constructive, threatening only to vested political interests”). These positions do not necessarily contradict a trust-based vision of regulation. Social trust in credible regulatory institutions, coupled with a healthy skepticism of any particular individual, may produce the most reliable, credible, and trustworthy outcomes.

42. For an exploration of this point, see Piotr Sztompka, *Trust and Emerging Democracy: Lessons from Poland*, 11 *INT’L SOC.* 37, 39 (1996).

43. PIOTR SZTOMPKA, *TRUST* 19–22 (1999).

44. This is not to suggest a simple story. The recent salmonella in peanut butter scandal revealed FDA’s impotence in maintaining food safety. The Vioxx scandal revealed FDA’s messy conflicts of interest. Trust is easily lost.

Trust in the FDA becomes a transitive property. The agency's perceived rigor creates a mantle of trustworthiness that can vouch for the conduct of third parties, thereby facilitating desirable social outcomes. Social trust can thus stabilize ambiguous situations by increasing society's ability to tolerate uncertainty. It does so by mediating what Adam Seligman eloquently describes as "the interstices of system, . . . that metaphorical space between roles, that area where roles are open to negotiation and interpretation."⁴⁵ Because it enables cooperation in the face of uncertainty, social trust also offers a path out of the "prisoners' dilemma."⁴⁶ As social interdependencies and uncertainties span a globally integrated world, both these roles for social trust become ever more critical.⁴⁷

There is a problem with the idealized story recounted above. As the reach of the global market increases, so does uncertainty about the safety of products exchanged through global trade⁴⁸ and whether national governments actually have the capacity to protect their citizens.⁴⁹ In a new, more ambiguous global economic system, a multiplicity of possible decision-makers jockey for influence—international organizations promulgate standards that would traditionally have been the province of the state, states continue to assert their authority, and transnational actors, particularly corporations, set up alternative streams of power and control.

New trade patterns make product safety a moving target.⁵⁰ As production is fragmented across the globe in pursuit of low-cost producers, responsibility blurs. Too often, this means that oversight falls through the cracks. The sheer volume of trade stretches regulatory capacity past its breaking point. Regulators

45. SELIGMAN, *supra* note 6, at 27.

46. For an explanation of the prisoner's dilemma, see *infra* Part II.C.

47. BARBARA A. MISZTAL, TRUST IN MODERN SOCIETIES 9 (1996).

48. Indeed, 2007 was dubbed "the year of the recall" in light of the myriad products recalled over contamination and other safety concerns. Editorial, *Protecting the Littlest Consumers*, N.Y. TIMES, July 30, 2008, at A16. See also Kevin Drawbaugh, *Toy Recalls Fuel Momentum Toward U.S. Safety Reforms*, REUTERS, Oct. 4, 2007, <http://www.reuters.com/article/topNews/idUSN0441473020071004> (quoting CPSC Acting Chairman Nancy Nord as saying that a "summer of recalls" underlined the need for changes at the CPSC).

49. See, e.g., Meglena Kuneva, European Comm'r for Consumer Affairs, Press Conference Speaking Points at the High Level EU-China-U.S. Trilateral Summit on Product Safety (Nov. 18, 2008) (noting that the 2007 recalls "showed more clearly than ever that delivering effective product safety cannot just be a national or even European concern"), available at <http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/08/620&format=HTML&aged=0&language=EN&guiLanguage=en>; see also Peer Zumbansen, *Law After the Welfare State: Formalism, Functionalism, and the Ironic Turn of Reflexive Law*, 56 AM. J. COMP. L. 769, 770–74 (2008).

50. For example, reporting about the tainted cough syrup that killed hundreds in Panama, *The New York Times* described "a poison pipeline stretching halfway around the world." Walt Bogdanich & Jake Hooker, *From China to Panama, a Trail of Poisoned Medicine*, N.Y. TIMES, May 6, 2007, § 1, at 11 (tracing the diethylene glycol-tainted syrup from China through Europe to Panama). The article reported that there had been similar mass poisonings in Haiti, Bangladesh, Argentina, Nigeria, and India, and estimated that the death toll was in the thousands or tens of thousands.

simply cannot keep up.⁵¹ Nor can they credibly claim to be managing the unforeseen consequences of globalized trade and new technologies. If “[t]rust is the currency of the global economy,”⁵² recent history suggests that the foundations of that trust are increasingly in jeopardy.

Part of the problem has been that governments, pundits, and the public alike have become confused about what regulatory trust actually is. Thus we see rhetoric blurring the lines between personal and social trust, or even suggesting that rationality can supplant the need for trust.⁵³ Separating trust into its various strands helps surface some of these misconceptions, and therefore facilitates a more focused discussion about the role that trust plays in the regulatory system. Surfacing and naming the different roles that trust can play in regulatory systems is the first step in constructing an analytical framework for regulatory trust. To that end, what follows is an attempt to sort out and categorize the different kinds of trust as a necessary precursor to an in-depth exploration of regulatory trust.

A. What Is Trust?

Although trust is often identified as one of the major components of a society’s social capital,⁵⁴ its role is rarely identified or explored.⁵⁵ Instead, trust is

51. For example, while food imports have increased 50% in the past few years, the number of FDA inspectors has decreased by 20%. See Julie Schmit, *U.S. Food Imports Outrun FDA Resources*, USA TODAY, March 18, 2007, at 1B. The Consumer Product Safety Commission reports that product imports into the United States have increased by more than 100% over the past decade. U.S. CONSUMER PROD. SAFETY COMM’N STAFF, IMPORT SAFETY STRATEGY 3 (2008), available at <http://www.cpsc.gov/businfo/importsafety.pdf>. Despite overseeing \$2 trillion worth of products imported by 800,000 importers at 300 ports of entry, *id.* at 5, the CPSC did not have a single full-time inspector at any port of entry. U.S. CONSUMER PROD. SAFETY COMM’N, 2008 PERFORMANCE AND ACCOUNTABILITY REPORT 21 (2008), available at <http://www.cpsc.gov/CPSCPUB/PUBS/REPORTS/2008par.pdf>. It was only in March 2008 that the CPSC announced plans to place the first CPSC inspectors at a single port, with the promise that “additional staff will be assigned to other busy ports as the division is expanded.” Press Release, U.S. Consumer Product Safety Commission, CPSC to Announce New Strategy at Ports (March 5, 2008), available at <http://www.cpsc.gov/cpscpub/prerel/prhtml08/08206.html>. Former Health and Human Services Secretary Mike Leavitt admitted that “[t]he global market has clearly changed the nature of our challenge in keeping products safe.” Margaret Fan, *FDA Sending Inspectors to Foreign Nations*, WASH. POST, Nov. 19, 2008, at A12.

52. Meglena Kuneva, European Comm’r of Consumer Affairs, Statement at the 2008 Trilateral Summit on Product Safety, (Nov. 18, 2008), available at <http://www.euractiv.com/en/trade/eu-us-china-product-safety-cooperation/article-177290>.

53. For examples of both phenomena, see *infra* Parts II.B–C.

54. The Organisation for Economic Co-Operation and Development defines social capital as “networks together with shared norms, values and understandings which facilitate cooperation within or among groups.” OECD, SUSTAINABLE DEVELOPMENT: GLOSSARY, http://www.oecd.org/glossary/0,3414,en_2649_37425_1970394_1_1_1_1,00.html#197031 (last visited July 31, 2009). See generally, OECD, SUSTAINABLE DEVELOPMENT: CRITICAL ISSUES (2001). For an exploration of social capital, see generally James S. Coleman, *Social Capital in the Creation of Human Capital*, 94 AM. J. SOC. S95, S95–S120 (1988).

an assumed backdrop, an “ever-ready lubricant”⁵⁶ for greasing the wheels of market exchange and/or democratic governance.⁵⁷ Annette Baier analogizes trust to air—something we notice only when it becomes scarce or polluted.⁵⁸ Because of this implicit quality, it is difficult to measure trust. Nevertheless, its presence, absence, or magnitude can be assessed in most circumstances, as recent jeremiads proclaiming a loss of trust in society demonstrate.⁵⁹ The beginning of the twenty-first century has already offered many challenges to social trust. When athletes use performance-enhancing drugs, financiers abscond with billions of dollars, and the president starts a war based on misinformation and lies, the cumulative effect is widespread loss of trust in social institutions and society more generally.⁶⁰

Sissela Bok argues that social trust is an imperative goal for those who aspire to an ethically grounded society.⁶¹ Niklas Luhmann asserts that to trust is to organize one’s world.⁶² Even setting aside that kind of lofty rhetoric, trust is clearly a basic building block of social interaction.⁶³ Thinkers from many different

55. There is no unanimity among scholars about whether trust is properly considered a form of social capital. Francis Fukuyama argues vociferously that trust is a vital component of social capital. FRANCIS FUKUYAMA, *TRUST: THE SOCIAL VIRTUES AND THE CREATION OF PROSPERITY* 23–41 (1995); see also Eric M. Uslaner, *Producing and Consuming Trust*, 115 *POL. SCI. Q.* 569, 589 (2000) (“Trust is a form of social capital, one of the building blocks of a civil society.”). But see Russell Hardin, *Distrust*, 81 *B.U. L. REV.* 495, 521 (2001) (“[T]rust is not a kind of resource and is therefore not a candidate for social capital.”).

56. Partha Dasgupta, *Trust as a Commodity*, in *TRUST: MAKING AND BREAKING COOPERATIVE RELATIONS* 49 (Diego Gambetta ed., 1988).

57. For an exploration of the differing conceptions of trust in psychology, sociology, political science, economics, and communication, see generally Denise M. Rousseau et al., *Not So Different After All: A Cross-Discipline View of Trust*, 23 *ACAD. MGMT. REV.* 393 (1996).

58. Annette Baier, *Trust and Antitrust*, 96 *ETHICS* 231, 234 (1986).

59. See generally FUKUYAMA, *supra* note 55; ROBERT D. PUTNAM, *BOWLING ALONE: THE COLLAPSE AND REVIVAL OF AMERICAN COMMUNITY* (2000). Both books, written at the end of the twentieth century, lamented the falling away from a better, truer past in which we trusted each other.

60. For example, in a widely cited 2002 poll, Golin/Harris reported that 70% of Americans agreed with the statement, “I don’t know who to trust.” See *American Business Faces a Crisis of Trust* (June 28, 2002), http://trusenabement.com/local/Golin-Harris_Crisis_in_American_Business.pdf. These results seem to be consistent across all the Western democracies. See Russell J. Dalton, *The Social Transformation of Trust in Government*, 15 *INT’L REV. SOC.* 133, 134–54 (2005) (describing results in various countries).

61. SISSELA BOK, *LYING: MORAL CHOICE IN PUBLIC AND PRIVATE LIFE* 26–27 (1978).

62. LUHMANN, *supra* note 18, at 4. Similarly, Russell Hardin calls trust “a way of dealing with the risks inherent in complexity.” Russell Hardin, *The Street-Level Epistemology of Trust*, 23 *POL. & SOC’Y* 505, 516 (1993) [hereinafter Hardin, *Street-Level Epistemology*].

63. Martin Hollis asserts that “[w]e cannot flourish without trust.” MARTIN HOLLIS, *TRUST WITHIN REASON* 4 (1998). In making this claim, Hollis invokes John Locke, who described trust as the “bond of society.” *Id.* at 1 (quoting JOHN LOCKE, *ESSAYS ON THE LAW OF NATURE* 213 (1663)).

disciplines have explored the central role that trust plays in structuring and ordering contemporary society.⁶⁴ In particular, they posit that when cooperation is both fragile and essential, trust plays a critical role.⁶⁵ These theorists tell us that without trust the everyday social life we take for granted is simply not possible.⁶⁶ Moreover, the degree of trust in a society shapes the way individuals perceive and react to social change.⁶⁷

Given its ubiquity and centrality, one would expect notions of trust to be well-established, but Diego Gambetta's musings on the elusive nature of trust still ring true.⁶⁸ In light of the vast number of trees killed to publish psychological, economic, and sociological studies on the topic, trust's continued elusiveness seems surprising. Part of the problem may be that the term is used colloquially in many different contexts, and researchers from many different fields rely on an intuitive understanding of the term.⁶⁹ When researchers do attempt a definition, controversy soon follows. Indeed there is an ongoing debate within scholarly circles over the meaning of the term "trust," and there is still no consensus

64. See, e.g., BARBER, *supra* note 18, at 20–25; LUHMANN, *supra* note 18, at 20–26. There is a wealth of philosophical writing on this point, but a more general exploration of this body of work is beyond the scope of this Article.

65. It is of course possible to overstate the role of trust. Zbigniew Brzezinski, President Carter's National Security Advisor, reputedly made this point when asked before the 1985 arms talks in Geneva whether it made sense to trust the Russians. He replied that the point was "not to trust them" but "to find an agreement that is self-reinforcing." Geoffrey Hawthorne, *Three Ironies in Trust*, in TRUST: MAKING AND BREAKING COOPERATIVE RELATIONS 115 (Diego Gambetta ed., 1988).

66. HOLLIS, *supra* note 63, at 1–2; LUHMANN, *supra* note 18, at 4 (describing the only alternatives to appropriate trust as "chaos and paralyzing fear"); SELIGMAN, *supra* note 6, at 13; David Good, *Individuals, Interpersonal Relations and Trust*, in TRUST: MAKING AND BREAKING COOPERATIVE RELATIONS 31–48 (Diego Gambetta, ed. 1988). This use of the term trust focuses on its social nature rather than viewing trust as wholly the personal attitude of discrete individuals. Some argue, by contrast, that trust is wholly dependent on the past experiences of each individual. See Hardin, *Street-Level Epistemology*, *supra* note 62, at 506; Baier, *supra* note 58, at 234 (emphasizing the trusting party's state of mind). Trust is obviously related to individual disposition, experience, and behavior but is as obviously related to social networks and institutions.

67. Caitlin Borgmann describes how trust in judicial fact-finding makes it possible for witnesses to offer difficult and emotional testimony. Caitlin E. Borgmann, *Rethinking Judicial Deference to Legislative Fact-Finding*, 84 IND. L.J. 1, 26–27 (2009).

68. Diego Gambetta, *Can We Trust?*, in TRUST: MAKING AND BREAKING COOPERATIVE RELATIONS ix, (Diego Gambetta ed., 1988).

69. See generally Oliver E. Williamson, *Calculativeness, Trust, and Economic Organization*, 36 J.L. & ECON. 453 (1993) (surveying and disputing many of the different definitions); see also Lewis & Weigert, *supra* note 1, at 969 (arguing that because "individuals . . . have no occasion or need to trust apart from social relationships" trust is primarily a sociological phenomenon). As Barber observes:

We can start by recalling the imprecise and ambiguous use of the term "trust" in all forms of discourse, from the most ordinary to the most learned. It is obviously an important social concept, but one that is confused with many equally important and equally poorly defined concepts, such as honesty, confidence, and faith.

BARBER, *supra* note 18, at 164.

definition.⁷⁰ For example, there is disagreement about whether trust is a cause, effect, or mediator of observable events in the world.⁷¹

Even without a clear definition, most scholars seem to agree that trust embodies a willingness to accept vulnerability under conditions of uncertainty.⁷² Or, as Gambetta concludes, “For trust to be relevant, there must be the possibility of exit, betrayal, defection.”⁷³ This Article uses that minimal consensus as a starting point.

Conceptualizing trust as a willingness to accept vulnerability under conditions of uncertainty highlights trust’s reflexivity. Trust both grows from, and simultaneously creates, a set of shared expectations that minimizes the risk of relying on others.⁷⁴ Nevertheless, because trust bridges the profound chasm between autonomous actors, it offers no guarantees. Though trust is a device for reducing risk, the act of trusting is itself a risk. Existential uncertainty—the never wholly dismissible possibility that trust may be misplaced—bubbles up time and again.

70. Rousseau et al., *supra* note 57, at 394 (“To date, we have had no universally accepted scholarly definition of trust.”). Luhmann suggested limiting trust to interpersonal interactions and reserving the term “confidence” for “trust” in the ability of social institutions to function as expected. Niklas Luhmann, *Familiarity, Confidence and Trust: Problems and Alternatives*, in TRUST: MAKING AND BREAKING COOPERATIVE RELATIONS 94–105 (Diego Gambetta ed., 1988). Others have proposed other parsing schemes where confidence stems from ability and trust stems from disposition or motivation, see Dasgupta, *supra* note 56, at 52 n.3, or trustworthiness as an aspect of disposition and trust as contingent on circumstance, *id.* at 54. See also Russell Hardin, *Trustworthiness*, 107 ETHICS 26, 28–29 (1996). I am not persuaded of the utility of these distinctions. They give the illusion of precision and specificity in a context fraught with ambiguity and interrelation. Quibbling with the distinctions between these various subcategories too often turns into an intellectually satisfying means to avoid focusing on the question of social trust itself.

71. For a discussion of this point, see Rousseau et al., *supra* note 57, at 396–97 (providing a brief literature review on this point). See also Toko Kiyonari et al., *Does Trust Beget Trustworthiness? Trust and Trustworthiness in Two Games and Two Cultures: A Research Note*, 69 SOC. PSYCHOL. Q. 270 (2006) (trying to sort out the relationship between trust and trustworthiness).

72. MISZTAL, *supra* note 47, at 21 (“Central to the concept of trust, seen as embodied in structures of social relations, is uncertainty about other people’s motivations.”); Baier, *supra* note 58, at 235 (describing trust as “accepted vulnerability to another’s possible but not expected ill will (or lack of good will) toward one”); Luhmann, *supra* note 70, at 97 (“Trust . . . presupposes a situation of risk.”); Roger C. et al., *An Integrative Model of Organizational Trust*, 20 ACAD. MGMT. REV. 709, 712 (1995) (defining trust as a willingness to be vulnerable); Rousseau et al., *supra* note 57, at 395 (same); Ribstein, *supra* note 3, at 565. The best description of this relationship between vulnerability and trust comes from Guido Möllering, who characterized trust as “both highly uncomfortable and highly positive” because it reminds actors of the harm others might cause them while at the same time implying that this vulnerability might not be problematic in practice. GUIDO MÖLLERING, TRUST: REASON, ROUTINE, REFLEXIVITY 6 (2006).

73. Gambetta, *supra* note 68, at 218–19.

74. Lynne G. Zucker, *Production of Trust: Institutional Sources of Economic Structure 1890–1920*, 8 RES. ORG. BEHAV. 53, 54 (1986).

Were the world filled with perfectly rational actors, each of whom has equal bargaining power and perfect information, trust would be a far less interesting phenomenon. Under these (unrealistic) circumstances, trusting would not create much vulnerability, because with almost total predictability to individual and group interactions, trust would hardly be necessary.⁷⁵ By contrast, it is when things are not certain, when possibilities are contingent, and decisions turn on a host of unknown or unknowable factors, that trust is most important, and most difficult.

This exploration of regulatory trust builds on a well-established insight about the relationship between trust and legitimacy in the judicial context.⁷⁶ Law school professors love to regale their classes with the value of “having one’s day in court.”⁷⁷ The message is clear: while parties may prefer to win their cases, having access to the courts, being heard, and having claims seriously considered creates trust in the judicial system as a whole. This trust gives a society the resilience necessary to avoid the destabilization that adverse outcomes might otherwise generate. Sociological evidence bears this out.⁷⁸ Win or lose, there is a social value in having access to the courts. One may not always agree with the result, but if there is a sense that the process has been legitimate and the tribunal unbiased,⁷⁹ one is more willing to accept results that run counter to one’s normative

75. The Cold War creed “You Can Trust the Communists (to be Communists)” is an example. FREDERICK C. SCHWARZ, *YOU CAN TRUST THE COMMUNISTS* (1961). Originally published by The Christian Anti-Communist Crusade, the essay is available at <http://www.schwarzreport.org/ycttable.htm>. When there is no uncertainty as to how information will be processed and acted upon, trust is either inherent to interactions, or, depending on how one frames the question, irrelevant.

76. See Borgmann, *Judicial Evasion*, *supra* note 38. Any direct analogy between judicial process and administrative process is fraught with difficulty because administrative agencies act in both a quasi-judicial and a quasi-legislative capacity. While fully cognizant of those difficulties, the point I am trying to make is a different one. I am not trying to compare processes, or to create a yardstick for legitimacy, but to use the judicial system as an example of a successful interaction between trust, process, and legitimacy.

77. Scholars routinely identify this notion of “having one’s day in court” as a central principle, or at least a central myth, of our legal system. Indeed, the idea is so central that it appears in hundreds of law reviews, without citation—the importance of “having one’s day in court” is apparently self-evident enough to escape law review editors’ continual demands for authority. The judiciary has also been known to wax eloquent about the importance of “having one’s day in court.” See, e.g., *Martin v. Wilks*, 490 U.S. 755, 762 (1989) (referring to “[o]ur deep-rooted historic tradition that everyone should have his own day in court”); *Joint Anti-Fascist Refugee Comm. v. McGrath*, 341 U.S. 123, 162–63 (1951) (Frankfurter, J., concurring) (characterizing this principle as “[r]epresenting a profound attitude of fairness between man and man, and more particularly between the individual and government”).

78. For a survey of research documenting this point, see Brockner & Siegel, *supra* note 28, at 390–410. See generally DAVID BEETHAM, *THE LEGITIMATION OF POWER* 15–36 (1991) (noting the relationship between legitimacy and shared beliefs); TOM R. TYLER, *Psychological Perspectives on Legitimacy and Legitimation*, 57 *ANN. REV. PSYCHOL.* 375 (2006); TOM R. TYLER & YUEN J. HUO, *TRUST IN THE LAW: ENCOURAGING PUBLIC COOPERATION WITH THE POLICE AND COURTS* 7–18 (2002) (advocating a “process-based model of regulation that encourages voluntary deference” to authorities based on fairness in exercise of authority).

79. These are, of course, big “ifs.”

preferences. The concept of regulatory trust developed in this Article tries to identify the conditions under which the same might be said of regulatory decision-making.

Before focusing on regulatory trust, it is worth walking through the alternative conceptions of trust most often offered as a substitute for the kind of social trust implicated in the regulatory context. The two most significant alternatives are personal relationships and rational calculation. The rest of this Section explores these alternatives and explains why neither suffices as the basis for a credible regulatory system. This Section ends with a description of social trust which forms the basis for the regulatory trust paradigm developed in the rest of the Article.

B. Thick Trust Between Individuals

Some argue that the only way to produce trust is to rely on interpersonal relationships. Under this model, sometimes called “thick”⁸⁰ or “strong”⁸¹ trust, cooperative interactions occur wholly between persons of known disposition and character. Many traditional societies function based on this kind of “thick trust.”⁸²

A precondition of a society based on thick trust seems to be a small, tightly knit, and homogenous society. When every individual’s identity is bound up with group membership, thick trust within the group can be a powerful force for organizing and maintaining society.⁸³ This does not mean that thick-trust relationships are not betrayed in such societies, or that such betrayal does not resound to the society’s detriment. Instead, the point is merely that intimate relationships make it possible to rely on thick trust as an ordering principle.

Structural changes flowing from the Industrial Revolution of the nineteenth century transformed Western societies in ways that made relying on thick trust far more problematic.⁸⁴ Urbanization and industrialization meant that individuals and local communities developed an ever-widening circle of interaction.⁸⁵ With formerly insulated groups interacting while also remaining

80. ERIC M. USLANER, *THE MORAL FOUNDATIONS OF TRUST* 9 (2002); Bernard Williams, *Formal Structures and Social Reality*, in *TRUST: MAKING AND BREAKING COOPERATIVE RELATIONS* 12 (Diego Gambetta ed., 1988); PUTNAM, *supra* note 59, at 136–37.

81. Ribstein, *supra* note 3, at 558–68.

82. The Chinese concept of *guanxi* has obvious parallels here, and this principle forms one of the bases of the *Kairetsu* structure for business. Although these systems certainly have many strengths, they also have weaknesses. The downsides of such a structure are hinted at by the unflattering label “crony capitalism.”

83. For a description of the complex web of trust relationships in a traditional society, see PARKER MACDONALD SHIPTON, *THE NATURE OF ENTRUSTMENT* 99–119 (2007).

84. For an evocative description of this chaotic period in American history, see generally ROBERT H. WIEBE, *THE SEARCH FOR ORDER 1877–1920* (1967). The technological revolution of the twentieth century seems to be producing changes on a comparable scale. If so, we will once again need to rethink social trust in light of new realities.

85. As Alan Wolfe puts it: “[t]o be modern is to face the consequences of decisions made by complete strangers while making decisions that will affect the lives of people one will never know.” ALAN WOLFE, *WHOSE KEEPER? SOCIAL SCIENCE AND MORAL*

distanced, social relations became more contingent. Cohesive group identification lessened as a result, with a concomitant weakening in the shared bonds necessary to establish thick trust.

The neoconservative take on this phenomenon has been one of lamentation—mourning the perceived erosion of trust and trustworthiness in modern society.⁸⁶ Empirical evidence provides some support for this concern; indeed, numerous surveys show that public trust in government has been on the decline since the 1960s.⁸⁷ Critics, however, rightly point out that it is important to avoid valorizing thick trust based on exclusion of “the other.”⁸⁸ Modern societies are not homogeneous, and thus social trust must necessarily rest on inclusion rather than exclusion.

As societies grow in size and complexity, the disadvantages of relying on thick trust multiply. There are simply too many interactions among too many parties at too great a distance. Perhaps the biggest disadvantage is that at the beginning of every interaction with a new individual or entity, trust must be painstakingly constructed from zero. As societies become more complex, with sharp divisions of labor and increased interactions with strangers, it becomes impracticable to continually construct thick trust every time individuals interact.⁸⁹

Moreover, invocations of thick trust can seem out of place as a means to address political uncertainty of the modern state. For example, former President George W. Bush’s announcement that he had looked Vladimir Putin “in the eye [and] . . . found him to be very trustworthy” was an invocation of thick trust as the basis for United States–Russian relations.⁹⁰ Because such an expression of thick

OBLIGATION 3 (1989).

86. FUKUYAMA, *supra* note 55, at 23–41; PUTNAM, *supra* note 59, at 287–91; Roderick M. Kramer & Tom R. Tyler, *Whither Trust?*, in *TRUST IN ORGANIZATIONS 3* (Roderick M. Kramer & Tom R. Tyler eds., 5th ed. 1995). This vision of trust places the entire burden for making society work onto traditional voluntary associations and the traditional family unit. Warren, *supra* note 14, at 14.

87. See generally Am. Nat’l. Election Studies, *The ANES Guide to Public Opinion and Electoral Behavior: Trust in the Federal Government 1958–2004*, http://www.electionstudies.org/nesguide/toptable/tab5a_1.htm; see also A.H. Miller, *Political Issues and Trust in Government: 1964–1970*, 68 AM. POL. SCI. REV. 951, 951–53 (1974).

88. For an exploration of this point, see Orlando Patterson, *Liberty Against the Democratic State: On the Historical and Contemporary Sources of American Distrust*, in *DEMOCRACY AND TRUST 199–204* (Mark E. Warren ed., 1999).

89. For example, we are all wholly dependent on the skill and care employed (we hope) by the anonymous engineers of the subways we ride, the manufacturers of the medicine we take, and the workers who assemble our child-safety seats, refrigerators, and automobiles. We have little chance of meeting these individuals, and thus cannot interact on the basis of thick trust. See Hardin, *Street-Level Epistemology*, *supra* note 62, at 510–11 (remarking that trust can be based on many sources other than thick relationships).

90. President Bush not only announced that he had looked Russian Federation President Vladimir Putin “in the eye . . . [and] found him to be very straightforward and trustworthy” but continued by adding that “I was able to get a sense of his soul; a man deeply committed to his country and the best interests of his country . . . I wouldn’t have invited him to my ranch if I didn’t trust him.” President George Bush & Russian Federation

trust seemed bizarre in the context of state-to-state diplomatic interactions, Bush's statement was greeted with disbelief and derision.

One recent attempt to base administrative decision-making on thick trust reveals the shortcomings of such an approach. The Quincy Library Group,⁹¹ (QLG) a California-based grassroots project, sought to make management decisions for portions of the Lassen, Plumas, and Tahoe national forests through a selected local stakeholder cooperation.⁹² Conflicting aspirations for these forests, particularly with regard to old-growth trees that provided habitat to the endangered spotted owl, had devolved into a "timber war" between the timber industry and environmentalists. The QLG set out to find common ground in order to end the timber war. The QLG specifically excluded government officials and representatives of national conservation groups from its "consensus-building" decisional process on the theory that they would "aggravate frustrations."⁹³ After dozens of meetings, the QLG, which began as a collection of "uncomfortable individuals and contentious factions," had become a "very easy-going and cohesive group."⁹⁴ With thick trust established, the QLG developed an alternative forest management plan for nearby national forests, one that allowed significantly more logging than did the Forest Service's forest management plan. For this reason, the Forest Service initially rejected QLG's forest management plan as inconsistent with its obligations under National Environmental Policy Act (NEPA), the Forest Management Act and the Endangered Species Act. Indeed, the plan proposed by the QLG was less protective of endangered species and old-growth forests than was the Forest Service Plan. Nevertheless, after significant lobbying, the QLG's plan was enacted into law by the Herger-Feinstein Quincy

President Vladimir Putin, Press Conference (June 16, 2001), *available at* http://www.kremlin.ru/eng/speeches/2001/06/16/0000_type82914type82915_142990.shtml.

91. The Quincy Library Group (QLG) maintains a website. *See* The Quincy Library Group Home Page, <http://www.qlg.org/>.

92. QLG formed as a local response to the never-ending "timber wars" over timber management in a 2.3 million acre area in the Lassen, Plumas, and Sierra counties of California. These "wars" included court battles, alleged sabotage, and even death threats between environmentalists and loggers. William Varettoni, *Success Overdue at the Quincy Library: Pitfalls in Public Participation*, PROP. & ENVTL. RES. CENTER (June 2005), *available at* <http://www.perc.org/articles/article549.php>. The QLG discussions began in 1992 between a Sierra Pacific Industries district manager, a Plumas county supervisor, and a local environmental attorney.

93. Bill Coates, *Finding Common Ground: Restoring a Small Town Economy and National Forests to Health*, QUINCY LIBR. GROUP, <http://www.qlg.org/pub/miscdoc/coates.htm> (last visited Aug. 1, 2009); *A Clear View*, QUINCY LIBR. GROUP, (Nov. 20, 1997) <http://www.qlg.org/pub/Perspectives/clearview112097.htm>. The QLG's exclusion of national conservation groups is well-known. *See* Letter from the Wilderness Society, Sierra Club, & Natural Resources Defense Council to William Jefferson Clinton, President (May 18 1994), *available at* <http://www.qlg.org/pub/archive/archive94/twsnrdcsc051894.htm>; National Audobon Society, *Audobon Official Position on Quincy Library Group Bill* (Sept. 20, 1997), *available at* <http://www.qlg.org/pub/Perspectives/audubonposition.htm>.

94. Pat Terhune & George Terhune, *Engaging, Empowering, and Negotiating Community: Strategies for Conservation and Development*, QUINCY LIBR. GROUP (Oct. 8, 1998), <http://www.qlg.org/pub/miscdoc/casestudy.htm>.

Library Group Forest Recovery Act.⁹⁵ As a means of restoring a sense of community in Quincy, the project may have been a success, but it amounted to fewer protections for treasured national resources in the name of local compromise. Thick trust within the QLG came at the expense of stewardship, with inappropriate compromises on wider issues like ecosystem management, endangered species habitat, and forest-wide planning. For this reason, few informed commentators would hold the project up as a model for cooperative regulation. The Quincy experience instead underscores the inadequacy of thick-trust relationships for solving multi-scalar problems.

There is scarcely any form of activity in modern society that does not require the social collaboration of human beings not personally known to one another. For these kinds of interactions, trust arises from the context in which the action occurs rather than from the attributes of any specific trusted individual. This kind of trust is social rather than personal—it resides in processes and systems rather than individuals. What it shares with thick trust is the ability to simplify complexity—and it does not have to be constructed anew for each new interaction.

The unfolding Madoff saga shows how badly things can go awry when thick trust gets confused with social trust in a complex, modern society. Bernard Madoff was a professional money manager with a stellar reputation. He delivered consistent returns to his investors year after year—regardless of what the market did as a whole.⁹⁶ His investors included the rich and famous, other sophisticated investors, and numerous charities, as well as countless ordinary folks.⁹⁷ Many of his investors had long personal relationships with him, and they all described him as trustworthy.⁹⁸ On December 12, 2008, Madoff was arrested for investment fraud, accused of running a giant Ponzi scheme.⁹⁹ His investors lost at least \$50 billion.¹⁰⁰

95. The Herger-Feinstein Quincy Library Group Forest Recovery Act of 1998, Pub. L. No. 105-277, tit. IV, § 401, 112 Stat. 2681-305 to 2681-310 (1998) (codified at 16 U.S.C. § 2104 (2006)). For a description of the Quincy Library Group saga, see RONALD D. BRUNNER ET AL., *FINDING COMMON GROUND: GOVERNANCE AND NATURAL RESOURCES IN THE AMERICAN WEST* 159–200 (2002); *ACROSS THE GREAT DIVIDE: EXPLORATIONS IN COLLABORATIVE CONSERVATION AND THE AMERICAN WEST* (Philip Brick et al. eds., 2001). At the time, supporters hailed the group as a new model for cooperative regulation, while opponents objected to privileging local relationships and interests over national priorities. These alternative viewpoints capture some of the ambivalence about the place thick trust might hold in modern administrative decision-making. The extensive literature on agency capture also speaks to this question.

96. *Ponzi Squared*, *ECONOMIST*, Dec. 15, 2008, available at http://www.economist.com/businessfinance/displayStory.cfm?story_id=12795543 (describing Madoff's "unnaturally consistent" results).

97. See Diana B. Henriques, *Madoff Scheme Kept Rippling Outward, Crossing Borders*, *N.Y. TIMES*, Dec. 19, 2008, at A20 (detailing the network of personal relations between Madoff and his investors); Alan Feuer, *Standing Accused: A Pillar of Finance and Charity*, *N.Y. TIMES*, Dec. 12, 2008, at B1.

98. See Henriques, *supra* note 97; Feuer, *supra* note 97.

99. Diana B. Henriques & Zachery Kouwe, *Prominent Trader Accused of Defrauding Clients*, *N.Y. TIMES*, Dec. 11, 2008, at A1.

100. *Id.*

Colleagues report that Madoff was “very involved” with regulators, often acting as a consultant or sounding board.¹⁰¹ This relationship had clear strategic advantages. As one anonymous colleague commented: “If you’re very close with regulators, they’re not going to be looking over your shoulders that much. Very smart.”¹⁰² And, in fact, regulators ignored tips about Madoff’s activities.¹⁰³ It seems clear that a sense of personal relationship blinded otherwise sophisticated investors, and even government regulators, to the warning signs that Madoff’s operations needed more scrutiny. It is worth remembering that the “con” in “conman” stands for “confidence.” Scammers prey on society by using personal relationships to create a cocoon of trustworthiness, and that cocoon often deflects even the kind of credible tips of wrongdoing that the SEC received about Madoff.¹⁰⁴ In short, investors and regulators alike confused thick trust based on personal relations with the trust that grows from effective regulatory oversight.¹⁰⁵ Indeed, the common reaction to the scandal was reportedly universal disbelief, not that such a fraud occurred, but that it was perpetuated by “one of the good guys.”¹⁰⁶

The Madoff situation involved breaches of both thick personal trust and social trust. The former, no doubt, profoundly affected the individuals involved. But what might have been limited to a personal tragedy instead became a public crisis because regulators inappropriately relied on thick trust instead of fulfilling their end of the social trust bargain (performing competent regulatory oversight).¹⁰⁷ In doing so, the regulators breached their duties to the public. The ramifications of this mistake are shaking the financial foundations of our society.

While thick trust certainly forms the basis for many of our daily interactions with family, colleagues, and friends, these examples clearly demonstrate that modern societies also require a ground for trust not based on

101. Julie Creswell & Landon Thomas, Jr., *The Talented Mr. Madoff*, N.Y. TIMES, Jan. 24, 2009, at B1.

102. *Id.* (quoting an anonymous source).

103. Binyamin Appelbaum & David S. Hilzenrath, *SEC Didn’t Act on Madoff Tips*, WASH. POST, Dec. 16, 2008, at D1; Binyamin Appelbaum & David S. Hilzenrath, *SEC Ignored Credible Madoff Tips*, WASH. POST, Dec. 17, 2008, at D1.

104. *The Bernard Madoff Case: Trust Takes Another Blow*, KNOWLEDGE@WHARTON, Jan. 7, 2009, available at <http://knowledge.wharton.upenn.edu/article.cfm?articleid=2131> (describing how regulators improperly relied on Madoff’s status as “one of them”); Alex Berenson, *’92 Ponzi Case Missed Signals about Madoff*, N.Y. TIMES, Jan. 16, 2009, at A1.

105. This is not to discount the role that the Bush Administration’s profound ideology of deregulation had in shaping the Madoff affair. There were many contributing factors.

106. Eric J. Weiner, *Betrayal*, L.A. TIMES, Dec. 20, 2008, at A31.

107. *The Nation* described the fallout thusly: “Madoff has sown the seeds of suspicion everywhere. He has caused us to doubt men and women with whom we have done business with for years. There is no way of knowing if someone is a con artist. The presumption of trust is gone.” Nicholas von Hoffman, *Bernard Madoff, Trust-Buster*, THE NATION, Dec. 17, 2008, available at http://www.thenation.com/doc/20081229/howl3?rel=hp_currently. Or, as Russell Hardin comments “[t]rust can finally be stupid and even culpable.” Hardin, *Street-Level Epistemology*, *supra* note 62, at 513.

thick social relationships.¹⁰⁸ Confusion on this point leads to social disaster. Once we acknowledge this, a new way to lubricate the wheels of social interaction becomes necessary.

There are two basic responses to this problem: rejection of the need for trust in favor of calculative self-interest, or, in the alternative, the invocation of social rather than interpersonal trust. The former is based on the premise that only interactions grounded in thick trust should properly be termed trust relationships,¹⁰⁹ and that all other interactions should be considered “calculative” rather than trust-based. The latter possibility looks instead to the bridging role that institutions play in spanning the gap between thick trust and modern society. As discussed in the next Section, the extremely narrow vision of trust represented by calculative rationality has obtained currency in law and economics circles. Unfortunately, this approach to trust offers little prospect for enhancing overall social resilience. Social trust, by contrast, can readily become a building block for a more resilient society. While social trust certainly has a personal component, it rests on more than the private virtues of individuals and the relationships between them. Instead, social trust looks to institutional procedures, priorities, and outcomes for its justification and support. The Sections that follow discuss both of these options in some detail.

C. Trust as Rational Calculation

Starting from the premise that individuals are motivated to maximize their personal gains and minimize their personal losses¹¹⁰ in social interactions, rational-choice theorists posit that most social interactions can be explained through a self-interested, instrumental lens.¹¹¹ Prisoner’s dilemma games,¹¹² which tease out these

108. For Francis Fukuyama, social trust stems from thick trust within “pre-existing communities of shared moral norms and values.” FUKUYAMA, *supra* note 55, at 336. Fukuyama’s work has been roundly criticized for rejecting modernity and romanticizing pre modern virtue. HOLLIS, *supra* note 63, at 3; Barbara A. Misztal, *Trust and Cooperation: The Democratic Public Sphere*, 37 J. SOC. 371, 373 (2001). Pamela Paxton turns this equation of “thick personal trust produces social trust” on its head. Pointing out that trust in institutions seems more resilient than individual trust, she argues that the “relatively . . . steady trust in institutions . . . [may be] our best hope of restoring trust in individuals.” Pamela Paxton, *Trust in Decline?*, 4 CONTEXTS 40, 45 (2005).

109. Williamson, *supra* note 69, at 479–84. He describes bounded rationality and opportunism as the conditions that govern not only contractual relations but also “the systems context in which contracts are embedded.” *Id.* at 485. This line of thinking has a proud heritage stretching all the way back to Tönnies’ assertion that trust relationships can only exist in *Gemeinschaft*. FERDINAND TÖNNIES, *COMMUNITY AND CIVIL SOCIETY* 252 (Jose Harris ed., 2001). As a middle ground, Carol Rose proposes “semi-rational trust.” Rose, *supra* note 18, at 535–38.

110. Such an approach presumes, of course, that individuals have fixed preferences and can assess whether any particular outcome will result in a gain or a loss.

111. There is a vast literature on rational-choice theory. Readers looking for an introduction might consider: JAMES S. COLEMAN, *FOUNDATIONS OF SOCIAL THEORY* (1990); AXELROD, *supra* note 19; and Hardin, *Street-Level Epistemology*, *supra* note 62.

112. Merrill Flood and Melvin Dresher first posited the Prisoner’s Dilemma in 1950. Their work was formalized and popularized by Albert Tucker, who gave it the name

instrumental motivations, have shaped this rationalist analysis of trust.¹¹³ Because this theory served as the intellectual justification for the deregulation movement in the United States, it is worth discussing in some detail.¹¹⁴ This Section highlights the ways that discounting the social framework within which interactions occur¹¹⁵ produces an incomplete picture of trust.¹¹⁶ My intent is not only to focus attention on the theoretical flaws in rational-choice reasoning but also to highlight how an alternative set of assumptions leads to a very different vision of regulatory decision-making and its role in the construction of social trust.

To the extent that rational-choice theorists invoke trust as a means of facilitating cooperation, that trust grows from rational and instrumental considerations.¹¹⁷ For these thinkers, we live in a society of individuals.¹¹⁸ Accordingly, value-maximizing, calculating individuals make choices that create society and achieve the social good, without the need for regulatory interventions. This is rational choice.

“Prisoner’s Dilemma.” A.W. Tucker, *The Mathematics of Tucker: A Sampler*, 14 TWO-YEAR C. MATHEMATICS J. 228, 228 (1983). For a brief historical overview of the evolution of game theory, see Phillip D. Straffin, Jr., *Changing the Way We Think About the Social World*, 14 TWO-YEAR C. MATHEMATICS J. 229, 229–30 (1983). For an in-depth description of game theory’s birth, see WILLIAM POUNDSTONE, *PRISONER’S DILEMMA* (1992).

113. Game theory explores conflict situations in which players must make a choice and where the ultimate outcome of the conflict is determined in some prescribed way by the cumulative choices made by all the players. POUNDSTONE, *supra* note 112, at 6.

114. In his first inaugural address, President Reagan captured this point of view when he famously declared, “In this present crisis, government is not the solution to our problem; government is the problem.” President Ronald Reagan, First Inaugural Address, 1 PUB. PAPERS 1, 2 (Jan. 20, 1981). In light of the role that deregulation played in the recent financial collapse, this view has less resonance than it once did.

115. This point is elucidated in JOHN M. GILLROY ET AL., *A PRIMER FOR LAW & POLICY DESIGN* 1–13 (2008).

116. Criticism of rational-choice theory is voluminous. A reader might consider AMITAI ETZIONI, *THE MORAL DIMENSION: TOWARD A NEW ECONOMICS* (1988); TYLER, *WHY PEOPLE OBEY*, *supra* note 16.

117. COLEMAN, *supra* note 111, at 99 (claiming that trust “is nothing more or less than the considerations a rational actor applies in deciding to place a bet”). Indeed, some game theorists openly dispute that trust plays a role in these interactions at all. Axelrod, for example, noted that “Whether the players trust each other or not is less important in the long run than whether the conditions are ripe for them to build a stable pattern of cooperation with each other.” ROBERT AXELROD, *THE EVOLUTION OF COOPERATION* 184 (1984). Williamson entirely rejects the notion of trust, asserting that if behavior could be explained in calculative terms, then it ought not be characterized as trust. Williamson, *Organization*, *supra* note 69, at 469–75. Indeed, Williamson’s schema takes this point so far that he scarcely allows for thick trust. *Id.* at 484 (“[T]rust, if it obtains at all, is reserved for very special relations between family, friends, and lovers.”).

118. Critics of this position bemoan that “the very idea of society today is haunted by a kind of individualism out of which no society can be conceived, as it obfuscates its political dimension.” Antoon Braeckman, *The Closing of the Civic Mind, Marcel Gauchet on the ‘Society of Individuals,’* 94 THESIS ELEVEN 29, 30 (2008) (describing Marcel Gauchet’s theory of a society of individuals).

This story begins with invocation of the prisoner's dilemma. The classic iteration involves two prisoners arrested for an unspecified crime. Not having enough evidence for a conviction, the police speak with the prisoners separately, offering each a Faustian bargain. If one prisoner agrees to testify against the other, who remains silent, the defector goes free and the silent accomplice receives a ten-year sentence. If both remain silent, both face six months in jail for a minor charge. If both defect by agreeing to testify, thereby betraying each other, both will receive a five-year sentence.¹¹⁹

For each prisoner, the game presumes that the best *individual* result is always obtained by confessing—either by betraying an accomplice who remains silent, or by betraying an accomplice who is also striking a deal with the prosecution—thus creating an incentive to confess. The best *overall* result is obtained if both remain silent. If both confess, each faces an outcome that is worse than had both remained silent. There is, thus, an incentive not to confess. But, a prisoner who remains silent and whose accomplice defects is the game's sucker—the worst position possible. Although the ultimate outcome depends on the collective choices made by the accomplices, each prisoner must choose without knowing what the other has chosen. This is the dilemma.¹²⁰

The question then becomes: what is the “rational” choice in a prisoner's dilemma game?¹²¹ It depends. A focus on individuals suggests that the rational choice is to confess even though each player's individual reward would be greater had they both remained silent. A focus on the overall welfare of the group suggests that remaining silent is the rational strategy. Prisoners who can trust their accomplices not to confess are better off as a class than are prisoners who cannot trust their accomplices. This is true even though individual prisoners who betray their accomplices might be better or worse off than individual prisoners who do not. Trust or its absence shapes which choices are “rational.” It makes no sense to remain silent unless the players trust each other, because it is a choice that risks making that player the game's sucker but also has the potential for maximizing joint welfare.¹²²

119. See Tucker, *supra* note 112.

120. For a discussion of how prisoner's dilemma games are used and misused in legal theory, see Richard H. McAdams, *Beyond the Prisoners' Dilemma: Coordination, Game Theory and Law*, 82 S. CAL. L. REV. 209 (2009) (pointing out that although prisoner's dilemma games are only a small subset of game theory, these games loom unduly large in the legal literature).

121. A principal heuristic of rational-choice theory is that a potential trustee's trustworthiness, as perceived by a potential trustor, can be expressed in terms of a probability, and that rational actors will only place trust if the net expected value of trust (the potential loss or gain multiplied by the corresponding likelihood of occurrence) is positive. See COLEMAN, *supra* note 111, at 99. However, actors faced with questions of whether to trust lack access to this information pretty much by definition. Thus, as Möllering points out, rational-choice thinking about trust rests on a paradox. MÖLLERING, *supra* note 72, at 17. Moreover, experimental evidence does not bear out this hypothesized connection between trust and trustworthiness. See Kiyonari et al., *supra* note 71, at 280.

122. Some assert that trust is a precondition for cooperation. Others characterize trust as a result of, rather than as a precondition for, cooperation. For a discussion, see

According to rational-choice theory, the rational result is to defect, and in the game, many players do select that option. The same is not necessarily true in the world. The disconnect between results in the game and results in the world stems, at least in part, from artificialities inherent in the game—the players are not subject to enduring consequences for their choices, have no ties of loyalty, fear, or love to anyone else in the game, and participate for only a short period of time.¹²³

By contrast, interactions in the real world are rarely limited to purely dyadic relationships between atomistic and ahistorical actors.¹²⁴ Trust decisions are instead embedded in particular contexts, made in light of particular histories, and motivated by the confluence of multiple, sometimes conflicting, values.¹²⁵ These decisions often involve actors besides those bestowing and receiving trust.¹²⁶ And, of course, in the world it is not always obvious whether someone has acted cooperatively or defected, nor do the “games” that people play outside the laboratory have any clear boundaries. As a result, any generalizing from prisoner’s dilemma games to actual social, political, or economic activities must be carefully qualified.¹²⁷

More realistic games cure some, but not all of these problems. The iterated prisoner’s dilemma has players engaging in repeat interactions rather than making a single isolated decision. This version of the game therefore includes faint echoes of those conditions that give rise to thick trust.¹²⁸ Perhaps not surprisingly, cooperative behaviors (which prisoner’s dilemma games conflate with trust)¹²⁹ increase in the iterated version. When the players expect multiple interactions during the course of the game, their behavior changes.¹³⁰ Even within a single

Gambetta, *supra* note 68, at 235.

123. And of course there is the problem of false confessions, a variable that the game does not consider, but one that must be of significant concern to a system focused on justice.

124. For an elaboration on this point, see Good, *supra* note 66, at 33.

125. Jon Elster offers a rousing exploration of the contradictory impulses at the heart of many human choices. JON ELSTER, *ULYSSES AND THE SIRENS: STUDIES IN RATIONALITY AND IRRATIONALITY* 157–79 (rev. ed.1984).

126. Zucker describes reputation as “a symbolic representation of past exchange history” and notes that brand names serve as a proxy for reputation. Zucker, *supra* note 74, at 62.

127. For a critique of this relentlessly individual approach to trust, see Frankel, *supra* note 4, at 462.

128. Douglass North points out that “the essence of impersonal exchange is the antithesis of the condition for game theoretic cooperation. But the modern Western world does in fact exist.” DOUGLASS C. NORTH, *INSTITUTIONS, INSTITUTIONAL CHANGE AND ECONOMIC PERFORMANCE* 12 (1990).

129. Because trust and cooperation are conflated, these studies are both over-inclusive and under-inclusive. The analytical model has no way of distinguishing cooperation that occurs despite lack of trust from trust-based cooperation, nor can it distinguish a decision not to cooperate despite trusting with a refusal to cooperate based on lack of trust. These problems are inherent to an experimental model that treats trust and cooperation as interchangeable. For an exploration of these points, see Toshio Yamagishi et al., *Separating Trust from Cooperation: Prisoner’s Dilemma with Variable Dependence*, 17 *RATIONALITY & SOC’Y* 275, 276 (2005).

130. POUNDSTONE, *supra* note 112, at 101–16.

round of the game, or in related one-off trust games,¹³¹ researchers report that subjects display far more trusting behavior than the theory suggests.¹³² In interpreting games, it is important to remember this initial simplification of trust and to assess any results not only within the experimental design but also against a richer and more complex conception of trust. The notion that reputation matters,¹³³ and that trusting behavior occurs, even in the context of a prisoner's dilemma, highlights trust's reflexivity¹³⁴ and suggests limits for extrapolating from the game to more complex real-world situations.

Nor is trust the same thing as cooperation.¹³⁵ For one thing, cooperation can be induced by fear as well as by trust.¹³⁶ It is nearly impossible for game theory to distinguish cooperation based on trust from cooperation rooted in an exercise of power.¹³⁷ While that difference may be of little import within

131. For a detailed description of trust games, see Dasgupta, *supra* note 56, at 49–71; *see also* MÖLLERING, *supra* note 72, at 33–37.

132. Luca Crudeli et al., *Social Capital or Economic Rents? An Experimental Study*, 20 RATIONALITY & SOC'Y 311, 321–30 (2008); Nahoko Hayashi et al., *Reciprocity, Trust, and the Sense of Control*, 11 RATIONALITY & SOC'Y 27, 35–40 (1999); Harvey S. James, Jr., *The Trust Paradox: A Survey of Economic Inquiries into the Nature of Trust and Trustworthiness*, 47 J. ECON. BEHAV. & ORG. 291, 305–07 (2002) (pointing out that trust can exist even despite a lack of rational incentives); Kiyonari et al., *Social Exchange and Reciprocity: Confusion or a Heuristic?* 21 EVOLUTION & HUM. BEHAV. 411, 421–27 (2000); *see generally*, Dean G. Pruitt & Melvin J. Kimmel, *Twenty Years of Experimental Gaming: Critique, Synthesis, and Suggestions for the Future*, 28 ANN. REV. PSYCHOL. 363, 376–84 (1977).

133. Dasgupta, *supra* note 56, at 59. There is also a significant body of work showing that game players are willing to incur a loss in order to punish what they believe to be inappropriate behavior. For a survey of this work, *see* Ernst Fehr & Simon Gächter, *Fairness and Retaliation: The Economics of Reciprocity*, in ADVANCES IN BEHAVIORAL ECONOMICS 510–18 (Colin F. Camerer, George Loewenstein, & Matthew Rabin eds., 2004); *see also* Werner Güth, et al., *An Experimental Analysis of Ultimatum Bargaining*, 3 J. ECON. BEHAV. & ORG. 367, 371–75 (1982); Daniel J. Kahneman et al., *Shared Outrage and Erratic Awards: The Psychology of Punitive Damages*, 16 J. RISK & UNCERTAINTY 49, 58–72 (1998); Daniel J. Kahneman & Shane Frederick, *Fairness as a Constraint on Profit Seeking: Entitlements in the Market*, 76 AM. ECON. REV. 728, 728–29 (1986).

134. Giddens calls this self-reinforcing and self-transforming aspect of trust “active trust.” Anthony Giddens, *Risk, Trust, Reflexivity*, in BECK ET AL., REFLEXIVE MODERNIZATION, *supra* note 5, at 184–97.

135. For a more general critique of behavior economics along this line, *see* Amartya K. Sen, *Rational Fools: A Critique of the Behavioral Foundations of Economic Theory*, 6 PHIL. & PUB. AFF. 317, 320–26 (1977) (questioning the use of observed choices to identify and define preferences); *see also* Yamagishi et al., *supra* note 129, at 278 (convincingly demonstrating that trust and cooperation must be considered separate phenomena).

136. Coercion can temporarily substitute for trust but does not provide a basis for maintaining a social order over time. SELIGMAN, *supra* note 6, at 13.

137. *See* Cynthia Hardy et al., *Distinguishing Trust and Power in Interorganizational Relations: Forms and Façades of Trust*, in TRUST WITHIN AND BETWEEN ORGANIZATIONS 64–86 (Christel Lane & Reinhard Bachmann eds., 1998) (criticizing theories of trust that cannot distinguish cooperation based on trust from cooperation rooted in explicit or implicit power relations).

laboratory games, it is a vital distinction in the real world. Even taking the “trust equals cooperation” equation at face value, rational choice runs into a fundamental paradox. The relentless logic of backwards induction suggests that cooperation is rarely possible between actors with different preferences.¹³⁸ The world is, nevertheless, replete with examples of such cooperation.¹³⁹ Resort solely to instrumental values cannot adequately account for cooperation, let alone trust.¹⁴⁰

Moreover, where rational-choice theory posits rational actors coolly weighing indicia of trustworthiness to calculate trust decisions,¹⁴¹ uncertainty is a hallmark of situations requiring trust. There is a stark contrast between the precise and simple world of game theory and the messy imprecision of human interactions. Would-be trustors must often make the choice to trust against a backdrop of unreliable, inconclusive, or even no evidence. They have only their imperfect and subjective interpretations to help them bridge the gaps created by incomplete information. When rationalist explanations posit decision-making based on information that is, almost by definition, unavailable,¹⁴² they paper over this fundamental uncertainty with the illusion that individuals have access to the information that would allow rational calculation to occur.

Game theory’s focus on self-interest also gives rise to another interesting paradox. Within the game, self-interest becomes grounds for rational trust¹⁴³—in the real world, however, self-interest is routinely identified as one of the prime factors undercutting trust generation.¹⁴⁴ In one survey, 26% of respondents

138. For an allegorical exploration of this claim, see HOLLIS, *supra* note 63, at 19–22.

139. Gambetta, in *TRUST MAKING AND BREAKING*, *supra* note 68, at 217; Joyce Berg et al., *Trust, Reciprocity and Social History*, 10 *GAMES & ECON. BEHAV.* 122, 130–39 (1995) (detailing investment game results with significantly more trust and cooperation than the Nash equilibrium for the game would predict); Kiyonari et al., *supra* note 71, at 270–74 (summarizing research); Craig W. Thomas, *Maintaining and Restoring Public Trust in Government Agencies and Their Employees*, 30 *ADMIN. & SOC.* 166, 172–73 (1998); but see Williamson, *supra* note 69, at 473 (disputing that these games involve trust at all).

140. ELSTER, *supra* note 125, at 146 (“Altruism, trust and solidarity are genuine phenomena that cannot be dissolved into ultra-subtle forms of self interest.”); James, *supra* note 132, at 291; see also MÖLLERING, *supra* note 72, at 42–45; Kramer & Tyler, *supra* note 86, at 5–6 (drawing on moral development literature to support the claim that instrumental models cannot adequately explain trust).

141. COLEMAN, *supra* note 111, at 99 (claiming that the rational actor will trust “if the ratio of the chance of gain to the chance of loss is greater than the ratio of the amount of the potential loss to the amount of the potential gain”).

142. See NORTH, *supra* note 128, at 8 (noting that the version of the rational actor model premised on complete information has “simply led us astray” because it lacked an “understanding of the nature of human cooperation and coordination”).

143. See, e.g., RUSSELL HARDIN, *TRUST AND TRUSTWORTHINESS* 1–8 (2004) (laying out a theory of “encapsulated interest” as a basis for trust); see also Hardin, *Street-Level Epistemology*, *supra* note 62, at 506 (describing encapsulated self-interest as “I trust you because it is in your interest to do what I trust you to do.”).

144. See, e.g., JÁNOS BERTÓK & ELODIE BETH, *OECD OVERVIEW FOR MANAGING CONFLICT OF INTEREST IN THE PUBLIC SERVICE* 64–70 (2005) (describing the various self-interests that governments perceive as creating a conflict of interest sufficient to undermine a public official’s ability to faithfully carry out the public’s interest); Robert M. Worcester,

identified “self-interest” as the main reason they did not trust government and about half said that people in general could not be trusted because they were “only looking out for themselves.”¹⁴⁵ The mere spectre of the quid pro quo is enough to compromise the legitimacy of political decision-making and of scientific research.

More fundamentally, game theory starts from the assumption that trust is an individual and behavioral phenomenon produced by rational machinations of calculating individuals.¹⁴⁶ This account does not leave room for the social and normative components of trust, which some argue are its primary attributes.¹⁴⁷ At the very least, a variety of motivations leads people to trust and/or cooperate in a plurality of contexts. Games that detach individual decision-making from a social context are unlikely to reveal the richness of social responses to uncertainty, and thus are not capturing the full dynamics of trust under those conditions. This critique does not so much identify a flaw in game theory itself as much as it recognizes the limitations that the methodology imposes on data interpretation.¹⁴⁸

Despite these caveats, the insights of game theory do provide some important lessons for understanding the role that trust plays in the regulatory context. First, there is a very real possibility that rational individual choices lead to an outcome that does not maximize group welfare. Some activities pit individual

Science and Society: What Scientists and the Public Can Learn from Each Other, in COSMIC RAYS: ESSAYS IN SCIENCE AND TECHNOLOGY FROM THE ROYAL INSTITUTION 97, 105 (Richard Catlow et al. eds., 2001) (noting that being perceived as an “interested party” heightened mistrust, particularly of scientists); Richard Morin & Dan Balz, *Reality Check: The Politics of Mistrust*, WASH. POST, Jan. 28, 1996, at A1. See also *infra* note 215 and accompanying text.

145. Washington Post / Kaiser Family Found. / Harvard Univ. Survey Project, *Why Don't Americans Trust The Government?* (1996), available at <http://www.kff.org/kaiserpolls/1110-governs.cfm>. More recently, the Pew Research Center's 2007 Social Trends survey reported analogous results, with half of all respondents agreeing that “you can't be too careful” and 35% stating that people were “just looking out for themselves.” PEW RESEARCH CTR., *supra* note 13. The Pew survey did not ask the “self-interest” question explicitly.

146. According to rational-choice theory, trust enables actors to conserve on transaction costs because it is the possibility of opportunistic behavior that generates many transaction costs. See, e.g., L.L. Cummings & Philip Bromiley, *The Organizational Trust Inventory (OTI): Development and Validation*, in TRUST IN ORGANIZATIONS 302 (Roderick M. Kramer & Tom R. Tyler eds., 5th ed. 1995) (trust reduces transaction costs in and between organizations by reducing the need for spending on control, monitoring, and sanctioning). These theorists seek to explain trust as a matter of incentives subject to calculation, but they cannot explain away all the uncertainty and vulnerability that individuals face in making trust decisions. HOLLIS, *supra* note 63, at 13 (“trusting people to act in their self-interest is one thing and trusting them to live up to their obligations another. The former does not capture the bond of society, since the bond relies on trusting people not to exploit trust.”).

147. See, e.g., Lewis & Weigert, *supra* note 1, at 976; Thomas, *supra* note 139, at 172–73.

148. Alfred Schutz drew out this distinction between the theoretical actions of an anonymous “anyone” and those of real live individuals acting in contexts. ALFRED SCHUTZ, *THE PHENOMENOLOGY OF THE SOCIAL WORLD* 242–49 (George Walsh & Fredrick Lehnert Walsh trans., Northwestern Univ. Press 1967) (1932).

and group interests against each other in a fashion that subverts the public good. Perhaps the most famous example is the Tragedy of the Commons.¹⁴⁹ A related insight is that lack of information can also lead to results that are sub-optimal from a rational, value-maximizing perspective. Indeed, it is experience with these phenomena that often leads to regulation in the first place.

Finally, as Russell Hardin asserts, the best condition for humans is an environment in which they have a “well-founded confidence.”¹⁵⁰ He recognizes, however, that this is not an individual problem but a collective one.¹⁵¹ Successful regulatory decision-making both creates that well-founded confidence¹⁵² and is successful because that well-founded confidence reflexively conveys legitimacy on decisions taken in the face of uncertainty.¹⁵³

D. Social Trust

Social theorists posit an alternative vision of trust based on discursive processes within civil society. For these theorists, trust is a generative process that both forms the backdrop for civil society and, at the same time, helps create that society by facilitating cooperation within and between diverse groups.¹⁵⁴ Social trust involves a generalized belief in the honesty, integrity, and reliability of generalized others.¹⁵⁵ This kind of trust requires propitious social conditions before it becomes possible or likely.

The social theorist’s approach views individuals as embedded in social systems, with rules and resources that powerfully constrain or enable individual interactions. Although, certainly, aspects of these social systems are powerfully influenced by “thick trust,” they depend much more heavily on what Luhmann called “system trust”¹⁵⁶ than on interpersonal trust relationships. The reasons for this are obvious. In the change from a relatively small, face-to-face society to a demographically large and structurally complicated system, people often interact

149. See generally Garrett Hardin, *The Tragedy of the Commons*, 162 *Sci.* 1243 (1968).

150. Hardin, *Street Level Epistemology*, *supra* note 62, at 513.

151. *Id.*

152. As Susan Bandes points out, “the question of how people would address risk individually differs from the question of how they would like their government to address collective risks.” Susan A. Bandes, *Emotions, Values and the Construction of Risk*, 156 *U. PA. L. REV. PENNUMBRA* 421, 423 n.11 (2008), available at <http://www.pennumbra.com/responses/03-2008/Bandes.pdf>. Cass Sunstein similarly makes the point that the preferences people hold as private individuals differ from their collective judgments. CASS R. SUNSTEIN, *FREE MARKETS AND SOCIAL JUSTICE* 261 (1997).

153. A focus on the rational, self-interested individual too often fails to account for the fact that economic life is deeply embedded in social life. Indeed, a preoccupation with “the market” has blinded some thinkers to the critical role played by governments, particularly in creating and running institutions within a society.

154. To say this is not to assume that any particular institutional formation or setting as given—indeed, the construction and explanation of those settings is a central problem in sociology. See, e.g., S.N. EISENSTADT, *POWER, TRUST AND MEANING: ESSAYS IN SOCIOLOGICAL THEORY AND ANALYSIS* 1–40 (1995).

155. PEW RESEARCH CTR., *supra* note 13, at 1.

156. LUHMANN, *supra* note 18, at 48–58.

from a distance that is both physical and social. There is scarcely any form of activity in modern society that does not require the social collaboration of human beings who are unknown to each other. As a result, the trust necessary for social coordination becomes unavoidably institutional rather than intimate.¹⁵⁷ This shift captures some of the same phenomena that have also been attributed to the shift from status to contract as the organizing principle of social interaction.¹⁵⁸

Without confidence in the functioning and safeguards of social systems (the monetary system and the legal system are two obvious examples), many of the most commonplace interactions in a modern society would become extremely risky and unpredictable. For example, a business willing to accept a check as payment for service does so in the context of fraud protection in the banking system and the law of negotiable instruments. This remains true even though it is highly likely that the business representative does not consciously consider the soundness of the banking system or the UCC when making this decision. These social factors act as the invisible social backdrop that generates the social trust that makes individual trust possible. Institutions and social processes can thus promote (or constrain) trust relationships.¹⁵⁹

Barber emphasized that expectations must be the starting point for defining and exploring trust.¹⁶⁰ Thus, in addition to being shaped by the broader social climate, trust is also heavily influenced by the performance of social institutions. For example, social trust is an indispensable attribute of an effective monetary system. Without public trust in the legitimacy of a state's currency as a holder of value and a medium of exchange, the state's social institutions disintegrate. Indeed, collapse of trust in the monetary system is often a sign that a social system is under severe strain.

Social trust offers a legitimizing counterbalance to the risks inherent in an impersonal social structure built out of dependence on strangers.¹⁶¹ At its bottom, this trust rests on a shared set of constitutive expectations about how people behave in society.¹⁶² Beyond this minimal baseline, shared expectations that contribute to trust derive, at least in part, from the stabilizing influence of social institutions, particularly the role these institutions play in certifying credentials and setting social ground rules.¹⁶³

157. Warren, *supra* note 14, at 6.

158. For an application of this point, see Keith Hart, *Kinship Contract and Trust: The Economic Organization of Migrants in an African City Slum*, in TRUST: MAKING AND BREAKING COOPERATIVE RELATIONS 178, (Diego Gambetta ed., 1988).

159. This is not to overly idealize trust as a social condition. As Annette Baier cautions, “[e]xploitation and conspiracy, as much as justice and fellowship thrive better in an atmosphere of trust.” Baier, *supra* note 58, at 232.

160. BARBER, *supra* note 18, at 8–10.

161. SELIGMAN, *supra* note 6, at 22 (distinguishing trust from faith and from confidence in the fulfillment of role expectations).

162. See Harold Garfinkel, *Studies of the Routine Grounds of Everyday Activities*, 11 SOC. PROBS. 225, 228–31 (1964).

163. Social trust, as I have framed it, thus differs from Hobbes's Leviathan in that I am invoking social institutions in their role as expectation generators, and credential verifiers, rather than as rule enforcers or outcome guarantors.

Viewed in this light, social institutions provide the system of rules and meaning that create common expectations, thereby defining individuals as social actors.¹⁶⁴ In other words, institutions “establish the very criteria by which people discover their preferences.”¹⁶⁵ This framing assigns an important mediating role to agencies as social institutions because they occupy the transition points between social and interpersonal trust. The same individual might have social trust in the agency itself and personal trust in the agency’s representatives with whom that individual has contact. Ongoing contact with the agency gives rise to a reflexive feedback loop¹⁶⁶—Giddens calls this the access point or “facework” of the institution—the point of intersection where personal interactions with an agency’s representative either shore up or erode social trust in the agency as an institution.¹⁶⁷ If regulatory agencies were static entities, this point would be much less significant. But, at the same time that a feedback loop between individuals and the agency is recreating or modifying social trust in the agency as an institution, the reflexive agency is also continually reconstructing the basic rules by which it is constituted and governed.

Social trust thus hinges not on individuals per se, but on the roles those individuals play within a broader social and economic system. The motivation to trust is tied to the context in which activities occur rather than to the attributes of any specific trusted individual. Trust under these circumstances takes the form of safeguards built into social systems and in the ability of these safeguards to enforce expectations. Because these safeguards function independently of the personal motivations of any of the participants at any given time, one can repose trust in the system itself, instead of being forced to depend wholly on the thick trust based on individual relationships.¹⁶⁸ Social trust thus provides a means to resolve, or at least bracket, the contingencies and uncertainties inherent in a complex society.

By contrast, as social trust erodes, so does trust between members of the society (though this observation may suffer from a chicken and egg problem). Either way, trust dynamics are an important component of effective social action.¹⁶⁹ Experience with individuals can reinforce or undermine social trust in

164. MÖLLERING, *supra* note 72, at 60–64.

165. Paul J. DiMaggio & Walter W. Powell, *Introduction* to THE NEW INSTITUTIONALISM IN ORGANIZATIONAL ANALYSIS I (Paul J. DiMaggio & Walter W. Powell eds., 1991).

166. Giddens, *supra* note 134, at 185; *see also* PETER L. BERGER & THOMAS LUCKMANN, THE SOCIAL CONSTRUCTION OF REALITY 61 (1966).

167. In saying this, I am cognizant that “the institution” is also in a state of reflexive and dynamic equilibrium.

168. Nor is trust a purely internal psychological function, though obviously there are psychological dimensions to trust. LUHMANN, *supra* note 18, at 5; *see also* BARBER, *supra* note 18, at 26–38 (describing how childhood experiences and psychological conditions shape an individual’s ability to participate in social trust systems).

169. There are, of course, degrees of trust. Mayer, Davis, and Schoorman posit that “trustworthiness should be thought of as a continuum, rather than the trustee being either trustworthy or not trustworthy.” Mayer et al., *supra* note 72, at 721. The trust continuum can simultaneously be composed of both individual and social trust because trust among persons and within society more generally is interconnected. Indeed, there is ample

institutions and vice versa. It is this interconnectedness that makes trust such a fragile commodity.¹⁷⁰ Erosion of trust in one context reverberates throughout society in unpredictable and disruptive waves. The presence or absence of social trust not only influences the choices that individuals and societies *actually* make, but also shapes the array of choices they could *possibly* make. By shaping the possible, this kind of trust both limits and enables social interactions and describes the boundaries of social resilience.

III. REGULATORY TRUST

As uncertainty erodes traditional bases of administrative authority, the weaknesses that limit thick trust and rational calculation as tools for constructing and maintaining social resilience rapidly become more than theoretical. Neither nostalgia for an idealized past in which thick trust presumably flourished,¹⁷¹ nor cynical reductions of trust to just another strategic calculative decision, offer a true picture of how the complex phenomenon we call trust influences regulatory choices. Instead, social trust, what Luhmann refers to as “system trust,”¹⁷² becomes a critical backdrop for understanding regulatory trust.

Although many components contribute to the construction of social trust,¹⁷³ this analysis focuses on the three that are most relevant to trust in the administrative context: *expertise*, *stewardship*, and *transparency*. Together, these three attributes make up “regulatory trust,” which I conceive as a specialized subset of social trust. The interplay of these three trust dimensions creates the context in which administrative decisions are made, and thus offers the possibility of public trust (or not) in regulatory decisions.

These regulatory trust components flow organically from previous scholarly work on trust,¹⁷⁴ but reflect the *sui generis* attributes of administrative

evidence that trust is dynamic rather than static—it develops, builds, declines, and resurfaces over the course of time. An inability to accommodate this dynamism is one of the major criticisms leveled at prisoner’s dilemma games. See Rousseau et al., *supra* note 57, at 395.

170. Roger E. Kasperson et al., *Social Distrust as a Factor in Siting Hazardous Facilities and Communicating Risk*, 48 J. SOC. ISSUES 161, 170 (1992). In a Hobbesian state of nature, the potential costs of misplaced trust overwhelm the potential advantages of well-placed trust. Under this view, the role of government is to reduce the costs of misplaced trust and thus make cooperation possible.

171. FUKUYAMA, *supra* note 55, at 23–41.

172. LUHMANN, *supra* note 18, at 48–58 (identifying institutions and their processes as a source of social trust in modern societies).

173. For a more in-depth exploration of the components of system trust, see Zucker, *supra* note 74, at 53.

174. Scholars working in this area seem to have a marked partiality for tripartite conceptions of trust. Mayer, Davis, and Schoorman, for example, propose that trust is a function of the trustor’s propensity to trust combined with the trusted party’s perceived ability, benevolence, and integrity. Mayer et al., *supra* note 72, at 717–20. This formulation owes much to Barber’s tripartite formula of fiduciary obligation, technically competent performance, and constant social conditions. BARBER, *supra* note 18, at 9–16. More recently, Möllering describes the traits that generate trust as being “able, willing and consistent.” MÖLLERING, *supra* note 72, at 48. Ruscio similarly reflects this theme when he

decision-making. Thus, *expertise* means not only demonstrable technical mastery, but also a keen appreciation of the limits of expertise and an ability to work respectfully with diverse groups. *Stewardship* includes not only consistency in fulfilling expectations across time and fair decision-making processes, but also a profound receptiveness to the diversity of public concerns. *Transparency* involves more than merely the provision of accurate and useful information; it also includes a commitment to capacity-building and an active solicitation of plural voices.

Mapping the contours of regulatory trust is an important first step toward understanding how to construct, nurture, and maintain it. First of all, trust interactions with a regulatory system are different from interactions between individuals. While an individual may be quite savvy in interpersonal matters, those same competencies do not necessarily come into play, for example, in choosing to take a drug regulated by the FDA. Moreover, the public is inherently vulnerable to the combined effects of a multitude of decisions made by individuals, none of whom are likely to have considered the cumulative or synergistic possibilities of their activities.

Regulation is intended to bridge both of these kinds of vulnerability—the inability of individuals to assess their vulnerability vis-à-vis a particular regulatory decision and the vulnerability of the public’s interest to the cumulative effects of private decisions. The role of regulation in this context is to fill these gaps and create a social foundation upon which individuals can rely.¹⁷⁵ As a result, regulatory trust must necessarily be more socially oriented than the individual value maximization posited by rational choice, but at the same time less intimate than the dense interpersonal relationships of thick trust.

Regulatory failures like those that permitted the sale of tainted heparin, lead-contaminated toys, and inappropriate sub prime mortgages to unwitting consumers—to highlight just a few examples from recent headlines—highlight regulatory trust’s fragility. These failures, and others, seem to transgress a basic ground rule that frames the regulatory state—the displacement of *caveat emptor* with a cultural presumption that society and manufacturers have a duty to produce

describes political trust as “weaving together judgments of the integrity and capability of public officials with confidence in the institutional structures in which they operate.” Kenneth P. Ruscio, *Jay’s Pirouette, or Why Political Trust is Not the Same as Personal Trust*, 31 ADMIN. & SOC’Y 639, 640–41 (1999). Zucker posits that trust has two basic sets of components: a shared set of background expectations, including a shared interpretive frame, and a shared set of constitutive expectations, including fiduciary responsibility and competence in the task at hand. Zucker, *supra* note 74, at 57–59. For all of these thinkers, Garfinkel’s famous breaching experiments are the touchstone for the proposition that background assumptions shape social discourse. See Garfinkel, *supra* note 162.

175. President Obama’s choice to head the EPA invoked this role for trust in her first memorandum to EPA staff. Memorandum from Lisa Jackson, Adm’r. of EPA, to EPA Employees (Jan. 23, 2009), *available at* <http://www.epa.gov/administrator/memotoemployees.html> (“[p]ublic trust in the Agency demands that we reach out to all stakeholders fairly and impartially, that we consider the views and data presented carefully and objectively, and that we fully disclose the information that forms the bases for our decisions”).

and market safe products.¹⁷⁶ One consequence of this transgression has been the erosion of social trust in regulation and regulators. For example, as a result of many of the failures listed above, the Pew Research Center documents that trust in FDA plummeted from 1996 to 2006.¹⁷⁷

This data gives us some insight into the contours of regulatory trust. For such trust to exist, the public must be satisfied, not only with a decisionmaker's technical qualifications, but also with the regulatory agency's motivations, and its ability to construct an administrative system that will function as intended. Regulatory trust therefore necessarily includes a focus on agency deliberation, judgment, and procedures.

Properly structured and supported, regulatory trust can help a society retain its resilience. At the same time, abuse or malfunctioning of any of regulatory trust's components also has the potential to undermine overall social trust. This vulnerability is compounded because agencies are typically making decisions that involve the exercise of discretion in the face of uncertainties. Where there is room for the exercise of discretion there is also the possibility that agency decision-making may deviate from the components that underpin regulatory trust. This possibility creates a gap in social relations—an open space between systemically defined expectations and agency discretion.¹⁷⁸

Although *expertise*, *stewardship*, and *transparency* are interrelated, each deserves thorough consideration on its own merits. The Sections that follow map out the contours of each regulatory trust component in some detail, giving special attention to how my characterization expands on or diverges from the current trust literature.

A. *Expertise*¹⁷⁹

The current American administrative system has its roots in the Progressive Era belief in technocratic administration—that expertise and insulation from the political process would produce better decision-making.¹⁸⁰ Born during a

176. EISENSTADT, *supra* note 154, at 147–55.

177. In its 1996 nationwide survey, the Pew Research Center reported that the FDA received an overall favorable rating of over 80%, more than twice the approval rate of the entire government. By 2006, that rating had plummeted to 29%.

178. For an explanation of role expectation and trust, see SELIGMAN, *supra* note 6, at 24–25; *see also* BARBER, *supra* note 18, at 16–17 (cautioning that trust must always be measured against the relevant social system because different role expectations for an individual may arise from differing social relationships).

179. Like trust, defining expertise is a thorny project. There are almost as many definitions of “expert” as there are researchers studying the topic. For purposes of this discussion, it is enough to point out that the idea of expertise is often contested.

180. There is a wealth of literature on the rise of expert administration during the Progressive Era. *See, e.g.*, JAMES T. KLOPPENBERG, UNCERTAIN VICTORY: SOCIAL DEMOCRACY AND PROGRESSIVISM IN EUROPEAN AND AMERICAN THOUGHT, 1870–1920 (1986); THOMAS K. MCCRAW, PROPHETS OF REGULATION 17–44, 60–65 (1984); ROBERT H. WIEBE, THE SEARCH FOR ORDER, 1877–1920 (1967); Daniel J. Gifford, *The New Deal Regulatory Model: A History of Criticisms and Refinements*, 68 MINN. L. REV. 299, 306–07 (1983) (describing the New Deal Era view that advised deference to agencies' expertise);

time of spectacular technological innovation, this system grew from the belief that new forms of governmental oversight were needed to respond to challenges that were rapidly reshaping society. Scholars and policymakers answered these challenges with the “science of administration.”¹⁸¹ Steeped in visions of efficiency and expertise, these policymakers presumed that the way to produce superior law and policy was to adopt the correct legal and administrative processes. According to this vision, regulators exercised authority that was delegated to them because of their presumed expertise. Their credentials as experts were both what qualified them to make decisions and what cloaked their decisions with social legitimacy.

Presumptions about the peculiar competencies of administrative agencies continue to resonate, even alongside the growing recognition that many purportedly technocratic decisions are, in fact, deeply political.¹⁸² These perceptions of agency expertise are crucial for regulatory trust.¹⁸³ Many exercises of regulatory power—ranging from licensing schemes that allocate scarce public resources to policing schemes intended to correct market failures to regulations intended to create or preserve public goods—place expert judgment at the center of the regulatory enterprise.¹⁸⁴ Indeed, a predominant (though by no means the only) justification for administrative agencies rests on the desirability of technocratic decision-making—the tantalizing prospect of expert judgment insulated from the winds of politics.¹⁸⁵ For these reasons, the expertise component of regulatory trust is probably the most familiar—indeed issues of scientific validity and expertise have routinely been a focus of discussions about regulatory legitimacy.

Daniel T. Rodgers, *In Search of Progressivism*, 10 REV. AM. HIST. 113, 126–27 (1982); Dorothy Ross, *Modernist Social Science in the Land of the New/Old*, in MODERNIST IMPULSES IN THE HUMAN SCIENCES, 1870–1930 (Dorothy Ross ed., 1994). A modern revival of this vision of technocratic expertise can be found in STEPHEN BREYER, *BREAKING THE VICIOUS CIRCLE: TOWARD EFFECTIVE RISK REGULATION* 61–63 (1993) (advocating establishment of a cadre of experts to bring economic and scientific rationality to the writing of regulations). For an articulation of this vision contemporaneous with the formation of the regulatory state, see VANNEVAR BUSH, *SCIENCE, THE ENDLESS FRONTIER: A REPORT TO THE PRESIDENT* ch. 3 (1945) (advancing the “social contract of science” vision of science untainted by political or industrial concerns).

181. GERARD CARL HENDERSON, *THE FEDERAL TRADE COMMISSION: A STUDY IN ADMINISTRATIVE LAW AND PROCEDURE* v (1924).

182. Some argue that the principle of *Chevron* deference straddles this divide. Mark Seidenfeld, *A Civic Republican Justification for the Bureaucratic State*, 105 HARV. L. REV. 1511, 1516–41 (1992); Laurence H. Silberman, *Chevron—The Intersection of Law & Policy*, 58 GEO. WASH. L. REV. 821, 823 (1990) (proposing, but rejecting, this view).

183. See, e.g., Paul Busch & David T. Wilson, *An Experimental Analysis of a Salesman’s Expert and Referent Bases of Social Power in the Buyer-Seller Dyad*, 13 J. MARKET. RES. 3, 10 (1976) (reporting the importance of perceptions of expertise to trust development).

184. For a thorough overview of the development of administrative law in the United States, see Robert L. Rabin, *Federal Regulation in Historical Perspective*, 38 STAN. L. REV. 1189 (1986).

185. For an early and influential articulation of this vision, see JAMES MCCAULEY LANDIS, *THE ADMINISTRATIVE PROCESS* (1938). The United States Supreme Court extolled the virtues of agency expertise in a line of cases starting with *NLRB v. Hearst Publ’ns Inc.*, 322 U.S. 111, 130 (1944).

Expert opinion alone can neither establish regulatory trust nor demonstrate legitimate decision-making. While there are certainly aspects of the use and manipulation of technical knowledge that are wholly or predominantly the realm of expertise,¹⁸⁶ most regulatory decisions are deeply embedded in a normative context. There is often enough uncertainty in the predictive powers of science to support different and widely diverging characterizations of risk. The tendency of agencies to cast their decisions as purely scientific or technocratic elides a critical distinction between science and policy¹⁸⁷—between interpreting data and choosing among alternative social paths. These latter decisions are not technical decisions to be left wholly to the expert.¹⁸⁸ While such decisions are *informed* by science, they are at bottom social and political decisions—choices about the kind of society we will create and the values that society will seek to maximize.

The primary argument against public participation rests on the notion that the public prioritizes the “wrong” concerns. The theory is that by “leaving risk management to experts, who know the issue better than anyone else, society benefits.”¹⁸⁹ John Graham, former head of the White House Office of Information and Regulatory Affairs (OIRA) exemplified this vision of regulation—with risk decisions based on criteria drawn exclusively from economic and scientific spheres.¹⁹⁰

The problem with this argument is that decisions about new technologies and, indeed, many other regulatory decisions made under conditions of uncertainty are value-laden at every turn.¹⁹¹ They can be resolved only by exercises of normative judgment. Ulrich Beck makes this point, albeit more poetically, when he points out: “[r]isks flaunt and boast with mathematics,”¹⁹² offering only

186. See Lindsay Prior, *Belief, Knowledge and Expertise: The Emergence of the Lay Expert in Medical Sociology*, 25 SOC. ILLNESS & HEALTH 41, 41–46 (2003).

187. See Borgmann, *Judicial Evasion*, *supra* note 38, at 35–40.

188. Scholars make this argument across a multitude of administrative contexts. For a thorough exploration, in the welfare reform context, see Wendy A. Bach, *Welfare Reform, Privatization and Power*, 74 BROOK. L. REV. 275, 299–304 (2009); Matthew Diller, *Form and Substance in the Privatization of Poverty Programs*, 49 UCLA L. REV. 1739, 1757 (2002) (arguing that the embrace of purportedly technocratic decision-making techniques can be a deliberate attempt to shield policy-making from public scrutiny).

189. RAGNAR E. LÖFSTEDT, *RISK MANAGEMENT IN POST-TRUST SOCIETIES* 23 (2009). This thinking dates back at least two decades. See, e.g., William D. Ruckelshaus, *Science, Risk, and Public Policy*, 221 SCI. 1026, 1026–28 (1983); William D. Ruckelshaus, *Science, Risk and Democracy*, 1 ISSUES SCI. & TECH. 19–38 (1985).

190. See, e.g., JOHN GRAHAM & J.K. HARTWELL, *THE GREENING OF INDUSTRY: A RISK MANAGEMENT APPRAISAL* 1–2 (1997); JOHN GRAHAM & JONATHAN WEINER, *RISK VERSUS RISK: TRADEOFFS IN PROTECTING HEALTH AND THE ENVIRONMENT* (1995).

191. For a description of the various assumptions built into a decision to approve genetically engineered Bt (*Bacillus thuringiensis*) crops, see generally Rebecca Bratspies, *The Illusion of Care: Regulation, Uncertainty, and Genetically Modified Food Crops*, 10 N.Y.U. ENVTL. L.J. 297, 325–36 (2002).

192. BECK ET AL., *REFLEXIVE MODERNIZATION*, *supra* note 5, at 9. Beck goes on to add, “It is possible to chase away critics with a risk approaching zero today, only to bemoan the stupidity of the public tomorrow, after the catastrophe has happened, for

probabilities and ruling nothing out. Invoking science and expertise, without acknowledging the normative judgments inherent in interpreting those probabilities, further exacerbates the erosion of social trust. Once we cease constructing probabilities and begin assessing how various regulatory choices help or hinder construction of the good society in light of those probabilities, we have left the realm of science for that of policy. As such, resort to expert opinions and/or data generated by scientists cannot, by itself, provide answers.

“Splitting-off” expert cultures¹⁹³ from the contexts in which they exist does a disservice to decision-making, particularly where uncertainty blurs the boundaries between “specialised knowledge and its multiple, many-layered (and often unforeseeable) context of implication.”¹⁹⁴ To be capable of generating trust, regulatory decisions, and the decision process itself, must fully reflect that context.¹⁹⁵ Indeed, use of the label of “expert” under these circumstances presupposes a shared commitment to a joint frame of reference, a proposition that is by no means self-evident.¹⁹⁶ Skepticism about expert decision-making has been underscored by increasing discomfort with decision-making in which indispensable knowledge is accessible only to the few.

A great challenge for regulatory decision-making is striking an appropriate balance between expertise, lay opinion, and context. In striking that balance in a fashion conducive to regulatory trust, agency experts face two central but somewhat contradictory challenges. Experts, and those who rely upon them, must learn to be mindful of the limits of their professional expertise.¹⁹⁷ Part of that mindfulness must be a willingness to learn from lay opinion, but to do so without valorizing as “the wisdom of the people” that which is actually nothing more than fear or rumor.¹⁹⁸ At the same time, regulatory legitimacy demands that the underlying science be carefully insulated from overtly political interference.

misunderstanding probability statements.” *Id.*

193. HABERMAS, *supra* note 31, at 398–99.

194. Helga Nowotny, *Democratising Expertise and Socially Robust Knowledge*, 30 SCI. & PUB. POL’Y. 151, 152 (2003).

195. Barber calls this the continuation of the expected moral order. BARBER, *supra* note 18, at 10–14.

196. Sameer Ashar makes this point in his work on the radical democratic vision embedded in social movement lawyering. Sameer M. Ashar, *Public Interest Lawyers and Resistance Movements*, 95 CAL. L. REV. 1879, 1923–25 (2007). Other scholars exploring this point include LUKE W. COLE & SHEILA R. FOSTER, FROM THE GROUND UP: ENVIRONMENTAL RACISM AND THE RISE OF THE ENVIRONMENTAL JUSTICE MOVEMENT 103–05 (2001); Jennifer Gordon, *The Lawyer Is Not the Protagonist: Community Campaigns, Law, and Social Change*, 95 CAL. L. REV. 2133, 2142–49 (2007).

197. For an interesting exploration of this point, see Elena Baylis, *Tribunal-Hopping With the Post-Conflict Justice Junkies*, 10 OR. REV. INT’L L. 361 (2008).

198. I am indebted to Tony Arnold for raising the point that a “dominant part of an environmental and social justice movement has called into question the fundamental trustworthiness of scientific, legal, and regulatory experts, regardless of the process’s transparency.” Personal Communication from Tony Arnold to Rebecca Bratspies (on file with the author). This is indeed a challenge to the construction of regulatory trust. But, I do not believe it insoluble, so long as there is a genuine commitment to recognizing that lay expertise is also a vital and indispensable part of the regulatory process. *See, e.g.*, Luke W.

These interrelated challenges pose what H.L.A. Hart might call a rule of recognition problem¹⁹⁹—in a world of increasing contingency, who are the experts? With increased social complexity has come a contemporaneous recognition of unique spheres of expertise. Typically, signals of expertise include credentials, job titles, and reputation. But, as complexity increases, so does the tendency to divide the world up into smaller and increasingly specialized slivers, each with its own set of expert signals, credentials, titles, and reputations.²⁰⁰ At the same time, the critical role that credentials play in establishing expertise has produced a cottage industry selling such credentials for a fee.²⁰¹ A proliferation of meaningless credentials tarnishes the very idea of “the expert” as it becomes increasingly difficult to establish where actual expertise ends and political maneuvering begins.²⁰²

Much research has shown that within their narrow area of expertise, experts offer more accurate predictions than novices, but outside of that area, they are just as prone to error, inaccuracy, and misunderstanding as any other citizen.²⁰³ Experts, as well as lay people, gather and evaluate data in light of their implicit assumptions about how the world works. Lay persons sometimes identify problems and solutions that experts, immersed as they are in their own professional islands, tend to overlook.²⁰⁴

Cole, *Empowerment as the Key to Environmental Protection: The Need for Environmental Poverty Law*, 19 *ECOLOGY L.Q.* 619 (1992). See also Jason Corburn, *Environmental Justice, Local Knowledge, and Risk: The Discourse of a Community-Based Cumulative Exposure Assessment*, 29 *ENVTL. MGMT.* 451 (2002); Tara J. Melish, *Maximum Feasible Participation of the Poor: New Governance, New Accountability, and a 21st Century War on the Sources of Poverty*, 22 *HARV. HUM. RTS. J.* (forthcoming 2009).

199. HERBERT LIONEL ADOLPHUS HART, *THE CONCEPT OF LAW* 94–99 (2d ed. 1994).

200. As June Carbone points out, when elites disagree, society experiences increased uncertainty. Personal Communication from June Carbone to Rebecca Bratspies (on file with author).

201. For example, there are a plethora of sites online offering PhD’s for “life experience” (and a fee, of course). Some even include an “award of excellence” in the package. See, e.g., Belford University PhD Program, <http://www.belforduniversity.org/university/doctorateprogram.asp#3> (last visited June 18, 2009).

202. See Sheila Jasanoff, *American Exceptionalism and the Political Acknowledgment of Risk*, 119 *DAEDALUS* 61, 76 (1990) (pointing out that many organized interests have both the incentive and the ability to present their representatives as experts and to create accounts of risk that have plausible support in available information). The Tobacco Institute is perhaps the best known example of this use of expertise.

203. JOHN R. ANDERSON, *COGNITIVE PSYCHOLOGY AND ITS IMPLICATIONS* 304 (6th ed. 2004) (concluding that chess masters “do not appear to be better thinkers for all their genius in chess”); PHILIP EDWARD SLATTER, *BUILDING EXPERT SYSTEMS: COGNITIVE EMULATION* 41 (1987) (reviewing literature and asserting that expert thinking is domain adapted); James Shanteau, *How Much Information Does an Expert Use? Is it Relevant?*, 81 *ACTA PSYCHOLOGICA* 75, 86 (1992) (concluding that it is difficult, if not impossible, for decision researchers to draw generalizations about experts without reference to specific problem domains); see also JAMES SUROWIECKI, *THE WISDOM OF CROWDS* 31–34 (2004) (asserting that experts routinely overestimate the likelihood that they are right).

204. Bjørn K. Myskja, *Lay Expertise: Why Involve the Public in Biobank*

An example from the agricultural biotechnology context highlights this point. In the mid-1990s agricultural biotechnology companies sought regulatory permission to market genetically engineered varieties of corn.²⁰⁵ These novel varieties had been genetically modified so that the plants endogenously produced *Bt*—a pesticide ordinarily found in soil bacteria. Because the *Bt* pesticide is toxic to certain Lepidoptera pests,²⁰⁶ the theory was that genetically engineered *Bt* corn varieties would be subject to less insect damage and therefore more productive.²⁰⁷ When deciding whether to approve this *Bt* corn, regulators needed to assess the environmental impacts of permitting release of these novel organisms.²⁰⁸ Among the most obvious of those impacts was the possibility that the target pest populations would rapidly develop resistance to the *Bt* pesticide.²⁰⁹ Resistance is a phenomenon that has plagued pesticide users and producers for decades.²¹⁰ As such, it is a problem about which expert regulators should have been fully cognizant.

Rather than address the resistance issue head on, regulatory experts instead decided that initial plantings of *Bt* corn were likely to be relatively diffuse, and therefore unlikely to pose a risk for evolution of resistance.²¹¹ The agencies

Governance?, 3 GENOMICS SOC. & POL'Y 1, 10 (2006).

205. See *Bacillus thuringiensis* Subspecies *Kurstaki CryIA(c)* and the Genetic Material Necessary for its Production in all Plants; Exemption from the Requirement of a Tolerance, 40 C.F.R. § 180.1155 (2002).

206. Bt toxins act by disrupting the function of the insects' digestive systems, thereby killing the insects. The insects susceptible to particular strains of Bt include, *inter alia*, European corn borer, southwestern corn borer, tobacco budworm, cotton bollworm, pink bollworm, and Colorado potato beetle. See J.F. Witkowski et al., *Bt Corn & European Corn Borer: Long-Term Success Through Resistance Management* (K.R. Ostlie et al. eds., 1997), available at <http://www.extension.umn.edu/distribution/cropsystems/DC7055.html>.

207. See UNION OF CONCERNED SCIENTISTS, NOW OR NEVER: SERIOUS NEW PLANS TO SAVE A NATURAL PEST CONTROL app. A (Margaret Mellon & Jane Rissler eds., 1998).

208. ENVTL. PROT. AGENCY, BIOPESTICIDES REGISTRATION ACTION DOCUMENT: BACILLUS THURINGIENSIS (BT) PLANT-INCORPORATED PROTECTANTS (Oct. 15, 2001), available at http://www.epa.gov/pesticides/biopesticides/pips/bt_brad.htm.

209. See FIFRA Scientific Advisory Panel, Final Report of the FIFRA Scientific Advisory Panel Subpanel on Plant Pesticides Meeting held March 1, 1995; Bruce E. Tabashnik, *Evolution of Resistance to Bacillus Thuringiensis*, 39 ANN. REV. ENTOMOLOGY 47, 47–74, 79 (1994); Fred Gould, *The Evolutionary Potential of Crop Pests*, 79 AM. SCIENTIST 496, 501–02 (1991). See generally D.N. Alstad & D.A. Andow, *Managing the Evolution of Insect Resistance to Transgenic Plants*, 268 SCI. 1894 (1995); Richard T. Roush, *Managing Pests and Their Resistance to Bacillus thuringiensis: Can Transgenic Crops Be Better than Sprays?*, 4 BIOCONTROL SCI. & TECH. 501, 502–03 (1994).

210. See George P. Georghiou, *The Magnitude of the Resistance Problem*, in PESTICIDE RESISTANCE: STRATEGIES AND TACTICS FOR MANAGEMENT 14 (Comm. on Strategies for the Mgmt. of Pesticide Resistant Pest Populations, Bd. on Agric., Nat'l Research Council ed., 1986).

211. See ENVTL. PROT. AGENCY, RESPONSE OF THE ENVIRONMENTAL PROTECTION AGENCY TO PETITION FOR RULEMAKING AND COLLATERAL RELIEF CONCERNING THE REGISTRATION AND USE OF GENETICALLY ENGINEERED PLANTS EXPRESSING *BACILLUS THURINGIENSIS* ENDOTOXINS 90 (Apr. 19, 2000); see also ENVTL. PROT. AGENCY, EPA AND USDA POSITION PAPER ON INSECT RESISTANCE MANAGEMENT IN BT CROPS (July 12, 1999) [hereinafter EPA AND USDA POSITION PAPER].

used this critical assumption about likely adoption patterns to avoid dealing with the resistance problem.²¹² Unfortunately, this assumption was wrong—adoption was instead densely clustered in areas with particular infestations of corn borer pests.²¹³ An honest mistake? Maybe, but a completely avoidable one. The nature of a corn borer infestation made it overwhelmingly likely that farmer adoption of the new technology would instead be clustered. Had the regulatory decisionmakers included farmer perspectives as part of their planning process they would never have made such an obvious error. As one farmer said, “If my neighbor plants *Bt* [corn], I’d better plant it too; otherwise I get the corn borers.”²¹⁴

This example highlights how lay knowledge can be an important supplement to expert knowledge in the process of solving regulatory problems.²¹⁵ Unfortunately, there is a tendency to give the opinion of an “expert” significant weight in public discourse, even when the opinion concerns matters beyond (and sometimes only distantly related to) the person’s area of expertise. This “expert haloing” creates problems for those endeavoring to construct regulatory trust. First, the lines of expertise can become blurred when professional fields overlap.²¹⁶ Moreover, because the experts themselves tend to overestimate the importance of their field of expertise and to underestimate what other perspectives might contribute, they are often blind to certain types of uncertainty.²¹⁷ Brian Wynne’s work documenting the disastrously wrong advice that so-called experts provided to Cumbrian sheepherders in the wake of Chernobyl highlights how prone experts are

212. For a full discussion of this point, see Bratspies, *supra* note 191, at 332–37.

213. EPA AND USDA POSITION PAPER, *supra* note 211.

214. ENVTL. PROT. AGENCY, OFFICE OF PESTICIDE PROGRAMS, EPA/USDA WORKSHOP ON BT CROP RESISTANCE MANAGEMENT 36 (June 18, 1999) (on file with author).

215. Lay knowledge can also be a wholly independent source of knowledge—standing outside the particular, privileged form of experience that is labeled “expert knowledge,” the lay person is uniquely positioned to raise foundational questions, the kind of questioning those immersed in the field tend not to do. Myskja, *supra* note 204, at 6.

216. For example, by the late 1980s, climate researchers had concluded with surprising unanimity that the increased releases of greenhouse gases from human activities could significantly raise the earth’s temperature in the next century. Stephen H. Schneider, *The Greenhouse Effect: Science and Policy*, 243 SCI. 771, 771 (1989). Yet two decades later, so-called experts (albeit not climatologists) are still opining to the contrary, spawning a cottage industry contending that the connection was not proven. The Union of Concerned Scientists has written extensively about the role of oil and coal companies in underwriting the activities of global warming skeptics. THE UNION OF CONCERNED SCIENTISTS, SMOKE, MIRRORS & HOT AIR: HOW EXXONMOBIL USES BIG TOBACCO’S TACTICS TO MANUFACTURE UNCERTAINTY ON CLIMATE SCIENCE (2007), available at www.ucsusa.org/assets/documents/global_warming/exxon_report.pdf. This report, and similar information about the funding of various global warming skeptic institutions, underscores my earlier point about self-interest compromising trustworthiness. Union of Concerned Scientists, *Global Warming Skeptic Organizations* (2005), available at http://www.ucsusa.org/global_warming/science_and_impacts/global_warming_contrarians/global-warming-skeptic.html.

217. See generally Sheila Jasanoff, *Technologies of Humility: Citizen Participation in Governing Science*, 41 MINERVA 223 (2003) [hereinafter Jasanoff, *Citizen Participation*]; SLATTER, *supra* note 203, at 37 (describing the tendency of experts to take their own lack of knowledge about a hypothesis as evidence of its falsity).

to the pitfall of not realizing that they do not understand certain aspects of a problem.²¹⁸ To drive home the significance of this point, Wynne calls this blindness “ignorance.”²¹⁹ Not only are experts vulnerable to many of the same ingrained cognitive biases that plague lay persons, but their status as experts makes them, as Holly Doremus points out, “prone to hubris.”²²⁰

Moreover, expert analytic frameworks can erect high barriers to participating in the social dialogue at all.²²¹ Legitimate positions and voices not facile with the dominant discourse, and thus unable to fit into it, are often excluded.²²² Along the same lines, turf wars between professional subcultures within an agency—say between lawyers and economists—can also create bureaucratic obstacles that hinder the effective incorporation of diverse perspectives in the decision-making process. Democratizing expertise thus serves twin goals: it helps overcome the expert haloing problem while also expanding participation in public decision-making. The combination of these two effects creates a better regulatory process.²²³

218. Brian Wynne, *Misunderstood Misunderstanding: Social Identities and Public Uptake of Science*, 1 PUB. UNDERSTANDING SCI. 281, 283–87 (1992). Wynne describes the inconsistency between “the certainty pervading public scientific statements and the uncertainties involved in actually attempting to create definite scientific knowledge in . . . novel and open-ended circumstances.” *Id.* at 293. Unfortunately, “unwillingness to reflect on the status of their own knowledge” can obscure significant gaps in information. *Id.* at 298. For example, the information gaps about the chronic and long-term effects of many hazardous chemicals were discovered only after entire populations and ecosystems had been exposed to the hazards. Before disaster struck, regulators did not appreciate the need for this information. See Jasanoff, *Citizen Participation*, *supra* note 217, at 234.

219. See Wynne, *supra* note 218, at 295–97.

220. Holly Doremus, *Precaution, Science, and Learning While Doing in Natural Resource Management*, 82 WASH. L. REV. 547, 567 (2007). Sheila Jasanoff asserts that modern societies have devoted inordinate resources to developing “technologies of hubris.” Jasanoff, *Citizen Participation*, *supra* note 217, at 238.

221. This observation fits with Michel Foucault’s assertion that “[t]here is no knowledge without a particular discursive practice and any discursive practice may be defined by the knowledge it forms.” BARRY SMART & MICHEL FOUCAULT: CRITICAL ASSESSMENTS 74 (1994) (quoting MICHEL FOUCAULT, *THE ARCHAEOLOGY OF KNOWLEDGE* 183 (A.M. Sheridan Smith trans., Pantheon Books 1972) (1969)).

222. Jasanoff, *Citizen Participation*, *supra* note 217, at 239. For an empirical documentation of this form of exclusion, see Barbara Bezdek, *Silence in the Court: Participation and Subordination of Poor Tenants’ Voices In Legal Process*, 20 HOFSTRA L. REV. 553, 565–74 (1992) (describing courtroom dynamics that systematically, if not necessarily intentionally, silence tenant voices). Gerald Torres describes the central importance of narratives, and emphasizes that mistranslation between different narrative frames can hinder consideration of particular viewpoints. Gerald Torres, *Translation and Stories*, 115 HARV. L. REV. 1362, 1378–82 (2002) (using *Lyng v. Northwest Indian Cemetery Protective Ass’n*, 485 U.S. 439 (1988), as an example). Jerome Bruner points out that stories can reveal competing normative assumptions about how the world should work. JEROME BRUNER, *THE CULTURE OF EDUCATION* 130–31 (1996).

223. Along these lines, a cornerstone of the European Union’s 2001 White Paper on Governance was a plan to democratize expertise by adopting new guidelines “on collection and use of expert advice in the Commission to provide for the accountability, plurality and integrity of the expertise used.” Commission of the European Communities,

Pointing out the complementary nature between realms of expert and lay knowledge is not to deny the importance of expertise. Recognizing that there is a grain of truth in characterizing expertise and “expert culture”²²⁴ as an ideology is not necessarily a slippery slope to believing that expert knowledge is merely “ideology masquerading as neutral fact.”²²⁵ Instead, this insight makes it possible to begin the process of reconceptualizing the relationship between science, expertise, and governance.

With causation often opaque, valuations uncertain, and the scope and magnitude of risks contested, any serious attempt to build regulatory trust must satisfy the cross-pressures for both expert decision-making and citizen participation. The following Sections on *stewardship* and *transparency* suggest some thoughts about how to achieve the latter, while still preserving an appropriate respect for expertise. This balancing act begins with a predicate question—what framework should be used to interpret facts relevant to a decision about social welfare? This is not a scientific question—it is not about the facts, but about their interpretation.²²⁶ For example, in deciding whether to permit a polluting activity, should the regulatory focus be on the activity’s benefits or on its harms? While the answer is obviously both, the question has important repercussions for what gets labeled a harm or a benefit, and thus influences the calculation.

Regulatory assessments are never solely factual calculations. It is not possible to consider all potential harms and benefits—choices must be made. Those choices are influenced by the regulators’ evaluative assumptions about the kinds of outcomes that are alterable as opposed to inevitable, the kinds of risks that are acceptable, and the factors that are most relevant in making these assessments. Decisionmakers can focus their evaluation narrowly on economic benefits and harms or can consider the broader social context in which these economic benefits and harms occur; for example, who bears the risks of which harms and who stands to benefit? Each alternative offers a perfectly legitimate matrix for assessing the proposed activity, based on privileging a different set of values and a different decisional framework. Much depends on the internal dynamics of the agency. The choice between alternative framings is a political one—merely by deciding which

European Governance: A White Paper COM 19 (July 25, 2001), available at http://eur-lex.europa.eu/LexUriServ/site/en/com/2001/com2001_0428en01.pdf. Some scholars challenge the premise of this White Paper—the notion that increased participation represents democratization, at least in the context of the European Union. See, e.g., JEAN MONNET CTR. FOR INT’L & REG’L ECON. LAW & JUSTICE, Symposium, *Mountain or Molehill? A Critical Appraisal of the Commission White Paper on Governance* (Working Paper No. 6/01) (presenting an array of views), available at <http://www.jeanmonnetprogram.org/papers/01/010601.html>; see also Ludger Radermacher, *The European Commission’s White Paper on European Governance: The Uneasy Relationship Between Public Participation and Democracy*, GERMAN L.J., Jan. 1, 2002, available at <http://www.germanlawjournal.com/article.php?id=125>.

224. HABERMAS, *supra* note 31, at 330.

225. This view is typically credited to Michel Foucault. See EVAN SELINGER & ROBERT P. CREASE, *THE PHILOSOPHY OF EXPERTISE* 163 (2006).

226. For an eloquent presentation of this point, see Sheila Jasanoff, *Technologies of Humility*, 450 NATURE 33 (2007).

harms and benefits will be evaluated and compared in making a regulatory decision, we have already crossed into the realm of policy.

Common regulatory tactics bury rather than surface these choices. For example, the common technique of reducing costs and benefits to dollars and then comparing those dollar figures (quantitative cost-benefit analysis) implicitly represents that this information is both available and reliable. These cost and benefit estimates are steeped in uncertainty, even though the approach depends on the relevant costs and benefits being precisely quantifiable. Scholars have written volumes making the case that costs not readily quantified are often inappropriately disregarded.²²⁷ When cost and benefit estimates are inaccurate or missing, the output of such an analysis becomes meaningless, while still conveying the illusion of numerical precision.²²⁸ Such techniques can therefore produce incorrect and misleading policy recommendations.²²⁹ Yet these process concerns are not systematically incorporated into the everyday decision-making of agency staff, nor are they considered in the regulatory process on a consistent, rather than an ad hoc, basis.

This kind of cost-benefit analysis also tends to assume that, once monetized, harms and benefits are fungible: reducing individuals to statistics and their experience to aggregate numerical risk calculations. This approach takes ignores the social foundations of vulnerability and does not consider that certain social groups are often allocated multiple risks from which they receive very little benefit. As a result, this kind of analysis actually reduces society's ability to

227. See generally FRANK ACKERMAN & LISA HEINZERLING, PRICELESS: ON KNOWING THE PRICE OF EVERYTHING AND THE VALUE OF NOTHING 205–34 (2004); MARK SAGOFF, THE ECONOMY OF THE EARTH 170–72 (1988); David Driesen, *Is Cost-Benefit Analysis Neutral?*, 77 U. COLO. L. REV. 335 (2006); Lisa Heinzerling, *Regulatory Costs of Mythic Proportions*, 107 YALE L.J. 1981, 2042–69 (1998); Amy Sinden, *In Defense of Absolutes: Combating the Politics of Power in Environmental Law*, 90 IOWA L. REV. 1405, 1413–23 (2005).

228. For example, in 2006, the Office of Management and Budget proposed requiring that quantitative risk assessment be used to assess, prioritize, and characterize risk whenever possible. Among the more controversial parts of this proposal were a series of required default assumptions, and a mandated “central” or expected risk estimate, that was to be developed by averaging risk estimates even in the face of significant model uncertainty. OFFICE OF MGMT. & BUDGET, PROPOSED RISK ASSESSMENT BULLETIN 17 (2006), available at http://www.whitehouse.gov/omb/inforeg/proposed_risk_assessment_bulletin_010906.pdf. For an analysis of how this proposal politicized risk assessment, see Sidney Shapiro, *OMB and the Politicization of Risk Assessment*, 37 ENVTL. L. 1083, 1099–1101 (2007). The National Science Council issued a report panning OMB's proposal as “fundamentally flawed” and recommended that the proposal be withdrawn because it “could not be rescued.” NAT'L ACAD. OF SCI., SCIENTIFIC REVIEW OF THE PROPOSED RISK ASSESSMENT BULLETIN FROM THE OFFICE OF MANAGEMENT AND BUDGET 1–7 (2007), available at http://www.nap.edu/catalog.php?record_id=11811. In the face of blistering criticism, OMB withdrew the proposal.

229. For an example of how this might happen, see ANNE-SOPHIE CRÉPIN, BEIJER INT'L INST. OF ECOLOGICAL ECON., THRESHOLD EFFECTS IN CORAL REEF FISHERIES, 23–27 (2003) (pointing out that mistakes about parameter values under conditions of uncertainty can skew results toward suboptimal options), available at <http://www.gruponahise.com/eaere2003/POSTERS/CREPIN.pdf>.

include issues of distributive justice and overall fairness in the decisional mix.²³⁰ Even worse, the disconnect between fuzzy inputs and precisely calculated outputs promotes a corrosive public cynicism about the decision-making process itself. Not only are these questions empirically and normatively complex, they have no definitive, value-neutral answers. To build regulatory trust we must not pretend that they do. We must not privilege efficiency at the expense of other values but must instead engage in an important social conversation about the acceptability of risks.

B. Stewardship

The manner in which regulatory decision-making occurs can have tremendous impact on levels of social trust in regulators and regulation. At its best, regulatory decision-making is informed by caring, ethics, and integrity. This ethos has been variously labeled the “ascription of benign intent,”²³¹ a “belief in the goodwill of the other,”²³² and “fiduciary responsibility.”²³³ All these characterizations are getting at aspects of what I am calling stewardship—a building block of regulatory trust.

Stewardship suggests an aspiration to more than mere efficiency and professionalism, the conventional measures for successful agency action. This is not to suggest that efficiency and professionalism are undesirable attributes in regulatory decision-making but instead to highlight that regulatory trust demands more than mere competence from regulators. Only by building a consistent track record of fulfilling long-term commitments and respecting constituents²³⁴ can regulators credibly claim to be stewards of the public’s interest. This includes agency stewardship of the public’s long-term interests in building a sustainable and just society—interests that are too often lost in the multitude of private, short-term decisions. When decisionmakers evince a clear commitment to those long-term interests even as they respond to near-term concerns, their communications, even under conditions of uncertainty, carry greater credibility. That credibility, in turn, facilitates trust.

Inclusive and rigorous processes are a baseline stewardship requirement—for both symbolic and practical reasons. On a symbolic level, inclusive decision-making processes signal the agency’s desire and intention to be trustworthy; on a practical level, such decision-making processes create a shared

230. Recent attempts to reduce the assumed value of a human life in calculating costs and benefits, a change that would obviously reduce the benefits attributable to health and safety regulation, graphically reveal how malleable cost-benefit analysis can be. ACKERMAN & HEINZERLING, *supra* note 227, at 61–90. As such, it provides a cautionary tale about the damage and deception that can be wrought through undue focus on monetizing costs and benefits. For a defense of these techniques, see John D. Graham, *Managing the Regulatory State: The Experience of the Bush Administration*, 33 *FORDHAM URB. L.J.* 953 (2006).

231. John Dunn, *Trust and Political Agency*, in *TRUST: MAKING AND BREAKING COOPERATIVE RELATIONS* 73–74, (Diego Gambetta ed., 1988).

232. SELIGMAN, *supra* note 6, at 43.

233. BARBER, *supra* note 18, at 14–16.

234. Mayer et al., *supra* note 72, at 719–21.

investment in regulatory policy, and set expectations about fulfillment and maintenance of regulatory promises.²³⁵ Participatory experiments along this line have been tried in Denmark, to significant, albeit not unanimous, acclaim.²³⁶ When successful, such programs create a mutual learning process that enhances democratic legitimacy of regulatory decision-making and improves the actual decisions themselves. This kind of participatory process also supplies the requisite “world in common” that sociological research tells us is necessary for trust.²³⁷

To achieve this, agencies must cultivate three different stewardship capacities. First, agencies must ensure basic procedural fairness, which creates a baseline perception that institutional processes are fair and open. From there, agencies must inculcate an internal culture of accessibility and responsiveness, so that procedural fairness does not denigrate into rule-bound behavior that offers the appearance of fairness while actually stifling the ability of regulators to respond to individual citizens and groups.²³⁸ Finally, agencies must cultivate a culture of rigorous self-critique to ensure that assessments of agency decision-making do not dwindle into play-acting but remain searching inquiries. Together these three stewardship capacities go a long way toward building trust in agency decisions.

When decisional processes are perceived as legitimate, the trust generated can carry agency decisionmakers across uncertainties that would otherwise derail agency credibility. Creating decisional processes that are perceived as legitimate, however, is no easy task.

In determining what constitutes legitimate process, there often seems to be a disconnect between those making regulatory decisions and those affected by the decisions—with a particularly large perceptual gap between the regulators and the intended beneficiaries of human health and environmental regulation. There is at least the perception that the regulators share the worldviews, interests, and values of the regulated parties, rather than those of the regulation’s intended

235. See, e.g., Bach, *supra* note 188, at 309–14; Melish, *supra* note 198 (describing what such a system might look like).

236. Zucker, *supra* note 74, at 54. The Danish Board of Technology offers a model for this kind of participatory approach—with members appointed from a wide range of constituents, the Board acts as an advisor to Parliament. See Act on the Danish Board of Technology, No. 375 (June 14, 1995), available at http://www.tekno.dk/subpage.php3?page=statisk/uk_act.php&toppic=aboutus&language=uk. For a first hand account of participating in one such Board, see Casper Bruun Jensen, *Citizen Projects and Consensus-Building at the Danish Board of Technology: On Experiments in Democracy*, 48 ACTA SOCIOLOGICA 221 (2005).

237. Garfinkel’s infamous breaching experiments underscore how basic these constitutive assumptions of a common set of rules are within a society. See Garfinkel, *supra* note 162. In some of these experiments, Garfinkel had students try to pay more than the price for an item at a store, shop by taking items from the grocery carts of others, and by changing the rules of tic-tac-toe mid-game. He used these experiments to demonstrate the existence of an unspoken set of assumptions about the course of everyday interactions, what he called a “common moral order of the facts of collective life.” *Id.* at 242. His work showed that disruption of these expectations caused extreme distress, anger, and anxiety. *Id.* Indeed, Zucker, Schutz, Berger, and Luhmann were all influenced by Garfinkel’s demonstration of this point.

238. Thomas, *supra* note 139, at 171.

beneficiaries. The so-called revolving door between industry and government is emblematic of this problem. Those selected to head regulatory agencies often come from the industries they regulate and then return to those industries after leaving the government. For example, President Bush appointed Philip A. Cooney of the American Petroleum Institute as chief of staff of the White House Council on Environmental Quality. After leaving that post under a cloud for altering reports to downplay climate change, Mr. Cooney went to work for ExxonMobil. Similarly, when David Lauriski became head of the Mine Safety and Health Administration, he promptly acted on a petition to water down worker protection regulations—a petition submitted by his former employer Energy West Mining Company. Upon leaving the government, Lauriski went to work for John T. Boyd Co., a mining consultancy.²³⁹ Other examples abound.²⁴⁰ When the stakes are high, and the risks and benefits unknown, this level of self-interest on the part of regulators, rather than building trust *à la* game theory, too readily bleeds into suspicion, or at the extreme, into conspiracy theories, thereby making trust more difficult.

Even more fundamentally, there is a growing body of empirical data that one's perceptions of risk are shaped by one's cultural frame. Yale's Cultural Cognition Project, for example, has persuasively demonstrated that individuals process information about risk in a fashion that fits their cultural predispositions.²⁴¹ For example, in the wake of the 2007 Virginia Tech shootings, Americans split, largely along pre-existing political fault lines, over whether stronger gun control measures could have prevented the tragedy or whether existing gun control laws enabled the tragedy by making it difficult for students and teachers to defend themselves.²⁴² Surveys revealed that individuals of opposing viewpoints had drawn opposing conclusions from the tragedy.²⁴³

Another example can be found in how different groups respond to the suggestion that a reinvigorated nuclear energy program is needed to respond to global warming. For those opposed to nuclear energy, the juxtaposition of the two issues seems absurd; but to those in favor of the technology the linkage is obvious.²⁴⁴ Thus, nuclear proponents accuse opponents of greenhouse gas

239. Christopher Drew & Richard A. Oppel, Jr., *Mines to Mountaintops: Rewriting Coal Policy: Friends in the White House Come to Coal's Aid*, N.Y. TIMES, Aug. 9, 2004, at A1.

240. For example, Open Secrets keeps a cumulative list of individuals it claims have revolved between industry and regulatory agencies. Open Secrets, *Revolving Door: Top Agencies*, <http://www.opensecrets.org/revolving/top.php?display=G> (last visited Aug. 2, 2009). The list totals in the thousands.

241. Dan M. Kahan, et al., *The Second National Risk and Culture Study: Making Sense of Progress in the American Culture War of Fact* (Yale Law School, Public Law Working Paper No. 154, 2007), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1017189. See also Kevin M. Carlsmith & John M. Darley, *Psychological Aspects of Retributive Justice*, 41 ADVANCES IN EXPERIMENTAL SOC. PSYCHOL. 40–42, available at <http://www.ssrn.com/abstract=1031193>.

242. Kahan et al., *supra* note 241, at 6–8.

243. *Id.*

244. *Id.* at 4 (reporting higher correlation with cultural cognition than with any other individual characteristic in how people perceived the threat of global warming).

hypocrisy, while opponents view this position as crass opportunism. Conflicting values channel responses to a challenge that has more than one plausible solution. Because neither side gives the other credit for presenting legitimate views, a lack of trust compounds the difficulties of responding to this pressing global crisis.

These differing cultural assessments of risk have important ramifications for regulatory trust. If it is true that one's value orientation predicts which risks one takes more seriously, this offers a cogent explanation for why policy antagonists so often appear to talk past one another rather than engage in a dialogue.²⁴⁵ Because of their unique experiences, these groups tend to draw on different knowledge stores and interpretive heuristics to process and interpret new information. Different relevance structures and baseline assumptions lead them to prioritize radically different pieces of information and thus to proceed down markedly different analytical paths from the same starting point.

This insight about the cultural dimensions of risk perception forms part of the social backdrop against which decisionmakers must act and adds another dimension to the trust-building process—properly conceived, the regulatory task is not only to bridge uncertainty gaps but also to bridge perceptual ones—and to do so in a fashion that makes meaningful dialogue possible and promotes sound decisions.

One advantage of analyzing agency actions through a stewardship lens is that it foregrounds obstacles to regulatory trust that a more traditional expert-based discourse obscures. For example, a robust stewardship analysis forces regulators to confront the problem that certain communities' needs are not well-served by the existing social order. Those who feel vulnerable or disadvantaged, for whatever reason, tend to find it riskier to trust because they are less able to cope with the consequences of misplaced trust.²⁴⁶ Mere "persistence of the moral social order"²⁴⁷ is not sufficient to create social trust in communities whose needs have historically been shunted aside in the administrative process or who bear a disproportionate share of public "bads."²⁴⁸ For these communities, mere *continuation* of the existing social order offers little reason to trust. Indeed, trust based on continuation of the

245. For a description of how this phenomenon plays out in the World Bank between economists and lawyers vis-à-vis human rights, see Galit A. Sarfaty, *Why Culture Matters in International Institutions: The Marginality of Human Rights at the World Bank*, 103 AM. J. INT'L. L. (forthcoming 2009).

246. See, e.g., Paxton, *supra* note 108, at 42; Robert Wuthnow, *The Foundations of Trust*, REP. FROM INST. FOR PHIL. & PUB. POL'Y, Summer 1989, at 8.

247. BARBER, *supra* note 18, at 10–14.

248. Gov't Accounting Office, *Environmental Justice: Measurable Benchmarks Needed to Gauge EPA Progress in Correcting Past Problems*, GAO-07-1140T (July 25, 2007). Indeed, some argue that there is a somewhat invidious feedback loop between socioeconomic status and social trust. See, e.g., Bach, *supra* note 188, at 308. These scholars claim that social trust correlates with perceptions of economic security and other resources like education. Because social trust creates positive feedback loops that make collective action easier, these thinkers see trust reinscribing privilege, a process that then creates a negative feedback loop deepening mistrust among outsider groups. Patterson, *supra* note 88, at 196. See also Hardin, *Street-Level Epistemology*, *supra* note 62, at 508 (opining that "experience molds the psychology of trust").

existing social order would require that they embrace the inequities that led to their disadvantaged situation in the first place.²⁴⁹ There is little prospect of such a result. An inclusive vision of regulatory trust, one not limited to trust among those already in a position of privilege, must account for these experiences.²⁵⁰ Thus, to build and nurture social trust, pluralism, inclusion, and participation must be central values in regulatory stewardship.

C. Transparency

It was none other than Louis Brandeis who wrote that “sunlight is said to be the best of disinfectants.”²⁵¹ It is certainly not novel to propose transparency as a critical component of regulatory trust. Indeed, the core of the Administrative Procedure Act (APA) consists of rules for public notice, participation, and comment.²⁵² The APA empowers citizens to interact with regulators through public meetings and written submissions. These participatory rights are of vital importance to the democratic legitimacy of administrative decision-making. United States disclosure statutes like the Freedom of Information Act²⁵³ and the Emergency Planning and Community Right-to-Know Act²⁵⁴ have been influential around the world. Most of these statutes focus on providing information—they leave the decision of how to use that information to individuals and the public as a whole. Thanks to former Vice President Gore’s Reinventing Government Initiative,²⁵⁵ a significant proportion of United States government information is

249. Thomas O. McGarity, *The Courts and the Ossification of Rulemaking: A Response to Professor Seidenfeld*, 75 TEX. L. REV. 525, 531–32 (1997) (expressing skepticism about the possibility of truly equal citizen participation in the face of vast disparities of wealth in the private sector).

250. Archon Fung & Erik Olin Wright, *Thinking About Empowered Participatory Governance*, in DEEPENING DEMOCRACY: INSTITUTIONAL INNOVATIONS IN EMPOWERED PARTICIPATORY GOVERNANCE 3 (Archon Fung & Erik Olin Wright eds., 2003). Susan Sturm rightly points out that even when they recognize the need for expanded participation, scholars are typically vague about the processes by which this will occur. Susan Sturm, *The Architecture of Inclusion: Advancing Workplace Equity in Higher Education*, 29 HARV. J.L. & GENDER 247, 261–70 (2006). Rena Steinzor emphasizes the inappropriateness of expecting individuals, especially marginalized individuals, to simply pick up the burdens of participation rather than significantly changing society to make their successful participation possible. Rena Steinzor, *Myths of the Reinvented State*, 29 CAP. U. L. REV. 223 (2001). This Article merely begins the process of answering the question of what meaningful public participation might entail. Much work still needs to be done to put flesh on these bones.

251. LOUIS D. BRANDEIS, OTHER PEOPLE’S MONEY 92 (1914). This line is often quoted, but its context is rarely remarked. Brandeis was writing about an unregulated banking system run amok. The parallels to today’s headlines are striking. As such, this insight is as important today as it was ninety-five years ago.

252. Administrative Procedure Act, 5 U.S.C. §§ 500–596 (2006).

253. Freedom of Information Act, 5 U.S.C. § 552 (2006).

254. Emergency Planning and Community Right-to-Know Act, 42 U.S.C. §§ 11001–11050 (2000). In particular, the Toxic Release Inventory, 42 U.S.C. § 11023, requires disclosure of toxic chemical releases and waste management practices of large industrial facilities. EPA’s TRI website can be found at <http://www.epa.gov/TRI/>.

255. See generally AL GORE, THE GORE REPORT ON REINVENTING GOVERNMENT:

readily available on the internet. Even this baseline vision of transparency rooted in the principle of free access to government information is often under siege.²⁵⁶

With all due respect, what I am proposing goes well beyond this rather minimal conception of transparency as access to government information. The APA only applies once an agency has settled on a proposed course of action.²⁵⁷ Citizens are routinely excluded from the earlier stages of the process—the forums in which substantive drafting decisions are made, agendas are set, and decision-making rules are established.²⁵⁸ Moreover, while the procedures enshrined in administrative decision-making welcome the public into an expert discourse, the opportunity is effective only for those able to translate their concerns into language that resonates within that discourse.

A robust conception of transparency must grapple not only with access to government information but also with the equally significant issues of how and whether information is communicated in a fashion that fully enables public participation,²⁵⁹ and who bears the costs associated with transparency. These latter questions are particularly important for regulatory trust because transparency often serves as a proxy for knowledge under conditions of uncertainty. In this capacity, transparency offers an escape from the otherwise vicious cycle that the less information we have, the more social and political trust we need, but the greater the uncertainty, the more difficult to create and maintain that trust.

CREATING A GOVERNMENT THAT WORKS BETTER AND COSTS LESS (1993).

256. Under Attorney General John Ashcroft, for example, the Department of Justice indicated that it would support agency denials of access to information, a policy the Obama Administration reversed its first day in office. See Memorandum from Attorney General John Ashcroft to Heads of All Federal Departments and Agencies (Oct. 12, 2001), available at http://www.doi.gov/foia/new_attorney_general_memo.html (overturned by President Obama's Memorandum on the Freedom of Information Act (Jan. 21, 2009), available at http://www.whitehouse.gov/the_press_office/FreedomofInformationAct/). During the eight years of the Bush Administration, routine denial of Freedom of Information Act requests became standard operating procedure at many federal agencies. See Coal. of Journalists for Open Gov't, *Still Waiting After All These Years*, Aug. 8, 2007, http://www.cjog.net/documents/Still_Waiting_Narrative_and_Charts.pdf; Mike Doyle, *Bush v. FOIA*, Jan. 23, 2009, <http://washingtonbureau.typepad.com/law/2009/01/page/2/>.

257. For an exploration of some of the other limitations of the APA transparency procedures, see Bach, *supra* note 188, at 294–99 (discussing contracting and adjudication); Alfred C. Aman, Jr., *Proposals for Reforming the Administrative Procedure Act: Globalization, Democracy and the Furtherance of a Global Public Interest*, 6 IND. J. GLOBAL LEGAL STUD. 397, 415–16 (1999) (exploring this topic in depth).

258. See *Home Box Office v. FCC*, 567 F.2d 9, 13–15 (D.C. Cir. 1977) (finding that the APA does not limit ex parte contacts before a notice of proposed rulemaking has been issued). The saga of the Cheney Energy Task Force underscores how important access to that information can be.

259. For an exploration of this question in the context of public education, see Natalie Gomez-Velez, *Public School Governance and Democracy: Does Public Participation Matter?* 53 VILL. L. REV. 297, 319–25 (2008). More generally, see Seyla Benhabib, *Toward a Deliberative Model of Democratic Legitimacy*, in DEMOCRACY AND DIFFERENCE: CONTESTING THE BOUNDARIES OF THE POLITICAL 68–69 (Seyla Benhabib ed., 1996) (providing opinion on democratic process).

Properly conceived, risk communication is not a one-way flow of information from the expert to a public that receives and is transformed by the information. Instead, risk communication is more of an iterative process of mutual information sharing and priority identification.²⁶⁰ This kind of communication builds trust. That trust, in turn, can increase participants' willingness to share information. When problems are ill-defined and possible alternatives are obscure and unknown, this increased flow of information can make better and more informed decisions possible. Thus transparency and trust have a reflexive relationship. Trust increases the flow of information upon which decisions are made. In turn, this enhanced transparency reinforces trust at those moments that it would otherwise be most difficult to create and maintain.²⁶¹ Transparency thus conceived serves as a proxy for knowledge under conditions of uncertainty.

For this reason, the familiar dismissal of many lay concerns as a manifestation of the "NIMBY" syndrome may miss an important dimension of the public discourse. The concerns that are raised are not only about risk but also about which risks are given priority and at whose cost. This latter question is one of legitimacy and social trust. Without trust that decisions will be made with "scrupulous fairness and uncompromised commitment to the protection of the public,"²⁶² there is little reason for potential risk bearers to acquiesce when risks are imposed on them. Certainly the lessons from environmental justice²⁶³ teach us that too often risks are concentrated in groups that bear little of the social benefit.

The process by which the federal government selected a Yucca Mountain, Nevada site for a high-level radioactive waste depository exemplifies how a lack of transparency compromises the regulatory trust necessary to give legitimacy to

260. This conception of how risk communication occurs is intended to avoid the "science as propaganda" hazard about which Paul Feyerabend has written, while still leaving space for regulatory decision-making that values technical expertise. See PAUL FEYERABEND, *SCIENCE IN A FREE SOCIETY* 73–76 (1978); Hardy et al., *supra* note 137, at 69–72 (arguing that trust rests on reciprocal communication and does not involve communication undertaken to sustain asymmetric power relationships).

261. This contention finds empirical support in a recent study exploring the relationship between trust in information provided by experts and risk perception with regard to food choices. Mario Mazzocchi et al., *Food Scares and Trust: A European Study*, 59 *J. AGRIC. ECON.* 2, 16 (2008) (finding that trust reduces risk perception). For an interesting survey of citizen preferences with regard to public participation, see David L. Markell & Tom R. Tyler, *Using Empirical Research to Design Government Citizen Participation Processes: A Case Study of Citizens' Roles in Environmental Compliance and Enforcement*, 57 *KAN. L. REV.* 1 (2008).

262. Kasperson et al., *supra* note 170, at 176.

263. ROBERT BULLARD, *DUMPING IN DIXIE: RACE, CLASS AND ENVIRONMENTAL QUALITY* 1–10 (3d ed. 2000); COMM'N FOR RACIAL JUSTICE (UNITED CHURCH OF CHRIST), *TOXIC WASTE AND RACE IN THE UNITED STATES: A NATIONAL REPORT ON THE RACIAL AND SOCIO-ECONOMIC CHARACTERISTICS OF COMMUNITIES WITH HAZARDOUS WASTE SITES* (1987), available at <http://www.ucc.org/about-us/archives/pdfs/toxwrace87.pdf>. For an interesting exploration of this issue in the context of international law, see Hari Osofsky, *Learning from Environmental Justice: A New Model for International Environmental Rights*, 24 *STAN. ENVTL. L.J.* 71, 88–94 (2005); see also Tseming Yang, *The Form and Substance of Environmental Justice: The Challenge of Title VI of the Civil Rights Act of 1964 for Environmental Regulation*, 29 *B.C. ENVTL. AFF. L. REV.* 143, 149–62 (2002).

difficult regulatory decisions. Disposal of these wastes involves inherently large uncertainties about health and environmental risks. The formidable technical uncertainties involved in selecting the “first of its kind” repository site only compounded those risks.²⁶⁴ Under these conditions, public acceptance of any selected site poses a major regulatory challenge. Unfortunately, rather than confront this trust problem head on by creating opportunities for real public participation in the decision-making process, the Department of Energy (DOE) sought to mask the many uncertainties by relying on a unidirectional flow of information under the rubric “public outreach.”²⁶⁵ Inadequate public participation, coupled with perceptions of agency bias²⁶⁶ that flowed from close ties to industry, and a poor track record with regard to handling these risks, hampered this process at every turn. The public simply did not believe that DOE was willing to fully engage with the nature and extent of the risks involved, nor did they believe that DOE was committed to effectively mitigating those risks.²⁶⁷

For example, in a 1990 poll about siting the nuclear waste storage repository at Yucca Mountain, only 29% of those surveyed agreed with a statement that the federal government would be honest in the scientific research it conducted to determine if nuclear waste could be safely stored at Yucca Mountain, while 68% disagreed.²⁶⁸ Even more troublingly, 52% expressed the belief that the

264. Michael E. Kraft, *Public and State Responses to High-Level Nuclear Waste Disposal: Learning from Policy Failure*, POL'Y STUD. REV., Winter 1991/92, at 152, 157–60 (arguing that agency secrecy and disregard of public participation compounded the problems with identifying a disposal site for high-level nuclear wastes).

265. *Id.* at 158–59; see also R.W. Riley, *Nuclear Waste and Governance*, in THE POLITICS OF NUCLEAR WASTE x (E.W. Colglazier, Jr. ed., 1982) (quoting S. Carolina Governor Riley as saying: “Of highest importance today is not only what is to be done but also how we decide it is to be done. A process of decisionmaking must be established that will allow us to have confidence in the results of that process. There will be remaining uncertainties no matter what the decisions are. Only confidence in the process which leads to those decisions will enable us, as a society, to live with those remaining uncertainties.”).

266. Dennis A. Bitz et al., *Decision and System Analysis for Underground Storage Tank Waste Retrieval Systems and Tank Waste Remediation System* 45 (undated) (reporting that the National Academy found DOE’s methodology to be “unsatisfactory, inadequate, undocumented and biased”), available at <http://www.osti.gov/energycitations/servlets/purl/10196816-wuoH9f/webviewable/>; E.W. Colglazier & R.B. Langum, *Policy Conflicts in the Process for Siting Nuclear Waste Repositories*, 13 ANN. REV. ENERGY 317 (1988); Kraft, *supra* note 264, at 159–62; 10196816.pdf. For a full and somewhat more approving discussion of this methodology, see Miley W. Merkhofer & Ralph L. Keeny, *A Multiattribute Utility Analysis of Alternative Sites for the Disposal of Nuclear Waste*, 7 RISK ANALYSIS 173 (1987); see also Letter from Bd. on Radioactive Waste Mgmt. to Mr. Ben Rusche (April 26, 1985), reprinted in U.S. Dept. of Energy, *A Multiattribute Utility Analysis of Sites Nominated for Characterization for the First Radioactive Waste Depository—a Decision-Aiding Methodology* (1986) (describing the methodology employed by the agency as “unsatisfactory, inadequate, undocumented and biased”).

267. DOE has a long record of ignoring health, safety, and environmental issues. Indeed, cleaning up contaminated nuclear weapons sites that DOE administered has been a three-decade-long project and counting.

268. Kasperson et al., *supra* note 170, at 176.

facility would be built at Yucca Mountain no matter what the research showed.²⁶⁹ These results reveal a lack of trust in the objectivity and intellectual honesty of the decisionmakers and suggest a clear perception that the research process was an attempt to drum up public support for an already crafted agenda, rather than a genuine attempt at dialogue and shared agenda building. In fact, the Office of Technology Assessment called the lack of public confidence in government the “single greatest obstacle” to developing an effective waste-management scheme.²⁷⁰ Such a result is not inevitable. Sweden had significantly more success in siting a similar facility, but only because its government processes were transparent and welcomed maximum feasible participation from the affected communities.²⁷¹ In short, regulatory trust was essential to success.

The Yucca Mountain experience is unfortunately not unique. Too often, parties with specific vested interests shape disclosure regimes in a fashion intended to further those interests rather than promote regulatory transparency.²⁷² This is yet another way that, contrary to the strictures of game theory, self-interest undermines rather than furthers social trust. For example, the Enron fiasco prompted new disclosure rules for public companies.²⁷³ Yet, the 2008 financial crisis brought home just how significantly those disclosure rules had been manipulated.²⁷⁴

Although this problem garners far less attention, there is also a mismatch between the purposes various parties ascribe to public participation. For developers and purveyors of new technologies, public participation is primarily a means to accomplish a specific end—approval of the technology. For members of the public, participation may be an end in itself,²⁷⁵ a manifestation of democratic

269. *Id.*

270. U.S. Office of Tech. Assessment, *Managing Commercial High-Level Radioactive Wastes: Summary* 31 (1982).

271. Jane I. Dawson & Robert Darst, *Siting Nuclear Waste Facilities in Western Europe and the New Democracies of Central-Eastern Europe: The Centrality of Transparency, Trust, and Democracy* 7–14 (2009), available at http://www.allacademic.com/meta/p_mla_apa_research_citation/0/9/9/2/6/pages99260/p99260-1.php.

272. Kraft, *supra* note 264, at 163 (criticizing the agency nuclear repository site selection process as more responsive to industry desires for rapidity than to the need for thorough scientific and technical review).

273. *See, e.g.*, Sarbanes-Oxley Act of 2002, Pub. L. 107–204, 116 Stat. 745–810 (codified in scattered sections of 15 U.S.C. and 18 U.S.C.); *see also* David A. Westbrook, *Telling All: The Sarbanes-Oxley Act and the Ideal of Transparency*, 2004 MICH. ST. L. REV. 441, 446–47.

274. *See* Simon Bowers, *Banking Crisis: US Regulators Plan Disclosure Rules for Short Sellers*, GUARDIAN, Sept. 18, 2008, available at <http://www.guardian.co.uk/business/2008/sep/18/marketturmoil.lehmanbrothers>; Press Release, Sec. & Exch. Comm., SEC Actions During Turmoil in Credit Markets, Jan. 22, 2009, <http://www.sec.gov/news/press/sec-actions.htm>. The conventional rent-seeking explanations for this phenomenon are well known. *See, e.g.*, DANIEL A. FARBER & PHILLIP P. FRICKEY, *LAW AND PUBLIC CHOICE: A CRITICAL INTRODUCTION* (1991); *see also* Georg von Wangenheim, *Self-Regulation as Two-Stage Rent-Seeking*, LATIN AM. & CARIBBEAN L. & ECON. ASS'N ANN. PAPERS No. 060309-03 (2009), available at <http://repositories.cdlib.org/bple/alacde/060309-03>.

275. Kasperson et al., *supra* note 170, at 179.

control over decision-making,²⁷⁶ or even a means to an opposite end—rejecting the technology. For agencies, participation is a time-consuming effort that often impedes instrumental goals.²⁷⁷ Perhaps these perspectives are to some extent unavoidable, but developing some basic consensus about the purpose of public participation as a collective exploration would be an important step in building regulatory trust.

Another facet of this problem has to do with the costs of communication. Time, attention, and resources must be expended in order to communicate information, and, given the complex nature of the scientific information to be communicated in many cases, adequate communication may involve more than mere access to information. Particularly when new technologies are involved, transparency might require active investment in the public's capacity to engage more fully with the disclosed materials.

Such an approach requires the commitment of significant resources that could otherwise be expended on other priorities. Should that investment be financed by those seeking regulatory approval? This approach has the obvious benefit of protecting the public fisc and fits well with the overall proof burdens placed on those seeking regulatory approval.²⁷⁸ There are some obvious hurdles as well. Regulated entities seeking approval for an activity or technology have an incentive to keep their disclosures to a minimum and very little incentive to help the broader public engage with the disclosed materials. This incentive structure stems from both a reluctance to hand information to potential antagonists in the general public and from the desire to protect intellectual property from potential competitors.²⁷⁹ A clear regulatory mandate that includes facilitating access and capacity building as part of the regulatory process might help to overcome these incentives toward secrecy and away from transparency.²⁸⁰

276. Although a discussion of deliberative democracy is beyond the scope of this Article, there is an obvious overlap between the ideas I am proposing and theories of deliberative democracy. Readers interested in the topic should start with JÜRGEN HABERMAS, *BETWEEN FACTS AND NORMS* (William Rehg trans., 4th ed. 1998). For a significantly more accessible survey of the relationship between participation and democracy, see The Center for Deliberative Democracy, *Results of a National Online Dialogue: Rethinking the Role of Citizens in our Democracy*, <http://cdd.stanford.edu/polls/btp/2007/results/> (last visited Aug. 2, 2009).

277. Kraft, *supra* note 264, at 164 n.1.

278. Indeed, the massive factual material and analyses that serve as a predicate for agency decision-making are already the joint product of agency experts and those interested in or affected by a rule.

279. Communicating information about a new discovery risks compromising the benefits associated with exclusive access. On the other hand, failure to communicate risks public suspicion and may slow the progress of the field as a whole. Lynne G. Zucker et al., *Collaboration Structure and Information Dilemmas in Biotechnology: Organizational Boundaries as Trust Production*, in *TRUST IN ORGANIZATIONS: FRONTIERS OF THEORY AND RESEARCH* 90–91 (Roderick M. Kramer & Tom Tyler eds., 5th ed. 1995).

280. For a discussion of these incentives, see Mary L. Lyndon, *Secrecy and Access in an Innovative Intensive Economy: Reordering Information Privileges in Environmental, Health, and Safety Law*, 78 U. COLO. L. REV. 466, 470–73 (2007).

When all of these pressures are considered together, it becomes clear that real transparency requires more than the bare-bones disclosures required by statute. Without deliberate agency intervention, the disclosures and information exchange necessary for meaningful public participation in regulatory decision-making—the kind of participation necessary to build regulatory trust—is unlikely to occur. Thus, it will take an affirmative commitment on the part of regulators to develop this component of regulatory trust.

CONCLUDING REFLECTIONS: USING REGULATORY TRUST TO BUILD A MORE RESILIENT SOCIETY

Exploring the role that trust plays in regulatory systems inevitably mediates the complex interrelationship between the economic and social fabric of society as a whole and the individuals constituting that society. Regulatory trust can help societies develop and nurture their resilient capacities, even in the face of growing uncertainty. Recognizing this dynamic between trust and resilience may offer a promising path for reshaping regulatory systems to respond to new economic and technological challenges. That is why understanding how regulatory trust is generated, and the factors that affect the durability of that trust is so important for strengthening the institutions of modern society.

All of the ingredients that go into regulatory trust are interrelated. Confidence in the general functioning of the system hinges on the possibility of effective communication about the system and a belief in both capable external oversight and in the system's internal reinforcement mechanisms. In turn, communication enhances external and internal monitoring, which reinforces the general functioning of the system as a whole.

When the system functions properly, regulatory trust can greatly enhance a society's resilience in the face of uncertainty. But it takes sustained effort to ensure that the processes sustaining regulatory trust do not dwindle into mere recapitulation of existing power relationships or reinscription of pre-existing political fault lines. This will require developing new ways of gathering and assessing information, rearranging institutional decision-making processes, and creating new focal points for accountability. Only through actively fostering these efforts can we open a trusting space within regulatory decision-making, creating the possibility for currently polarized constituencies to engage in genuine dialogue. Adopting regulatory trust-supporting strategies can help create social stability in the face of uncertainty.²⁸¹

The stakes are high. When citizens do not trust the regulatory systems that purport to protect them, more than social trust is diminished—social resilience suffers as well. Regulatory trust can increase resilience, but both trust and the resilience it supports remain vulnerable—it is unfortunately easier to destroy regulatory trust than to create it. This is why recent scandals about tainted cough syrup produced and mismarked in China, revelations of suppressed evidence about

281. Ruscio, *supra* note 174, at 640–41 (arguing that “political trust depends on weaving together judgments of the integrity and capability of public officials with confidence in the institutional structures in which they operate”).

the connection between Vioxx and heart attacks, or the failure of regulators to discover Madoff's swindle in time to protect investors, are so corrosive. By affecting all three of regulatory trust's components at once, these scandals weaken society's reservoir of trust and dampen its overall resilience.²⁸²

Trust generation can be a lens for assessing how to renew and revitalize social institutions. After all, the contours of the administrative structures inherited from earlier times were created in response to specific needs: they are not an a priori cultural given. The importance of this point cannot be overstated—there is nothing magical or sacred about past (or current) configurations of administrative processes. The regulatory toolkit must include an array of strategies that can be deployed in different situations. Indeed, modern administrative decision-making has already moved some distance from where this system began—for example, decision-making now more explicitly acknowledges both the technocratic and the political aspects of regulatory processes. While the underlying information may be technical or scientific, the regulator makes political judgments when assessing that information and prioritizing certain concerns and questions over others.²⁸³ Under these circumstances, the legitimacy of agency decisions hinges on the three dimensions of regulatory trust identified above—expertise, stewardship, and transparency.

While scientific and technical questions centered on risk assessment and risk management are an important element of regulatory decision-making, those are not the only questions worth posing and answering.²⁸⁴ The intertwined regulatory trust framework of expertise, stewardship, and transparency surfaces the fundamental social and ethical questions that otherwise tend to get overlooked. It is precisely because problems of risk have “no unambiguous solutions but are distinguished by a fundamental ambivalence,”²⁸⁵ that this kind of trust is so important. Regulators must meet the challenge of balancing the unquestionable benefits that scientific and technical advances offer with the new risks and uncertainties they generate.²⁸⁶ Only regulatory trust has the potential to achieve this balance. Thick relationships between individuals cannot overcome the inherent uncertainty of the modern condition and instrumental rationality cannot provide answers about which problems are worth solving first.

In building on these insights about the role that trust plays in regulatory systems, two dimensions deserve particular attention. The first, more specific dimension focuses on whether a particular regulatory regime is perceived as meeting the concerns for protecting human health and the environment that drove

282. These controversies also raise an important question of scale. Does one actually trust the chemist or the doctor, or is it in fact medicine, science, or technology? See LUHMANN, *supra* note 18, at 53 (posing this question).

283. For an exploration of this point, see Jacqueline Peel, *International Law and the Legitimate Determination of Risk: Is Democratizing Expertise the Answer?*, 38 VICT. U. WELLINGTON L. REV. 363, 365 (2007) (noting that “a seemingly objective determination of the ‘facts’ about a particular risk may easily bleed into ‘value’ judgments about acceptable risk”).

284. See Jasanoff, *Citizen Participation*, *supra* note 217, at 225.

285. BECK ET AL., *REFLEXIVE MODERNIZATION*, *supra* note 5, at 9.

286. See Jasanoff, *Citizen Participation*, *supra* note 217, at 223.

regulation in the first place. The second dimension is more global and assesses whether implementing a regulation supports or undermines articulated social values. This second dimension is constantly present in questions of how (or whether) new technology can help advance toward the goal of a better society. While lay risk appraisals are often posed as the polar opposite to “rational and reasoned” expert judgments, this polarity is false. Building regulatory trust means addressing both expert and lay concerns surrounding these new technologies. This approach recognizes that the definition of the public good, rests, at least in part, on the structural definitions and boundaries for interactions created by social trust and the social meaning that is ascribed to regulatory decisions about risk.

A healthy society needs room for genuine dialogue, particularly over issues of how to evaluate and weigh risks to public safety. When prospective risk bearers harbor suspicion over the fairness of the regulatory process and doubt the trustworthiness of those responsible for protecting them, conditions are ripe for conflict and impasse. Research shows that the presence or absence of trust dramatically affects communications about and perceptions of risk. The expanded forms of stewardship, expertise, and transparency described in this Article will help construct and maintain that trust.²⁸⁷ This approach to regulation requires a genuine commitment to continually reinforcing regulatory trust through enhanced public participation, expansive appreciation of both conventional expertise and its limits, and an open flow of information.²⁸⁸ Success on these fronts may be the biggest predictor of public acceptance of new or controversial technologies.

When technological advances outpace science policy, the public often finds itself trapped between ratifying post hoc the choices made by private actors for private purposes, without public input, or rejecting those choices and being labeled “backward” or “anti-progress” or “Luddite.” This choice is a false one. The goal of the regulatory state ought to be to engage with the public to create a shared vision of social policy in which technological innovation can be evaluated and assessed, rather than to try to drum up post hoc public support for an agenda already established by private actors.

Attention to stewardship, transparency, and expertise, as I have described them, might help transform this debate and help us move from public acrimony toward mutual respect.²⁸⁹ Such movement is critical if we are to rise to the

287. For example, in studying nanotechnology, the Pew Research Center reports that “[t]he public did not seem to be fearful of nanotechnology itself, but is highly aware of past failures to gauge and manage risks found to be associated with other new technologies.” MACOUBRIE, *supra* note 13, at 5.

288. See generally NAT’L RESEARCH COUNCIL, IMPROVING RISK COMMUNICATION 143–82 (1989) (describing effective risk communication as including consideration of distribution of risks and benefits).

289. See, e.g., LIND & TYLER, *supra* note 14, at 208; TYLER, WHY PEOPLE OBEY, *supra* note 16 (demonstrating that procedural justice gives legitimacy to legal authorities); Tom R. Tyler, *Public Trust and Confidence in Legal Authorities: What Do Majority and Minority Group Members Want From the Law and Legal Institutions?*, 19 BEHAV. SCI. & LAW 215 (2001) (demonstrating that trust in the justice system was linked to perceptions about the fairness of treatment afforded to individuals rather than to substantive outcomes).

challenges posed by global warming, and in the process, it will also help weave a tighter and more resilient social fabric.

One cannot “disprove” a deep unease with technological choices that commodify nature or humans and a suspicion that developments are not taking fundamental needs into account. Trust can bridge those concerns, but to build that trust, one must acknowledge the factual grounding on which these perceptions rest and must recognize that regulatory institutions simultaneously empower and control. This requires a reimagining of the relationship between public and private and a reconstitution of the ways in which we understand government to function. In short, social trust in institutions is “not so much a choice between one course of action (trusting) and another (distrusting), but between either accepting a given level of assurance or looking for further controls and safeguards.”²⁹⁰

290. MÖLLERING, *supra* note 72, at 73.