

A CASE FOR GOVERNMENT PROMOTED MULTI-STAKEHOLDERISM

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Policymakers in the Obama Administration have paid new attention to government-facilitated multi-stakeholder processes as a preferred means for developing best practices on the Internet.¹ This is an intentional evolution from a decade-old bias towards a largely self-regulatory approach. As now envisioned, policymakers themselves would be seen as stakeholders helping to guide or coax along the development of new norms.²

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1. Multi-stakeholderism does not have a hard and fast definition, but is intentionally flexible. In broad strokes, a multi-stakeholder process is comprised of representatives of groups or communities, both for profit and not, that aspire to develop norms that will guide those very same stakeholders' behavior.

2. Compare the Clinton Administration's "Magaziner Report" and its hesitancy to invite government engagement to recent statements from the Obama Administration. Per the Magaziner Report, "[G]overnments should encourage industry self-regulation wherever appropriate and support the efforts of private sector organizations to develop mechanisms to facilitate the successful operation of the Internet. Even where collective agreements or standards are necessary, private entities should, where possible, take the lead in organizing them." President William J. Clinton & Vice-President Albert Gore, Jr., *A Framework for*

The prominence of the Internet in today's society and the persistence of certain challenges online provide good justification for greater governmental engagement. Looking more deeply and, in particular, by building on lessons from Complexity Theory,³ this paper offers more fundamental reasons for employing a multi-stakeholder strategy. Observations from Complexity Theory suggest that we can improve welfare at the individual and societal level by building up mutual trust over time.⁴ Extrapolating, the multi-stakeholder framework fleshed out here is consciously aimed at cultivating formal and informal institutions that focus on fostering trust among industry, civil-society, and government stakeholders.

Complexity Theory also reminds us of the impossibility of predicting future innovations. Therefore, the multi-stakeholder framework eschews rules and rulemaking that might dampen innovation. Instead, it urges policymakers to identify the public imperatives they wish to protect at a high, principles-based level. Using those principles as a foundation, stakeholders ought to then convene themselves to develop context-specific methods for meeting the imperatives. Institutions, whether governmentally led or not, must be able to detect and deter cheating against the agreed-upon goals to maintain trust in the system. Finally, lessons from such oversight should be fed back into the norm

Global Electronic Commerce, THE WHITE HOUSE, <http://clinton4.nara.gov/WH/New/Commerce/read.html> (last visited Dec. 20, 2011) [hereinafter *Magaziner Report*]. In its 2010 green paper on "Commercial Data Privacy and Innovation in the Internet Economy," the U.S. Commerce Department observed, "The government also has an important role to play in . . . a multistakeholder approach to developing voluntary codes of conduct as a convener (in addition to or instead of as a traditional regulator). In this capacity, the government can provide the coordination and encouragement to bring the necessary stakeholders together to examine innovative new uses of personal information and better understand changing consumer expectations . . ." INTERNET POLICY TASK FORCE, U.S. DEP'T OF COMMERCE, COMMERCIAL DATA PRIVACY AND INNOVATION IN THE INTERNET ECONOMY (2010) [hereinafter *Green Paper*], available at http://www.ntia.doc.gov/files/ntia/publications/iptf_privacy_greenpaper_12162010.pdf; see also, INTERNET POLICY TASK FORCE, U.S. DEP'T OF COMMERCE, CYBERSECURITY, INNOVATION AND THE INTERNET ECONOMY (2011), available at http://www.nist.gov/customcf/get_pdf.cfm?pub_id=908648 ("The multi-stakeholder process relies on the institutions that so successfully built the Internet itself, drawing from businesses, consumers, academia, and civil society, as well as from government.").

3. See M. MITCHELL WALDROP, *COMPLEXITY: THE EMERGING SCIENCE AT THE EDGE OF ORDER AND CHAOS* (Touchstone 1992). A complex system is one in which any number of independent agents is interacting with each other in a great many ways. *Id.* at 11. These systems are widespread and exist in different size and time scales; e.g., ranging from interactions at the cellular level over minutes or hours to interactions among man-made organizations in the economic realm over years and decades. Complexity Theory examines behavior of these systems and attempts to identify common properties. A central trait of each system is that it exhibits coherence, or order, to greater or lesser degrees, even in the face of steady change. JOHN HOLLAND, *HIDDEN ORDER: HOW ADAPTATION BUILDS COMPLEXITY* 4 (1995).

4. See discussion *infra* Part II.A.

development process to keep practices up to date.

There are several risks to the success of multi-stakeholderism. To a great extent, those risks can be mitigated by deep investment, largely from the private sector. The overarching point is that a new paradigm such as the one outlined here is necessary if we are to continue to enjoy the fruits of Internet-based innovation while at the same time avoiding the threats to innovation that miscalculated, prescriptive regulation can create.

INTRODUCTION

In its early days, federal policymakers saw the potential of the commercial Internet and foresaw the threat that precipitous regulation could pose to it. In *A Framework for Global Electronic Commerce* (also known as the “Magaziner Report”), officials from the Clinton Administration recommended a decidedly hands-off approach.⁵ By default, the private sector was asked to lead and address policy challenges on the Internet via self-regulation.⁶

Flash forward 15 years and the wisdom of having taken this initial approach is clear. The mass market Internet has emerged and become pervasive. It has spawned countless new services and technologies. It has generated extraordinary value and, for those with the right formula, incredible wealth.⁷ It has given birth to businesses large and small, as well as to social networks that span continents. It has helped fuel democratic uprisings in long-oppressed nations.⁸

At the same time, certain challenges continue to frustrate us. Those involving privacy, cybersecurity, piracy, and more efficient criminal enterprises are some of the most prominent. Moreover, the Internet has come to compete with once-siloed and separately regulated communications services such as plain old telephony and television, creating regulatory disparities between the old guard and the new that distort competition.

To better manage the disconnect—to both sustain innovation and better address public concerns—Internet policymakers in the Obama Administration have advocated tweaking the self-regulatory model. They have highlighted the important role that multi-stakeholder processes have played in facilitating the development of technical standards for the

5. See Magaziner Report, *supra* note 2.

6. *Id.*

7. See Michael Dunlap, *30 Richest Internet Entrepreneurs*, INCOME DIARY (Mar. 27, 2009), <http://www.incomediary.com/30-richest-internet-entrepreneurs>.

8. See *Egypt's Facebook Revolution: Wael Ghonim Thanks the Social Network*, HUFFINGTON Post (May 25, 2011, 7:30 PM), http://www.huffingtonpost.com/2011/02/11/egypt-facebook-revolution-wael-ghonim_n_822078.html.

Internet.⁹ And as an addendum to the Magaziner Report, they have urged that officials take a more active role in fostering multi-stakeholderism to address policy issues.¹⁰ This paper offers a more deeply seated rationale than one typically sees in policy debates to justify governmental cultivation of multi-stakeholder processes—a rationale that relies heavily on lessons from the inherent complexity of the Internet and of the policymaking process. Based on those deeper reasons, the paper also provides guidance for effective multi-stakeholder initiatives.

The remainder of this paper provides more detail on the Obama Administration's rationale for advancing multi-stakeholderism; it introduces the reader to Complexity Theory's major concepts; and it explains how Complexity Theory helps us understand the dynamics of the Internet, of policymaking, and of economic growth. To tie these threads together, the paper draws on one particular lesson from Complexity Theory—namely, that agent-based strategies that inculcate trust tend to generate win-win outcomes at the individual and societal levels. Accordingly, the multi-stakeholder approach ought to be configured to build up trust. The paper concludes with steps that can be taken to achieve that goal.

I. OUR CONTEXT

No doubt the libertarian streak among the digerati remains strong, and they instinctively resist any governmental role in guiding norm development on the Internet. As appealing as that state-of-nature might seem, the reality is that the Internet has become so interwoven into the

9. See, e.g., Larry Strickling, NTIA Administrator and Assistant Secretary, Remarks at the Danish Internet Governance Forum (Aug. 23, 2001), *transcript available at* <http://www.ntia.doc.gov/speechtestimony/2011/remarks-assistant-secretary-strickling-danish-internet-governance-forum> (“The Internet we enjoy today—this marvelous engine of economic growth and innovation—did not develop by happenstance. It emerged as the result of the hard work of multistakeholder organizations such as the Internet Society, the Internet Engineering Task Force, and the World Wide Web Consortium. These organizations have played a major role in designing and operating the Internet we know today.”).

10. At the same time that the Obama Administration has said governments should advance multi-stakeholderism, they have been careful to note that that approach ought not tip to government control of the Internet. See, e.g., Hillary Clinton, U.S. Secretary of State, Remarks at the Conference on Internet Freedom in the Hague, Netherlands (Dec. 8, 2011), *transcript available at* <http://www.state.gov/secretary/rm/2011/12/178511.htm> (“So right now, in various international forums, some countries are working to change how the internet is governed. They want to replace the current multi-stakeholder approach, which includes governments, the private sector, and citizens, and supports the free flow of information, in a single global network. . . . [T]he United States supports the public-private collaboration that now exists to manage the technical evolution of the internet in real time. We support the principles of multi-stakeholder internet governance developed by more than 30 nations in the OECD earlier this year. A multi-stakeholder system brings together the best of governments, the private sector, and civil society. And most importantly, it works.”).

fabric of society that at times and on certain topics political forces already do build up and reach a tipping point, bringing the government onto the field to establish policy either by law or regulation. In reporting on a 2008 Silicon Flatirons summit on information policy—and in particular, in discussing the future direction of the network neutrality issue—now-Dean Phil Weiser observed that this phenomenon really means “[t]he ‘hands off the Internet’ era is over.”¹¹ Weiser’s comment was set against the backdrop of a specific tipping event. In the mid-2000s, the Federal Communications Commission had articulated certain Internet Freedom Principles aimed at assuring that providers of edge applications and services could reach their customers without unreasonable interference from last-mile broadband providers.¹² The FCC’s 2008 attempt to enforce those principles against Comcast ended up in an appellate court challenge;¹³ leading many, like Weiser, to call it like it was: the government is a stakeholder.¹⁴

Expressing a similar sentiment, NTIA Administrator Larry Strickling observed in a 2010 speech before the Media Institute, “that was then and this is now.”¹⁵ Strickling laid out the broader public interests now at play on the Internet.

It’s now time to respond to all the social changes being driven by the growth of the Internet. . . . We enter this new decade recognizing that we rely on the Internet for essential social purposes: health, energy efficiency, and education. It’s also a general engine for economic and social innovation. We must take rules more seriously if we want full participation, but we must keep the need for flexibility in mind.

. . . .

Despite the tremendous economic growth and social innovation that has occurred online over the past decade, policy tensions . . . have arisen and have not been effectively addressed. Given all the human actors involved in the Internet with all their competing interests, we

11. Philip J. Weiser, *Exploring Self Regulatory Strategies for Network Management*, FLATIRONS SUMMIT ON INFO. POL’Y (2008), <http://www.siliconflatirons.org/documents/publications/summits/WeiserNetworkManagement.pdf>.

12. Michael K. Powell, Chairman, Fed. Comm’ns Comm’n, Remarks at the Silicon Flatiron Symposium on The Digital Broadband Migration: Toward a Regulatory Regime for the Internet Age 2 (Feb. 8, 2004), *transcript available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-243556A1.pdf.

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

14. *See* Weiser, *supra* note 11.

15. Lawrence E. Strickling, Assistant Secretary of Commerce, Nat’l Telecomms. & Info. Admin., Remarks at the Media Institute (Feb. 24, 2010), *transcript available at* <http://www.ntia.doc.gov/speechtestimony/2010/remarks-assistant-secretary-strickling-media-institute>.

have to ask, do governments have to be involved to sort out these interests so that the Internet will continue to thrive?

I say yes but just as emphatically, I say that the government's role need not be one of a heavy-handed regulator. There's little question that our existing regulatory structures are poorly equipped to deal with these issues. They are too slow, they are too backward looking, and they are too political to be effective.

But it concerns me that in the absence of some level of government involvement, we will lose the one thing that the Internet must have—not just to thrive, but to survive—the trust of all actors on the Internet.¹⁶

Not surprisingly, Strickling's comments were read with suspicion by some in the Internet community, who saw in them seeds of betrayal and the potential onset of an explicit regulatory mindset.¹⁷ The response from some corners was so strident that Strickling saw the need to clarify the record in a follow-on speech at the Internet Society:

As the importance of the Web grows, it is imperative that we take maximum advantage of the successful Internet organizational models. We have a responsibility to assure our design principles—our policies—are producing desirable outcomes. And the challenge for governments today is to build on that cooperative, global, voluntary spirit. Perhaps government can find ways to help the growing list of Internet stakeholders participate in the development of not only technology, but also public policy solutions that address the Internet's leading challenges. The model may not be new but what is new is the need to apply this model to a broader range of problems, not just technical or administrative, but also social and legal challenges.

....

At the opening of the third decade of Internet policymaking, we are at an 'all hands on deck' moment. The policy challenges we must deal with are far broader than we have previously faced. In addition to continuing the necessary technical innovation of the Internet, the

16. *Id.*

17. See Kieren McCarthy, *US Government Rescinds 'Leave Internet Alone' policy*, REGISTER (Feb. 27, 2010, 00:06 GMT), http://www.theregister.co.uk/2010/02/27/internet_3_dot_0_policy; see also Mike Masnick, *Is the Commerce Department Really Ready to Regulate The Internet?*, TECH DIRT (Mar. 3, 2010, 10:30 PM), <http://www.techdirt.com/articles/20100301/2015418350.shtml>; *What Larry Strickling Meant to Say (and Should have Said)*, CTR. FOR DEMOCRACY & TECH. (Mar. 2, 2010), <http://www.cdt.org/blogs/brock-meeks/what-larry-strickling-meant-say-and-should-have-said>.

Internet community needs to work with governments and other stakeholders to share your knowledge about how to build flexible, sustainable, global multi-stakeholder institutions that can help the world face the social and public policy challenges of the global Internet environment.¹⁸

Core to each perspective—to those leery of a government role in multi-stakeholderism and to those advocating it—is the shared view that the Internet remains unique. That, because of the Internet’s innovative capacity, standard policymaking frameworks do not work well. The Internet’s time scale is out of sync with the law’s pace of change. The Internet continues to evolve rapidly. The law is plodding.¹⁹

But to observe that the law is slow to change does not exclude a role for government policymakers. You can distinguish policy from law by ascribing to the policymaker a much broader, sometimes amorphous role. The policymaker aims to bring value to society by, yes, shaping black-letter law. The policymaker also interprets law and applies it to given circumstances in those innumerable cases where the black-letter law does not clearly dictate a particular outcome. And looking forward, the policymaker is a norm shaper. Using the bully pulpit to coax, cajole, and persuade, and by modeling expected behavior, the policymaker can influence behavior without enacting law.

Officials from the Obama Administration have been promoting the notion that government can foster norm development on the Internet by using the multi-stakeholder process and by cajoling stakeholders to develop best practices.²⁰ In May 2011, for instance, the White House released its International Strategy for Cyberspace.²¹ It refers to multi-

18. Lawrence E. Strickling, Assistant Secretary of Commerce, Nat’l Telecomms. & Info. Admin., Remarks at the Internet Society’s INET Series: Internet 2020: The Next Billion Users (Apr. 29, 2010), *transcript available at* <http://www.ntia.doc.gov/speechtestimony/2010/remarks-assistant-secretary-strickling-internet-societys-inet-series>.

19. Strickling Remarks at the Media Institute, *supra* note 15.

20. *See supra* notes 10-12.

21. *See* WHITE HOUSE, INTERNATIONAL STRATEGY FOR CYBERSPACE: PROSPERITY, SECURITY, AND OPENNESS IN A NETWORKED WORLD (2011), *available at* http://www.whitehouse.gov/sites/default/files/rss_viewer/international_strategy_for_cyberspace.pdf (“The United States salutes [multi-stakeholder organizations] and will continue to recognize the unique contribution of such fora that represent the entire Internet community by integrating the private sector, civil society, academia, as well as governments in a multi-stakeholder environment.”); *see also* Danny Weitzner and Karen Kornbluh, *Agreement Reached on Internet Policymaking Principles*, WHITE HOUSE OFF. OF SCI. & TECH. POL’Y BLOG (July 1, 2011, 11:30 AM EST), <http://www.whitehouse.gov/blog/2011/07/01/agreement-reached-internet-policymaking-principles> (highlighting, among other things, the OECD’s adoption of Internet policymaking principles that commit countries to “co-operate in multi-stakeholder policy development processes”).

stakeholder governance as an emerging practice and urges that such efforts include all appropriate stakeholders.²² In June 2011 the Administration joined other OECD countries in endorsing Internet Policymaking Principles, one of which is to “Encourage multi-stakeholder co-operation in policy development processes.”²³ And the Commerce Department’s Internet Policy Task Force has called for new multi-stakeholder initiatives in order to address privacy and cybersecurity issues more effectively.²⁴

The follow-through on these pronouncements is nascent. Nonetheless, as described in the following pages, despite the skepticism expressed by some, the reasons for following through and investing in multi-stakeholderism lie in understanding the dynamics at work.

A. *The Language of Complexity*

Some might look at the swirl of activity on the Internet and in policymaking circles and see chaos, but the more appropriate description is that we live in a world characterized by complex systems and we are observing complexity at work.

Over the last 25 years thinkers who operate across multiple disciplines have been cultivating a new theory of complexity or complexity science.²⁵ At its core, Complexity Theory grapples with the fact that most of the world is made up of systems of interacting actors or agents.²⁶ At a micro level, each agent is propelled by its own set of forces and it moves within its own set of circumstances.²⁷ Interactions among agents can sometimes be anticipated and sometimes not.²⁸ Even when classes of actors are propelled by the same rules of thumb—when subsets of actors may act cooperatively—that does not eliminate tension in the system because the confluence of actions across the field of actors play out in novel ways—the system experiences perpetual novelty.²⁹ At the same time, system-wide unpredictability does not yield chaos—even

22. *Id.*

23. Communiqué on Principles for Internet Policy-Making, OECD, The Internet Economy: Generating Innovation and Growth 4 (June 28-29, 2011), *available at* <http://www.oecd.org/dataoecd/40/21/48289796.pdf>. In December 2011, the OECD’s decision-making body, its Council, formally adopted the principles and instructed OECD staff to assist countries in following them. *See* OECD, OECD Council Recommendation on Principles for Internet Policy Making 3-4 (Dec. 13, 2011), *available at* <http://www.oecd.org/dataoecd/11/58/49258588.pdf>.

24. *Internet Policy*, NAT’L TELECOMMS. & INFO. ADMIN., <http://www.ntia.doc.gov/category/internet-policy> (last visited Dec. 14, 2011).

25. Waldrop, *supra* note 3, *passim*.

26. *Id.* at 145.

27. *Id.*

28. *Id.* at 146.

29. *Id.* at 147.

though system-level behavior is unpredictable, as we see all around us, these dynamics result in neither chaos nor stasis.³⁰ We see episodes of change, but at the same time, we see patterns and relative stability emerge in many, many quarters.³¹ When agents are adaptable, like humans, they perceive their individual context and adjust their behavior.³² And they adjust their behavior in a way that, at the system level, yields neither absolute chaos nor stasis.³³

Order, in other words, often just emerges. As an extremely simple example: globally, men tend to wear pants and short hair, and women tend to wear skirts and long hair. There cannot be a gene for wearing skirts, however. This is evidenced by the fact that in some cultures men wear kilts, togas, and sulus. Similarly, there is not a gene for hair length. Our patterns of dress have emerged. Other norms of behavior emerge and appear throughout society.

Recognizing that systems such as these permeate our world—systems that simultaneously harbor change and relative stability at the micro and macro levels, and that at times generate new manifestations of order—Complexity Theorists have embarked on understanding what they can of the evolution of complex systems.³⁴ Even though individual outcomes are unpredictable, what, for example, can be said about the patterns of change? What impact do different rule sets—either endogenous or external to the system—have on system dynamics? And what can be said about systems where the actors are not quite automatons like ants marching, but are highly adaptive like you and me?

B. *The Conscious Creation of Order*

As others have commented, both the Internet and our policymaking processes can be examined as complex systems.³⁵ The Internet's reliance on TCP/IP, HTML, and other core standards seems stable, yet those technical inputs yield extensive ongoing innovation. Aspects of the U.S. policymaking process are ingrained, often frustratingly, and at the same time the legal landscape is constantly shifting.

30. ERIC D. BEINHOCKER, *THE ORIGIN OF WEALTH: EVOLUTION, COMPLEXITY, AND THE RADICAL REMAKING OF ECONOMICS* 167 (2006).

31. *Id.*

32. Waldrop, *supra* note 3, at 146.

33. *Id.*

34. *Id. passim.*

35. Pierre de Vries, *The Resilience Principles: A Framework for New ICT Governance*, 9 J. ON TELECOMM. & HIGH TECH. L. 137 (2011), available at http://jthtl.org/content/articles/V9I1/JTHTLv9i1_DeVries.PDF; Barbara A. Cherry, *The Telecommunications Economy and Regulation as Coevolving Complex Adaptive Systems: Implications for Federalism*, 59 FED. COMM. L.J. 369 (2007), available at <https://www.msu.edu/~bauerj/complexity/cherryfclj.pdf>.

As noted above, one of the biggest challenges we face in contemplating policymaking in the Internet realm is the fact that the time scale of the policymaking system is wildly out of sync with Internet time. Recognizing that incongruence should give us reason to pause. The digital libertarian might say that, since change is fast and unpredictable, any governmental meddling will be counterproductive. To this, my recommendation is that skeptics look even more deeply at the forces driving Internet innovation and the goals of policymaking. Most of those deeper forces are laid out in Eric Beinhocker's *Origin of Wealth*.³⁶

Beinhocker observes that over the course of millennia man has created items of greater value and has accumulated greater wealth by consciously bringing order into our existence in new ways.³⁷ Beinhocker sees, as we should, millennia of man-made attempts to engender greater order.³⁸ As an early example, *Homo habilis* took stones and shaved them to fine, more orderly points, creating better tools for hunting, cleaning carcasses, and puncturing skins so they could be sewn together with sinewy thread. Back in camp, gatherers either found rocks shaped like bowls or fashioned rocks into bowls and, with a complementary pestle, were able to more easily grind nuts and roots into a more edible mash. Over time, our long-ago ancestors improved their stone shaping and other tool building skills and, as a result, became more effective hunters for and gatherers of protein, fatty foods, and carbohydrates. In short, early hunter-gatherers shaped objects into new forms of order and as a result produced much greater wealth for themselves and their offspring.

Fast forward tens of thousands of years and instead of hunting for game and other sources of nourishment, we can now visit a web site, fill out an electronic form and have a potpourri of foodstuffs delivered by van to our doors before we wake up the next morning.³⁹ This modern-day hunting relies on numerous manifestations of physical order built up over time and layered atop each other, with many of the speediest order-generating tools developed only in the last century or even more recently. Today's "hunting" involves clicking our way to a web site and communicating with a remote computer over wireless and wired lines using a digital language. At the other end of the communication, warehouse workers track down the foodstuffs we've requested, crate them, and route them to a van. Before daybreak, the van driver rolls onto his route, leaving crates of food at dozens of locations while customers

36. See BEINHOCKER, *supra* note 30.

37. *Id.* at 316. "All wealth is created by thermodynamically irreversible, entropy-lowering processes. The act of creating wealth is an act of creating order." And "things with low entropy have value." *Id.*

38. *Id.* at 316-19.

39. See AMAZON.COM, <http://www.amazon.com> (last visited Dec. 14, 2011); KING SOOPERS, <https://homeshop.kroger.com/sf/servlet/storefront> (last visited Dec. 14, 2011).

sleep warmly in their beds.⁴⁰

We have come a long way in generating order and the things to which we assign value. Beyond this innate desire to use tools to foster order in our lives, Beinhocker points to three other ever-present dynamics that contribute to collective wealth-building.

Our innovative instincts and ability to progress are enhanced by both specialization and trade.⁴¹ Hunter-gatherer bands likely divided up their duties by skill set. They assigned responsibility for value-creating tasks to different members according to what they could do best. The stronger, faster men shouldered primary responsibility for hunting and fighting, while those men getting on in years may have stayed back in camp and used their experience to construct and maintain tools and weapons—to make ever sharper and truer spears—and to teach those skills to the youngest. Accounts were settled among the group when the more productive hunters returned and traded meat for weaponry with the more skilled but less mobile tool builders.⁴²

Nowadays, only a very small number of us actually have the ability to hunt for or gather up our food. Most of us have become specialized at some other skill. In return for whatever order, or thing of value, we generate in our day jobs, we are compensated in money for our specialty and then we trade that other manifestation of value—money—for food, goods, and services.

Embedded in this scenario is the third of Beinhocker's simple but profound insights. Man greatly accelerated his ability to accumulate, redistribute, and pass on wealth after inventing money.⁴³ But more

40. The order-generating, economic process is ubiquitous. As just one more example, each morning I hand over a thing of value—a five-dollar bill—to the cashier at the local coffee shop. The barista takes a small cup of roasted beans, grinds them, forces scalding water through them, adds a touch of chocolate syrup and hands me my morning pick-me-up. The barista has generated a new form of order—a chocolate mocha—from otherwise disparate components and, in doing so, has produced an item for which I'm willing to exchange value. By performing this process millions of times a day, and by pricing my drink for a profit, the company that runs thousands of coffee shops like my local one accumulates extraordinary wealth. The essence of the transaction, however, is the same as it has been for millennia. An innovator transforms materials into a new manifestation of order and then trades it for another manifestation of value, or as we say nowadays, sells it for money at a profit.

41. See BEINHOCKER, *supra* note 30, at 6-7. "No other species has developed the combination of trading among strangers and a division of labor that characterizes the human economy. In fact, Richard Horan of Michigan State University and his colleagues argue that it was this unique ability of *Homo sapiens* to trade that gave them the critical advantage in their competition with rival hominid species such as *Homo neanderthalensis*." *Id.* at 7.

42. See, ROBERT WRIGHT, *NONZERO – HISTORY, EVOLUTION & HUMAN COOPERATION* 21 (Abacus Books 2001). In a hunter-gatherer society "typically there is a division of labor within the whole. (Some people make the nets, some people man the nets, some people chase the rabbits.) One minute you're a bunch of independent foragers, and the next minute you're a single, integrated rabbit-catching team, differentiated yet united." *Id.*

43. See NIALL FERGUSON, *THE ASCENT OF MONEY: A FINANCIAL HISTORY OF THE*

broadly, Beinhocker points out that man not only has a propensity to create new physical technologies, but also what he calls “social technologies.”⁴⁴ A social technology is a conceptual construct that likewise helps us foster order—that serves as yet another means by which society can create things of value and generate wealth. Though social technology is rooted in intangible ideas, it is bound up in our existence. Money and all its modern-day manifestations, such as my online credit card purchase of groceries, are of course foundational. So too are language, writing, math and the sciences.

Just as we see ongoing innovation in physical technology, while it may not be as apparent because it is not as tangible, we also have ongoing innovations in social technologies. By putting ink on paper, or by storing digitized information on a hard drive, we can create corporations, stock holdings and limited liability corporations. Financiers enable investment and risk management by creating liens, bonds, tiers of stock ownership, mutual funds, stock indexes, hedging strategies and credit default swaps—new forms of social technology that in turn facilitate creating things of value and accumulation of wealth. The written word gives us contracts, educational tools, literature, and news.

Importantly, Beinhocker is not saying that the world is ordered, nor that there could be an optimal degree of order.⁴⁵ In fact, Beinhocker points out that economic development is its own complex adaptive system.⁴⁶ Each of us innately seeks greater order in order to improve our quality of life. Each of us applies tremendous energy seeking out those tools and other manifestations of order that make our lives more comfortable. Day-in, day-out, we also create some manifestation of order ourselves so that we might trade our end products (our work) for compensation. But while at the individual level we have a degree of control over how we pursue wealth-building, the macro-economic wealth building process is (and I would add, should be) an unpredictable complex system.

At the same time, the complex system we know as our economy creates a never-ending stream of dilemmas for policymakers. The challenge for policymakers as a group is to shape laws and norms in a

WORLD 4 (2008) (“money is the root of most progress . . . the ascent of money has been essential to the ascent of man”).

44. See, e.g., BEINHOCKER, *supra* note 30, at 15-16.

45. *Id.* at 355. “In a world governed by the Second Law of Thermodynamics, successful exploitation of one’s niche in the current environment is a necessary condition for survival – calories in must be greater than calories out, and money in must be greater than money out. But, as we also know, the shelf life of strategies in evolutionary systems can be quite short, so one must continuously explore new strategies, or risk finding oneself stuck in a poor position when the environment inevitably changes.” *Id.*

46. *Id.* at 19-20.

way that supports value creation not just for the benefit of the innovator, but also for the well-being of society as a whole. As lawyers recognize, the creation and management of a set of laws is essential to prosperity at the individual and societal level. Extrapolating from Beinhocker, the creation and implementation of law is a means of fostering order so that rights and wrongs, of all sorts, are understood and protectable, and so that as a society we can be more productive. The job of the policymaker is then, among other things, to shape the legal and governmental framework so that it accommodates these forces for progress.

Of course, it is no simple matter to determine what is and is not the proper policy contribution to fostering progress. Policymakers are only partly like the toolmakers from millennia ago. They both aspire to create a thing that produces value for the inventor and for the user of that thing. Yet, the age-old toolmaker's task is more complicated than it is complex. The toolmaking process is more self-contained. In democratic society, policymaking is characterized by the push and pull of the competing interests and values of stakeholders and society at large. We live in a swirling, ever-evolving environment. We see incongruities, large and small. We see pervasive competition among promoters of different technological—both physical and social—paths forward.

The Internet ecosystem can be particularly vexing for policymakers because it is both so clearly producing social good but also is unpredictable and is destabilizing many legacy institutions. In this context, how does one preserve the benefits derived from those institutions, while at the same time allow the Internet to generate commercial and social welfare in the organic fashion that it does? How does one establish a new policymaking path?

II. COMPLEXITY, TRUST, AND POLICYMAKING

The remainder of this paper aims to make the case for re-casting Internet policymaking as a mostly cooperative, trust-building undertaking among stakeholders. As envisioned, 21st century policymaking for Internet-based issues should pursue a three-prong strategy:

1. Build up trusted stakeholder networks
2. Within those networks, articulate expected behavior not via detailed, prescriptive implementation rules, but rather by developing higher-level, principle-based objectives
3. Cooperatively elaborate upon these principles over time via codes of conduct and assure meaningful enforcement

There is an important corollary here. Blindly transposing all 20th century regulations onto Internet-based communications is foolhardy and

likely counterproductive. Internet services cannot be jurisdictionally bounded like legacy, siloed offerings.⁴⁷ It would be counterproductive (even, impossible) to reengineer the Internet to achieve that goal. Global, ubiquitous, and relatively cheap interconnectivity creates the platform for the novel offerings that are rapidly generating new wealth and welfare. The framework suggested here exploits this interconnectedness and proposes a model based on shared responsibility.

A. *What Complexity Theory Tells Us about Trust*

Unfortunately, Complexity Theorists have not spent much time translating their discoveries into specific guidance for public policymaking. How do we harness the fact that at a macro level humans develop patterns of behavior? How do we shape those patterns to serve the public good? Those few Complexity Theorists who have tread in this direction, however, have come to a common conclusion: *mutual trust among individuals enhances both individual and collective welfare*.⁴⁸

Intuitively, this makes sense. The less we have to look over our shoulders to assure we are not being stabbed in the back—and the more faith we can put in the individuals with whom we are dealing—the lower the social cost of our transactions, and the more long-term benefit we derive from the entire trust-environment in which we operate.

Beyond Complexity Theorists, writers of various stripes connect high degrees of trust with individual and collective success. Generally speaking, societies that enjoy high, society-wide levels of mutual, interpersonal trust also enjoy high levels of GNP per capita; based on survey data, wealth-building correlates with trust-building.⁴⁹ Why? Because trust encourages personal and collective behavior in a manner that, by and large, respects local and society-wide interests.⁵⁰

47. Washington's decade-long struggle to determine the regulatory classification for, and treatment of, voice-over-IP (or VoIP) is the quintessential example here. *See, e.g., How Internet Protocol-Enabled Services Are Changing the Face of Communications: A Look at the Voice Marketplace: Hearing Before the Subcomm. on Telecommunications and the Internet of the H. Comm. On Energy and Commerce, 108th Cong. (2005).*

48. Bienhocker, *supra* note 30, at 433 ("There is an important correlation between trust and economic success. High trust leads to economic cooperation, which leads to prosperity, which further enhances trust in a virtuous circle."); WRIGHT, *supra* note 43, at 304 ("societies that don't solve the 'trust' problem, that don't discourage rampant parasitism, have tended to lose out to societies that do").

49. *See* Ronald Inglehart, *Culture and Democracy*, in CULTURE MATTERS: HOW VALUES SHAPE HUMAN PROGRESS 80, 90 (Lawrence E. Harrison & Samuel P. Huntington eds., 2000) ("even when we control for levels of economic development, interpersonal trust is significantly correlated with the society's level of GNP/capita").

50. *See, e.g.,* Mariano Grondona, *A Cultural Typology of Economic Development*, in CULTURE MATTERS: HOW VALUES SHAPE HUMAN PROGRESS 44, 48 (Lawrence E. Harrison & Samuel P. Huntington eds., 2000) ("To trust the individual, to have faith in the individual, is one of the elements of a value system that favors development. In contrast, mistrust of the

Of course, neither intuition nor correlation “prove” that mutual trust builds welfare. This is where Complexity Theorists dig in and attempt to apply the scientific method. These scientists look for replicable outcomes. Robert Axelrod has done some of the most noteworthy work in this area.⁵¹ Since the early 1980s, Axelrod and his many collaborators have run experimental models on different versions of the Prisoner’s Dilemma game. The basic puzzle is well known—whether in a given instance two actors should behave cooperatively with each other or try to cheat the other (i.e., defect) when the actors cannot communicate directly, and when the incentives to cooperate or cheat are not skewed wildly in one direction or the other. Axelrod builds on the Prisoner’s Dilemma game by “iterating” (allowing actors to engage each other in the game repeatedly). Importantly, he allows for strategy innovation—they allow their computerized actors to develop an indefinite range of strategies for maximizing their *own*, not the collective, well-being. He exploits today’s computing capacity by populating the system with hundreds of independent actors, and he runs his models through the computer over and over again.⁵²

In his modeling exercises, patterns emerge and move in one of two general directions. Those who cheat other agents early, repeatedly, and *without repercussion* amass significant “wealth,” and more often than not, their behavior engenders a pervasive culture of cheating which limits overall wealth creation in the system.⁵³ From a societal perspective, the other direction leads to win-win outcomes, where both individual and group welfare tend to rise over time.⁵⁴ Along this other direction, most successful actors employ a tit-for-tat (or similar) strategy, and other actors are drawn to that strategy over time.⁵⁵ This is the key finding. A tit-for-tat strategy says, “I will *trust* you and act in our mutual interests, but if you cheat me, I will discipline you for cheating, and *then* trust you again in our next encounter in hopes that we will both cooperate.”⁵⁶

individual, reflected in oversight and control, is typical of societies that resist development”); EDWARD O. WILSON, *CONSILIENCE: THE UNITY OF KNOWLEDGE* 276 (1998) (“In one form or another. . . dilemmas that are solvable by cooperation occur constantly and everywhere in daily life. The payoff is variously money, status, power, sex, access, comfort and health. Most of these proximate rewards are converted into the universal bottom line of Darwinian genetic fitness: greater longevity and a secure, growing, family.”); STEPHEN M.R. COVER, *THE SPEED OF TRUST* (2006).

51. ROBERT AXELROD, *THE COMPLEXITY OF COOPERATION: AGENT-BASED MODELS OF COMPETITION AND COLLABORATION* (1997) [hereinafter *COMPLEXITY OF COOPERATION*]; ROBERT AXELROD & MICHAEL D. COHEN, *HARNESSING COMPLEXITY: ORGANIZATIONAL IMPLICATIONS OF A SCIENTIFIC FRONTIER* (2000).

52. *COMPLEXITY OF COOPERATION*, *supra* note 51, at 14-23.

53. *Id.* at 21.

54. *Id.* at 20-21.

55. *Id.*

56. Punishment need not be retributive. Arguably, punishment should be no more severe

According to Complexity Theorists, systems dominated by such behavior are exhibiting “strong reciprocity.”⁵⁷ At the core of such systems is a willingness to trust other actors, to discipline those who cheat, but also to trust them again in hopes that they have reformed their ways.⁵⁸

B. *Applying the Lesson*

It may now be clear why Complexity Theorists have shied away from integrating their learning into specific public policy challenges. How do you translate the observation that systems exhibiting strong reciprocity yield win-win outcomes (individual and collective wins) into a policymaking strategy? How do policymakers actively engage in the development and maintenance of trust-focused governance systems? By now, it should be clear that this paper recommends multi-stakeholderism for Internet policymaking—but *multi-stakeholderism consciously designed to inculcate trust among participants*.

This is the part of the multi-stakeholder policymaking process that has not received sufficient attention. As participants work on the issue of the day, they need to keep top-of-mind that they are working both on the substance of the problem and on cultivating trust among themselves. This is where and why government engagement in the multi-stakeholder process has a role. Not to suggest that government policymakers are without bias; but bias or not, they are in a position to articulate goals and ground rules for multi-stakeholder processes. In broad strokes, those goals and ground rules might look like this:

- Government can clearly state its principal objective of building up trust-focused collaborations.
- Expectations among major stakeholders then can be brought into alignment. This requires:
 - Active government promotion of the new model and, when necessary, active refereeing. Without government buy-in and monitoring, stakeholders are less likely to soften their self-interests.
 - Buy-in from major stakeholders, including commitments to resist fragmentation.

than is needed to encourage cooperation in the next encounter.

57. COMPLEXITY OF COOPERATION, *supra* note 51, at 22-23.

58. To clarify, high-trust societies are those that exhibit trust across a nation as a whole. Axelrod’s studies suggest that high, localized trust can limit growth in societal trust. In other words, strong kinship relations are trusting, but can lead to insularity that in turns frustrates trust more broadly. This dynamic can explain why nations, which exhibit high trust locally, still struggle economically.

- A willingness on all parts to accept practical, good solutions instead of pursuing idealized, perfect ones, as well as an understanding that the dynamism of the Internet ecosystem means that there always will be those who lag behind the mainstream in adopting agreed-upon goals.
- As to implementation, governments also should clearly state a preference for “principles-based” policies which, to be effective, likewise rely on strong reciprocity.
 - Principle-based policies articulate the ends or outcomes that policymakers want to see the marketplace and civil society produce. They do not prescribe how to achieve those outcomes.
 - Principles should be the outgrowth of collaborative dialogue among stakeholders.
 - They should be achievable, not aspirational. Expectations that are unrealistic undermine trust.
 - Stakeholders are relied upon to pursue the desired outcomes via mutually agreed upon, and enforceable, codes of conduct.⁵⁹
- Given the limits of governmental resources and the complicated fact patterns inherent in Internet-related disputes, the first line of enforcement should be delegated to self-regulatory or co-regulatory bodies. Government enforcement can serve as a backstop for resolving the most critical disputes.
 - If enforcement is to work, stakeholders must avoid conflicts of interest in enforcement actions, and industry should ensure proper funding for self and co-regulatory bodies.
 - Stakeholders must clearly define the boundaries between offerings that are to be treated differently. Misalignment of expectations and distrust flow from poorly crafted, ambiguous boundaries.

To succeed, the model requires a deep commitment of time and energy to the multi-stakeholder process. In a diversifying, competitive, cost-conscious environment, assuring stakeholder engagement and cooperation is no simple task. The skeptic would say that the space is too diverse and too contentious to foster trust and reciprocity.

Universal cooperation is not a realistic objective. By the same token, however, universal compliance with the most painstakingly crafted prescriptive regulations is not a realistic aspiration either. Given

59. See de Vries, *supra* note 35, at 166.

the impossibility of perfect outcomes, then, the question becomes one of creating incentives. Can stakeholders create sufficient incentives for the bulk of commercial entities (rather than the potential cheaters) to participate in multi-stakeholder processes, relegating the cheaters to the “long tail” of the distribution pattern? To enhance the odds of success, the multi-stakeholder process needs to generate:

- *Robust, transparent, and independent enforcement mechanisms that provide parties due process.* It goes without saying that toothless penalties and captured enforcers undermine the public’s faith in any enforcement scheme, whether government-run or otherwise. Transparency and notions of due (and prompt) process provide further assurance that an enforcement mechanism is operating with the greater good in mind.
- *The ability to bring enforcement actions against those who officially have signed up to a code of conduct and, at a minimum, a willingness to call-out possible violations by those who have not.* In a co-regulatory context, this is easy to imagine. The frontline enforcer can refer cases to a governmental entity. In the context where government has no enforcement authority, the frontline enforcer may be limited to shaming bad actors or creating other means of distinguishing good and bad actors (e.g., by establishing logo programs and associated verification mechanisms).
- *Commitment of major stakeholders from industry, civil society, and government.* More specifically they must be fully committed to building, maintaining, and evolving the system.
 - As a practical matter, this also likely means that industry will tax itself in order to fund the undertaking, but also will accept the fact that funding does not provide control.
 - Stakeholders from civil society must be truly independent from commercial stakeholders; yet, civil society may need financial support from commercial stakeholders in order to afford deep engagement in multi-stakeholder initiatives.
 - Government may need to design exemptions from anti-collusion laws. It needs to take part in educating consumers on the mechanisms established by the stakeholder group. Also, it may need to hang the sword of prescriptive regulation over the heads of major industry players in order to prevent government silence from being misinterpreted as disinterest.
 - There must be a shared commitment to resist fragmentation and fractious behavior.

If at the end of the day behavior by outliers negates the efforts of good actors and irreparably undermines consumer trust in the undertaking, stakeholders should understand that regulation or

legislation, at least with respect to outlying behavior, may be in order.

III. PROSPECTS

The main lesson across all of Complexity Theory is that life is inherently unpredictable.⁶⁰ Yes, patterns emerge, but when and how those patterns evolve is impossible to know in advance. This may sound trite. But in the policymaking space, too often, this lesson is ignored. Well-meaning policymakers do attempt to predict the future. And in employing their foresight, they tend to fall back on the past century's practice of (1) defining classes of regulated business activity, and (2) applying prescriptive rules of conduct to them. In the Internet Revolution, this path is especially tenuous.

Complexity Theory not only guides us to an overarching theme for regulating in a rapidly evolving environment—inculcating trust—it also suggests a mechanism. It counsels against the existing, dominant mode of prescriptive regulation. In place of regulation, it suggests pursuing policy objectives by articulating the principles society wants respected and by charging stakeholders with developing the means in a trust-building environment.

Obviously, to buy into the framework, one must have confidence that it can work in practice, and the global experience with multi-stakeholderism is admittedly not all we would like it to be. But there are positive examples,⁶¹ and the current Administration's investment in promoting the model should be seen as an invitation to stakeholders to change the paradigm. And in such cases, the courage to move forward must be based on conviction—a conviction that a new paradigm is needed and that the one offered is more fit for our evolving reality. The alternative is to muddle through, and this is the likely fate of those who see trust-building as either unattainable or undesirable.

60. *See supra* notes 25-34.

61. *See, e.g.*, CENTER FOR COPYRIGHT INFORMATION, www.copyrightinformation.org (last visited Dec. 14, 2011); BROADBAND INTERNET TECHNICAL ADVISORY GROUP, www.bitag.org (last visited Dec. 14, 2011); ANTI-SPYWARE COALITION, www.antispywarecoalition.com (last visited Dec. 14, 2011).