

January 2006

## The Life of the Law Online

David R. Johnson  
*New York Law School*

Follow this and additional works at: [https://digitalcommons.nyls.edu/nyls\\_law\\_review](https://digitalcommons.nyls.edu/nyls_law_review)



Part of the [Law and Society Commons](#), [Legal History Commons](#), and the [Legal Writing and Research Commons](#)

---

### Recommended Citation

David R. Johnson, *The Life of the Law Online*, 51 N.Y.L. SCH. L. REV. 957 (2006-2007).

This Article is brought to you for free and open access by DigitalCommons@NYLS. It has been accepted for inclusion in NYLS Law Review by an authorized editor of DigitalCommons@NYLS.

VOLUME 51 | 2006/07

DAVID R. JOHNSON

## The Life of the Law Online

ABOUT THE AUTHOR: David R. Johnson is a Visiting Professor at New York Law School.

I would like to suggest that the law, that is a legal system such as the U.S. legal system, has a life of its own. The law is an organism rather than a mechanism. It is alive. This essay explores the implications of this notion for the development of law(s) to govern the global Internet.

Part I begins the exploration with a discussion of the difference between an organism and a mechanism, building on the biologist Robert Rosen's insight that the essence of "life" is a particular structure of causation.<sup>1</sup> Part II explains how this insight can then be mapped to an analysis of what makes the law the law. Part III explains how that analysis helps us to understand why certain approaches to law, which treat legal systems as machines rather than as organisms with a life of their own, are doomed to fail. Finally, and most importantly, Part IV explains how law is created by Rosennean entailment loops which provide repair and organizational invariance. This view helps to explain why and how the global Internet breaks territorial legal systems, as applied to online activities, and what might be done to create a more legitimate legal order online.

## I. WHAT IS LIFE?

Robert Rosen has been called the Newton of biology, yet his work is known to few biologists.<sup>2</sup> How could that be so? He didn't study evolution, the subject on which most biologists currently focus. Instead, he asked the biggest biological question of all: What makes something that is "alive" different from something that is not? How does an organism differ from a mechanism?<sup>3</sup>

Rosen found the beginnings of an answer by studying the structure of the causal relationships within living things, and then contrasting that with the structure of causation in mechanisms, as understood by traditional, reductionist science.<sup>4</sup> In his major book, *Life Itself*, he explained that organisms differ from mechanisms precisely insofar as the former are "closed to external entailment."<sup>5</sup>

Any order achieved by a mechanism is created in part by external causes. Non-living physical systems are moved from state to state by forces that are, by definition, located in an external environment. Complicated machines must be made and repaired by external makers. Non-living systems that are not fashioned in this manner inevitably run down to a state of equilibrium as entropy increases.

---

1. ROBERT ROSEN, *LIFE ITSELF: A COMPREHENSIVE INQUIRY INTO THE NATURE, ORIGIN, AND FABRICATION OF LIFE* (1991).

2. Donald C. Mikulecky, *Robert Rosen (1934-1998): A Snapshot of Biology's Newton*, 25 *COMPUTERS & CHEM.* 317 (2001).

3. ROBERT ROSEN, *ESSAYS ON LIFE ITSELF* (2000).

4. See ROSEN, *supra* note 1, at 67-107. Ever since Newton, science has proceeded by studying the way external forces move systems from one state to another and has assumed that systems can be understood by breaking them into smaller parts. Rosen explains that the characteristics of complex systems emerge from the interaction of their components and can only be explained at the system level.

5. See *id.*; see also ROSEN, *supra* note 3.

In contrast, the far-from-equilibrium order that characterizes life is the continuing and exclusive cause of itself. Organisms persist and develop by combining (1) catalyzed metabolism with (2) repair (of the metabolic catalysts) and (3) persistent (and malleable) organizational identity (essentially, catalysis and repair of the repair function) — into a self-referential loop. Viewed this way, life is a sort of moebius strip of causality. Introversion and self-reference create complex systems composed of components whose functions can only be explained with reference to all the other components, and all of the relationships among them. You can take a machine apart and understand how its parts work in isolation. If you take an organism apart, it dies.

According to Rosen, then, “life” is a certain type of entailment structure — describable in mathematical terms.<sup>6</sup> He explained that this type of structure allows us to answer the question *why* a component of an organism is the way it is by referencing what the component causes, rather than what causes the component to exist.<sup>7</sup> In contrast, explanation from forward-looking causation is expressly forbidden in reductionist, Newtonian science.<sup>8</sup> Rosen argued that traditional physics is about studying a special case — the keys it finds under its available lamppost — and that richer causal structures are the more “general.”<sup>9</sup> He did not answer the question of how life arose — that is a very different, historically contingent inquiry. But he did argue that once we are dealing with a living organism — and we know it when we see it — we have to use very different tools to understand why it is the way it is.

Again, life is very different from non-life. Machines rust, fall apart, and have to be repaired by external agents. Organisms stay highly ordered, far from equilibrium — as long as they can find raw materials and energy sources to metabolize, and as long as they are not injured by external forces — precisely because the *internal* causal loops that create order within them know how to repair themselves, and know how to remember what those “selves” want to be. Those causal loops are composed of components that cannot be fully understood in isolation from the rest of the living system, and involve relationships that include “final causation” — explanation with reference to purpose or result.

Rosen’s insight has profound implications for biology and, indeed, for all of science. We can’t fully understand living organisms by dividing them into separate parts and analyzing only their components. The relatively simple systems studied by traditional science may only be special cases in a much more complex (causally rich) universe — a universe in which the question of why something is the way it is may be answered with reference to the emergent goals (self-referen-

---

6. ROSEN, *supra* note 1, at 244.

7. *Id.* at 108–51.

8. ROSEN, *supra* note 3, at 324–40.

9. *See* ROSEN, *supra* note 1, at 89–97.

tial organizational identity) of a larger system in which it is embedded — an emergent identity on which each component of the system, at every level of detail, has some potential to have an effect.

## II. WHAT IS LAW?

What does this new mathematical biology have to do with law? Rosen didn't limit his analysis to any particular instantiation of the kinds of causal relationships in question.<sup>10</sup> His description of life could apply equally well to "systems" for which the substrate is not organic molecules, but people and their social relationships. The legal academy talks constantly about analyzing legal doctrine, "making" law and designing social organizations and legal institutions. So the idea that law is more like life than machines — that social organizations and legal institutions are more like organisms than mechanisms — and the result of that idea, that the academy could not actually do any of those things, would be genuinely arresting. If law has a life of its own, and in some sense causes its own form of order and persistence, we should be studying its biography rather than pretending that we can design and repair its mechanisms from the outside. If law is the kind of "system" that is closed to external entailment — the kind of system that Rosen proved differs fundamentally from mechanism and machine — then all notions of rational social design go out the window. We're left looking for environmental conditions that favor the evolution of one kind of legal organism rather than another. In reality, we're all gardeners, not social engineers.

Regardless of how law first arose, it is like life in precisely the ways that mattered to Rosen when he studied living organisms. Legal systems have a metabolism, of course. They use various forms of energy to convert facts into cases, words into rules, rules into roles, rule-based actions in roles into social institutions. More importantly, law systematically repairs this metabolism and preserves its organizational identity in the face of pressures from the external environment. Allow me to elaborate.

Law is a story we tell each other about justice and shared social values. We have to retell this story every day for it to replicate and persist. Legal institutions have a robust metabolism: facts and arguments, processed by legions of lawyers and judges and legislators and regulators, are converted into ever more complex structures of rules. Legal institutions are a far from an equilibrium event — they could never arise by chance, and they stay highly ordered, rather than random or rigid, despite the transience of clients and citizenry and representatives, despite the deaths of individual lawyers and judges, and despite the decay or increasing irrelevance of once "authoritative" texts.

---

10. Some have suggested that such order-creating systems include economic as well as biological systems. *See* STUART KAUFMANN, INVESTIGATIONS 211–41 (2000); *see also* JOHN MINGERS, SELF-PRODUCING SYSTEMS 153–69 (1995).

Law stays highly ordered by repairing itself, replacing components of its metabolism as they wear out. It does this by means of a meta-story that we tell ourselves when we narrate the baseline story of any given case. We don't just say "this is the legal rule in this case or circumstance." We *also* say "this law is part of THE law" — meaning that we can change or replace this particular rule if it seems inappropriate in light of our sense of justice or if our shared values change. This also means that any new law or legal institution will also be part of THE law. We don't just say that legal rules are texts that come from courts or legislative bodies. We also say that these institutions are still themselves even if the identity of all their individual members changes over time, even if their procedures and rules and structures change over time, and even if the very mode of argument that counts as "legal" changes over time. We teach law students with the expectation that they will interpret statutes yet unwritten, serve in legal roles not yet defined, and make legal moves not yet invented.

In the context of U.S. law as applied to local phenomena, we tell another story — a meta-meta-story — that completes the moebius strip-like self-referential loop required for persistent identity of the legal organism. We say that the legitimacy of our constantly self-repairing law comes from a particular source. We say: "We are the people and we are sovereign and the legitimacy of the law comes, ultimately, from *our* consent and *our* shared values." This meta-meta-story preserves the organizational identity of law. It repairs the repair function of the law. The citizenry, which repairs and preserves the meta-story that itself repairs and preserves the legal metabolism, is internal to the system of law. The citizenry is the citizenry because of what it causes: the law. Each component of this complex system can only be explained with reference to all the relationships among all the components. Thus, there is no possibility of explaining the state of the law with reference to external causes. The law is closed to external entailment. It is not a machine built by an outsider. In Rosen's sense, then, the law is alive.

You might object that "we" (current legal actors and the sovereign people) "make the law" — that the law is in some sense a social artifact. Surely human, intentional (sometimes intelligent) design creates particular legal doctrines, client-affecting outcomes, and legal institutions of all types. So, you could ask, "why can't we think of the law as a very complicated machine, engineered by social designers, rather than the kind of 'complex system' Rosen describes?" This objection misses the central point. Those who create particular legal arguments, rules, and institutions act as part of the system itself and, importantly, are subject to the system's internal constraints. The point is that when the entailment structures that lead to repair and persistent identity are in place, the causes that lead to order are a part of the current system itself. The individuals who make or change legal rules are acting in "roles" created and defined by the system itself. What they can do, even what they can legitimately say, is determined by the complex

relationships among all the components of the system. Their actions cannot be understood in isolation from those relationships. Legal institutions cannot be taken apart and understood as fragments.

The law is not a machine that can be repaired by an external engineer. A legal system derives legitimacy from its citizens. The citizens are components in the legal system. They are defined within the system in question, and simultaneously (there's that moebius strip loop) determine the goals of the system itself. But we are part of the metabolism and repair functions of the law only insofar as we are acting in legally defined roles. Legal actors always act in roles, and in relationship to goals, which emerge from the complex interdependencies of all (and only) the other components of the legal system in which they participate. There is no litigant without a judge, no judge without a congress, no congress without a constitution, no constitution without a people. A corporation is a legal person because "we" treat it as such, because it has employees and agents whose roles are defined with reference to it and because the law treats those roles as having legal consequences. What any legal actor can say — even the question whether any particular person has standing to make a legal argument — is always (and only!) determined by that actor's complex relationship to every other part of the system.

This is not to say that external forces cannot have any impact on the law. Organisms can be killed, and therefore must continuously adapt to external environments. A physical disaster, like Hurricane Katrina, can destroy the infrastructure on which the legal organism relies. Actions by people not purporting to act in legal roles can pull and push the legal system into new shapes. Assertions of power unconstrained by law, as in the case of tyranny, can destroy the system itself. But all of these external forces account for potential *loss* of order in social institutions. They don't account for the *increase* in social order that emerges from law.

The question that Rosen asked about how an organism differs from a mechanism concerns only the structure of causation, not the details of any particular catalyzed reaction. Rosen used the word "entailment" rather than "causation" because the structures that he studied were not limited to physical systems with physical, billiard-ball forms of "cause and effect."<sup>11</sup> He was just as concerned about ideas that "entail" other ideas as he was about real physical system states that entail future physical system states. As he noted, we can only think about "systems" in the physical world by creating mental models. The task of science is to integrate the entailments into our mental models, and then to bring our mental models into congruence with the entailments in real systems.<sup>12</sup> Similarly, we can create mental models to think about mental systems.<sup>13</sup> Because of the similarities

---

11. ROSEN, *supra* note 1, at 46–49.

12. *Id.* at 57–64.

13. *Id.* at 64–66.

in how we perceive both physical and mental systems, it is entirely appropriate to bring Rosen's mathematical categories to bear on social institutions as well as physical systems.

Any legal system involves multiple "entailments" — certain arguments imply certain rules, various social states suggest various social organizations, particular legal rules require particular case outcomes. The question of "what follows, as a matter of law" from a particular set of circumstances is, at bottom, very much the same kind of "entailment," for a legal system, as the causal relationships studied by science.<sup>14</sup> In Newtonian, reductionist physics, we look for the answer in the nature of forces external to the system under study acting on particular sets of system states.<sup>15</sup> In biology, Rosen tells us, we must look exclusively inside the system under study in order to understand why it remains orderly.<sup>16</sup> We must understand the system's goals (e.g., self-preservation) to understand why it is as it is, and we must study the system as a whole. It is in this precise sense that an organism differs from other types of systems and has a life of its own.

Law has the same kind of entailment structure as an organism. It repairs itself and defines its own persistent identity. If a legal system's future can be predicted at all, any prediction can be done only in reference to that legal system's internal goals and relationship structures. Law and legal institutions (including "private" social organizations) may and must be explained by what they cause, not by what causes them. Like organisms, it is this sense of causation that explains how law has a life of its own.

So what? Why does this similarity between law and Rosen's organisms matter? What does the nature of the source of legal order imply? First, we have to recognize that we cannot analyze particular portions of the legal system in isolation from one another. Second, we have to admit that legal institutions can't be designed in the abstract and should not be restructured by those who are not themselves embedded in legitimate roles within the legal system in question. Third, we must acknowledge that legal systems, as organisms, may die when the meta-stories and meta-meta-stories that repair them and preserve their identity cease to function.

These three fundamental insights translate into lessons for important social and legal dilemmas of our day. The first insight helps us understand the origins of, and find a cure for, the excessively complicated regulatory and statutory structures we have created in our legal system. The second insight provides a useful caution against undemocratic or illegitimate forms of rule-making. The third elucidates the impact that the Internet may have on current legal systems insofar as it may break existing causal loops. This insight also suggests new ways to

---

14. These causal relationships simply involve entailments within the data structures we obtain by measurement of the physical world.

15. ROSEN, *supra* note 1, at 67–68.

16. *Id.* at 244–53.

rethink global jurisdictional questions and the relationship between public and private social order. Together, Rosen's insights suggest new ways of thinking about how to produce an environment conducive to the evolution of much healthier legal organisms.

### III. TOO MUCH LAW

The law has grown too complex for anyone to deal with. Statutes and regulations have proliferated to the point that no one, not even experts, can hold them all in mind, much less provide a consistent, theoretically satisfying, gloss. Expenditure of energy and money to drive a case down to any given scale in the legal fractal can produce just about any tangent, any result.<sup>17</sup> In consequence, law has become a form of force — its invocation is often a use of power rather than an appeal to justice.

How did this happen? The fundamental reason is that law-makers tend to think about each problem they confront in isolation. They think of themselves as designing only a piece of a social machine. Although complicated, they think of the machine as having fully functional components that can be understood in isolation and analyzed as if these parts function independently, and are only assembled as an afterthought.<sup>18</sup> But, as Rosen's perspective makes instantly clear, the individual components of a legal system operate as they do only when, and because they are interrelated. New "rights" (seemingly sensible when contemplated in the abstract) create complex new ecologies of lawyers who, once established, seek the creation of still more rights (to fuel their class action practices or provide funding for public interest enterprises). New duties, seemingly reasonable in isolation, create costs that drive investments into less regulated channels, effectively accomplishing little for the social goals in question.<sup>19</sup> No one even asks whether the creation of a new law should be accompanied by the elimination of an old one. No one has a mandate to look at the overall picture, to ask whether the entire system of law is optimally organized. No one standing outside the system *can* ask that question. Only the system itself can ask.

The legal system does reject dysfunctional components, and becomes more successful in some ways over time. But this doesn't stem from abstract analysis, even by experts. In the U.S. legal system, law professors do not have "standing" to bring a case to change the law. That's a good rule.<sup>20</sup> It tends to keep the developing order of the legal system tied to its ultimate sources of legitimacy —

---

17. Arguably, this is why big law firms exist.

18. See DAVID SCHOENBROD, *SAVING OUR ENVIRONMENT FROM WASHINGTON: HOW CONGRESS GRABS POWER, SHIRKS RESPONSIBILITY, AND SHORTCHANGES THE PEOPLE* (2005).

19. See *id.*

20. This is in contrast to the French legal system's tendency to cite law journal articles as authoritative. Here, such articles are sometimes ignored even in amicus briefs. See DAVID SCHOENBROD & ROSS SANDLER, *DEMOCRACY BY DECREE* (2003).

the consent of the people to rules that affect them directly, developed by processes that seem fair to them. Law professors may hold up a mirror in which the society sees itself — but the social/legal face reflected in the mirror can only change from inside.

The rise of complex systems is always accompanied by specialization and nested hierarchy. Multi-celled organisms quickly differentiate into discrete organs that play differing roles. So why shouldn't the law, as an organism, also have specialists and specialties? It should. The problem is that our current legal system lacks the most fundamental mechanism, used by more rapidly replicating and adapting biological organisms, to keep undesirable levels of complication under control. Competition provides the motivation for the development of this adaptive mechanism. In biology, if an organism becomes too complicated for its own good (suffering the "complexity catastrophe"), it fails to mate; its line dies out, and is replaced by other systems, with more fit kinds of order. Because of the particular nature of law's meta-meta-story, its historical rooting of legitimacy in a particular geographic area, we've developed only one legal organism per country. We haven't had a robust competition for survival among rule sets. The competition is only between the rule of (our one) law and, presumably, anarchy. Because these geographically based rule sets have not been checked by evolutionary forces, they have become more complicated over time. These rule sets have been further complicated because the people who write them only consider parts of the system in analytical isolation. We replicate the law by telling its story, or slightly different versions of it, every day. But we tell only one story, and we don't shorten the story very often because that one story doesn't have to compete very hard for our attention and loyalty. Fortunately, that is about to change. But not without considerable disruption for all the organisms involved.

#### IV. TOO LITTLE CITIZENSHIP

Rosen teaches us that the entailment structures internal to an organism continuously repair the order created and sustained by its metabolism.<sup>21</sup> The corollary is that the order found in an organism cannot be attributed to external causes. Social or biological engineers can create lots of disorder, as they fractionate the complex systems that they study. But they cannot themselves create a new organism of their own design from without. Living organisms develop, emerge, and evolve; they are not built.

Most people understand that the United States cannot simply impose democracy on another country. A real democratic legal system requires a rich substrate of engaged citizens, shared civic values, and people playing all the different roles that constitute a polity. Less well understood is the relationship of legitimated

---

21. See Juan-Carlos Letelier et al., *Organizational Invariance and Metabolic Closure: Analysis in Terms of (M,R) Systems*, 238 J. THEORETICAL BIOLOGY 949 (2006), available at <http://bip.cnrs-mrs.fr/bip10/rosen.pdf>.

roles to political corruption in the United States. When Congress critters sell their votes for favors, they are stepping out of the roles that the sovereign people defined for them — they change laws by taking steps not permitted of legal actors. That's why their actions can create only disorder, not social order, and are widely condemned. The legal definition of a crime must be based on widely shared values because the resulting social order must be tied to the consent implicit in law's meta-stories. When legal rules condemn actions the people do not want to prohibit, the result is tyranny and rebellion, not increased social order. When selfish or evangelical actors seek to use the law's powers to impose their own values on a larger public, they ultimately disorder the social organism we know as law.

Corruption and selfishness (and lack of civic virtue) are old stories. The meta-metabolism of the law can to some degree repair these lesions. But, as noted, the quality of the social order created by geographically defined legal systems can suffer drastically from the fact that the citizens of any country have all their eggs in one basket. And our singular local legal organism is now facing a potentially fatal threat (or salvation, depending upon your point of view) — the death of the meta-meta-story on which its legitimacy rests. This threat comes from the rise of the global Internet.

By connecting arbitrarily located people and groups, the Internet drastically undermines any non-global definition of the “we” who are supposedly sovereign. Anyone can instantly affect anyone else via the Internet. A publisher in New Jersey can defame a businessman in Australia.<sup>22</sup> We need rules to govern these online interactions. But there is no apparent reason why the rules of any particular geographical sovereign ought to apply to actions that may involve people from many different countries. Local rules conflict and values are not globally shared. When an Australian court imposes rules not endorsed by U.S. actors, we achieve a result in the “case,” but not the legitimacy that stems from consent by those affected to that form of social order. We have no world citizenry to resolve the differences — neither directly, nor by delegation of power to some elected or otherwise “representative” governmental structure. The life of the law, as we have known it, is therefore threatened. If the law is an organism, it can die — or at least give way to more robust competitors within various online spheres.

## V. THE RISE OF NETIZENSHIP

It may be that we can repair the current legal organism — more accurately, create a new one — by telling a different meta-story; thereby catalyzing the creation and repair of a new legal metabolism. But, given the widely differing values found around the globe, and given the widely differing populations occupying many different online places, there will not likely be just one new meta-meta-story, or a new singular legal organism. That's great news. If we treat the

---

22. *Dow Jones & Co. v. Gutnick*, (2002) 210 C.L.R. 575 (Austl.).

people primarily affected by the rules of particular online places as the citizenry whose consent to particular sets of rules (governing that online space) should be required, we'll begin to have a real competition among rule sets, at least online. Moreover, evolutionary forces will be able to guide the competing legal organisms that do arise online towards optimal levels of legitimacy and complexity. Excessively rigid regimes will lose adherents, rule-less random frontiers will be avoided by most, and regimes that spill over unacceptable adverse impacts on other groups will be shunned.<sup>23</sup> We'll see the rise of a self-causing legal order composed of systems that adopt goals that serve the values of those they regulate, without excessively imposing those goals on others.

Traditional liberals might look upon the evolution of diverse rule sets online with horror. They would fear the loss of the single "civic" perspective that guides government — contemplated as a single geographically defined sovereign — towards the "public good."<sup>24</sup> Evangelical conservatives and security hawks might be just as appalled by the prospect of multiple, differing rule sets chosen by means of logging into one online place rather than another.<sup>25</sup> Yet neither would support the creation of a global state they might not run. Neither could explain why the collective action of online groups to make and consent to rules which govern their own actions is any less "civic-minded" than voting for a local sheriff offline. We'll eventually make rules for online life by choosing among competing regimes, rather than by voting for particular officials within only one legal system.

Rosen's perspective clarifies various previously imponderable questions regarding jurisdiction and the legitimate source of rules for global online activities. First, the act of logging into an online space and agreeing to abide by its rules is every bit as much a "legal" action as voting — it just doesn't happen to be a part of the same legal organism in which we have been used to being embedded.<sup>26</sup> By participating in a variety of online legal regimes, we will collectively tell and repair a legal, civic story — several of them, simultaneously — just not the single story we have told before. By treating the intangible boundaries around online spaces as more significant than the geographic boundaries around countries, we will redefine the social cell(s) in which our (online) legal/civic life exists. Because these cells must now compete for our attention and loyalty, they may well become healthier than our prior legal organism. These cells could even find ways to

---

23. See David R. Johnson, *Emergent Law and Order: Lessons in Regulation, Dispute Resolution, and Lawmaking for Electronic Commerce and Community*, in *BIOLOGY OF BUSINESS: DECODING THE NATURAL LAWS OF ENTERPRISE* 237 (John Henry Clippinger III ed., 1999).

24. See ROBERT D. PUTNAM, *BOWLING ALONE: THE COLLAPSE AND REVIVAL OF AMERICAN COMMUNITY* (2000); Margaret Jane Radin & R. Polk Wagner, *The Myth of Private Ordering: Rediscovering Legal Realism in Cyberspace*, 73 *CHI.-KENT L. REV.* 1295 (1998).

25. See generally Jack Goldsmith, *Against Cyberanarchy*, 65 *U. CHI. L. REV.* 1199 (1998) (challenging arguments that the state cannot regulate cyberspace because of its inherently non-geographic nature).

26. By signing on to Second Life, you accept their rules. Enforcement is easy and sometimes automatic. See also LAWRENCE LESSIG, *CODE AND OTHER LAWS OF CYBERSPACE* (1999).

coordinate their actions to become a new kind of multi-cellular legal/social animal unlike anything we've seen before. The cells will certainly seek more diverse goals, make more varied rules which are better tailored to the values and goals of participants, and invent more interesting roles for us to play.

A widely accepted part of our previous legal stories has been the sharp distinction between the private and the public, the selfish and the civic.<sup>27</sup> The new legal organism(s) of the Internet will not support this distinction, because no online population can give any online government an exclusive right to the legitimate use of (online) force. Netizens can agree to allow a sysop to terminate their online identity within a particular virtual world, for example, if they break the local rules.<sup>28</sup> But the laws of other online spaces will not defer to those decisions if they provide a haven for actions that harm outsiders. Netizens can agree to abide by the rules of an online space when they go there. But they can choose not to log in. In consequence, the new legal systems of the Internet will not be quite as powerful as existing governments. Groups of netizens will be able to create new spaces, with new rules, any time they want. Yet, when acting in groups for their mutual good, they will be engaged in actions more like self-government than purely private action.

One accepted subtext of the current legal story is the idea that robust organizations — corporations and schools, political parties and unions — owe their existence to the state. Our law says it has “deemed” such organizations to be legal persons, nervously suggesting that this is just a convenient fiction.<sup>29</sup> That perspective treats organized groups as if they are mere mechanisms — that is, social artifacts that could be assembled and disassembled by a central engineer. Rosen’s insight makes clear that robust organizations are themselves organisms nested inside the state. They are self-entailed, just like the overall legal system. They develop and evolve with lives of their own, when conditions are right. They repair their internal structures by positing their own immortality. Like any organism, they have to figure out how to co-exist peacefully with an external environment (and how to keep their own metabolisms going). But they are not structurally (causally) different from other legal organisms. They have internal rules which define differentiated roles in service of goals that have been consented to (collectively created) by an internal citizenry.

As the meta-meta-story of our current geographically-based legal organism breaks down, the idea that all social order arises from this same basic causal loop will become clearer. And it will become clearer that we need new types of robust organizations to serve all of the goals we have as individuals and groups globally, not just profit-seeking corporations on the one hand and public good-seeking

---

27. See Beth Simone Noveck, *A Democracy of Groups*, 10 FIRST MONDAY (2005), [http://www.firstmonday.org/issues/issue10\\_11/noveck/index.html](http://www.firstmonday.org/issues/issue10_11/noveck/index.html); Radin & Wagner, *supra* note 24.

28. Even AOL kicks users off for violating their terms of service.

29. See LON L. FULLER, *LEGAL FICTIONS* (1967).

governments on the other. We are on the brink of a Cambrian explosion resulting in a differentiation of legal organisms. We should allow lots of new forms of self-governance and collective goal-seeking to arise. We cannot engineer legal systems from the outside. But we can create the conditions of mutual tolerance that will allow the most productive new forms (the ones that best serve shared values of participants and do the least harm to outsiders) to prosper. Legal systems may have lives of their own. But we can all tell a meta-meta-meta-story about the relationships among legal systems that encourage diversity. We can promote a healthy ecosystem by giving up the idea that there is only one legal system for any territory, and by giving up any efforts to impose the legal systems we prefer on others who mostly mind their own business. We can insist on congruence (a substantial overlap between the people affected by a legal system and the people whose well-being that system seeks to serve) rather than sovereignty.

## VI. A FEW EXAMPLES

Some virtual worlds offer benefits of various kinds to participants who have more experience points, more digital objects, and more virtual currency.<sup>30</sup> Some online games have sought to ban the practice of selling such things to preserve a sense of fair play. But entrepreneurs in Romania have started a business of “power leveling” avatars for U.S. customers.<sup>31</sup> If this practice should be regulated in some fashion, who should be in charge? The United States? Romania? The “game gods” who created the affected online world? The users of that virtual world? It’s difficult to imagine Congress passing, much less enforcing, a law against such practices. Even more difficult is imagining the company that owns the game enforcing rules against the practice if it is widely supported by the players. This may seem like a trivial question — hardly the stuff of social order. But the problem of whether and when to have rules that prevent or allow an online activity is similar in *form* to every other question about which legal academics theorize. Clearly, the answer to this question — really a question about the shared values of those who participate in the virtual world in question — won’t be found in rational analysis, territorially local law, or tyrannical action by those who happen to control software code. The virtual worlds in question are allowing a new online citizenry to develop, and the complex relationships among these groups of citizens will facilitate the emergence of rules and roles that form a new social order. Ultimately, different virtual worlds will develop different rules (laws) to govern such activity.

---

30. Virtual worlds are three-dimensional online spaces that use on-screen representations of users, known as avatars, and allow multiple users to occupy the same location. They provide an enhanced sense of “place” and persist and change even in the absence of particular users. They are used here as an example because it is natural to think of virtual worlds as developing distinct rules to govern interactions that take place in such places.

31. For a price you can buy an “experience” avatar.

Users who buy and sell goods and services through eBay have long understood the value of law in enabling the creation of trust and resolution of disputes. But they don't often look to local courts for redress in the event of disagreement. Instead, they use an online dispute mechanism (Square Trade) to self-mediate most of their disputes about shipments broken on delivery or misrepresented qualities of goods.<sup>32</sup> They also participate in a robust reputation system that seeks to identify and ostracize cheaters. As a practical matter, the local consumer protection laws that would otherwise have had to step in to protect this marketplace have proved unnecessary. A new form of legal order is emerging in this particular online space.

The domain name system poses lots of new and interesting legal questions. Should someone have to be a cooperative to register in .coop? What procedure should someone follow to transfer a domain name to another party or change their registrar? What level of information, with what accuracy, must be disclosed, and to whom, as a condition of registration? Territorial governments have tried to make some rules governing this kind of issue.<sup>33</sup> But, for the most part, the rules are made by many different actors and in many different ways.<sup>34</sup> The application of the rules is defined by the DNS domain, not by any geographically defined territory. People become subject to the rules by deciding to register within a particular domain, not just because they live physically in a particular place. There are some global rules.<sup>35</sup> But even these are constrained by the ability of users to migrate to other identification systems, to the less regulated lower regions of the domain space (third level domain names) or to so-called country code top-level domains (ccTLDs) that actively compete against each other for registrations on a global basis — using differing rules as a part of their competitive appeal.

None of these examples involve life or death issues we sometimes think of as the core subject matter of the law, and the core goal of social order. But most of the traditional law, embodied in our ever more complex legal institutions, doesn't involve life or death issues either. Territorial legal rules tell us when and how we can form a corporation (based, say, in Delaware). In virtual worlds, guilds and businesses, which make money in a virtual world currency that converts to real world dollars, form in very different ways — using contracts recorded at virtual notaries, and enforced in online courts. Territorial rules define and pun-

---

32. See SquareTrade, <http://www.squaretrade.com> (last visited Oct. 19, 2006).

33. See Anti-Cybersquatting Consumer Protection Act, 15 U.S.C. § 1125(d) (2000); Kim Zetter, *Domain Owners Lose Privacy*, WIREDCOM, Mar. 4, 2005, <http://www.wired.com/news/privacy/0,1848,66787,00.html>.

34. Most registries, especially country code top-level domains (ccTLDs), make their own rules.

35. The Internet Corporation for Assigned Names and Numbers (ICANN) imposes some consensus policies on generic/global top-level domains, via contracts it requires be signed as a condition of delegation. ICANN Consensus Policies Page, <http://www.icann.org/general/consensus-policies.htm> (last visited Nov. 10, 2006).

ish fraud. Online rules establish reputation systems that predict fraud, and seek to route around the perpetrators. Territorial rules define and create causes of action to remedy torts, such as defamation, or to protect intellectual property. Online worlds can, at least amongst their inhabitants, redefine the rules to allow avatar battery (if they think it's fun) or to insist that all in-world creations be freely shared (or not). Some have suggested a "trademark-free Top Level Domain."<sup>36</sup>

Will localized geographic governments defer to these new legal systems? The answer depends on whether the new systems create a better form of social order, one that is supported by the consent of willing participants, and that does not unduly spill over adverse consequences on outsiders who are not part of the consenting citizenry. But that question works in both directions. Why should netizens defer to local governments other than the one located where their bodies happen to be? Offline law will not be the "law of the Internet" indefinitely unless it provides a better, more legitimate, form of social order than the social order created by the legal systems that emerge organically online. If law is an organism that repairs and continuously re-creates itself, then the only reasonable expectation is that legal systems that preserve a "fit" form of social order will prosper. These "healthy" systems provide institutions adapted for the environment in which the law must operate, roles welcomed by those who must play them, and rules repaired with the consent of those affected.

#### VII. LONG LIVE THE LAW(S) ONLINE

Sometimes sick organisms die hard — potentially taking others with them. We have seen many efforts by governments and even academics to explain why it is essential that geographically defined sovereigns, and associated legal institutions, should continue to regulate the Internet. China is attempting to re-establish its territorial border inside the Internet itself.<sup>37</sup> But all of these efforts and arguments have a tellingly desperate air. They will fail because their proponents haven't yet recognized what makes any legal system "viable" over the long term; that is, what types of entailments create social order. To live, a complex legal system must repair itself (fill roles that have been vacated, revise rules that have become outmoded), and it must do so with reference to a shared meta-meta-story that the people most affected by the resulting legal rules and social organizations agree should be told. The goals of a successful legal organism must be agreed upon by those who live within it, because a legal system is nothing more than a

---

36. Posting of Gordon Burditt, [gordonb.n0ptw@burditt.org](mailto:gordonb.n0ptw@burditt.org), to Labor Law Talk, Domain Ownership & Usage Page, <http://www.laborlawtalk.com/showthread.php?s=29bf90ffd9944a83c6a0201d011fddb9&t=111082> (Sept. 15, 2004); *see also* E-mail from Shari Steele, [ssteele@eff.org](mailto:ssteele@eff.org), to [comment-udrp@icann.org](mailto:comment-udrp@icann.org) (Aug. 24, 1999, 18:41:17), <http://www.icann.org/comments-mail/comment-udrp/current/msg00015.html>.

37. Internet Censorship in the People's Republic of China, [http://en.wikipedia.org/wiki/Internetcensorship\\_in\\_mainland\\_China](http://en.wikipedia.org/wiki/Internetcensorship_in_mainland_China) (last visited Oct. 19, 2006).

collective conversation about shared values. When it ceases to be that kind of internally entailed organism, the law becomes mere power, and social “order” becomes tyranny. It matters a great deal *who* is telling the story. The Internet has irreversibly changed the identity of the story-telling collective.

Organisms can't be repaired from the outside. But, with reference to interactions that take place primarily online, that is exactly where existing local governments are situated. Outside the vibrant, self-regulating online spaces they seek to regulate, and outside the willing online participants who seek primarily to regulate their own affairs. The local governmental efforts to engineer the Internet as if it were a mechanism are not only fundamentally illegitimate, but doomed by the very nature of the thing they seek to regulate. They are trying to create social order, of course. But they have not recognized, as Rosen did, that order in complex systems creates itself.

Our geographical, sovereign law may be well suited for regulating physical things and protecting us from real world threats. This type of legal system will undoubtedly persist in its own appropriate environmental niche. But, even in that context, we would do better to treat this system as an organism, rather than a mechanism — viewing it as complex whole, disallowing efforts to redesign it from the outside, and discrediting efforts to analyze it by reductionist means. In any event, we must recognize that our current legal organism, transplanted online, will not prosper. As we interact globally over the Internet, we create a new non-local citizenry, a netizenry, occupying many different kinds of online spaces that both need, and can create, rules of their own. The new global metabolism will produce new forms of social order that use fundamentally different forms of repair, goal setting and legitimation. Our old meta-meta-story of citizen consent to a social contract empowering a territorially local government will not work in this new context. But new repair mechanisms, new complex systems, new forms of social order will arise. These will involve voluntary navigation and filters, not voting. Ultimately, they will demand and receive deference from local legal regimes, because they will be better than any current legal systems at creating social order online. Long live the new legal organisms of the Internet.