https://doi.org/10.1017/S0265052515000084 Published online by Cambridge University Press

DEGENERATE COSMOPOLITANISM*

By Adam Martin

Abstract: *Advocates of cosmopolitan ideals, to the extent that they engage with questions of institutional design, typically imagine replicating or refining existing, nation-state models of governance but on an international scale. This essay argues that cosmopolitan ethics need not go hand in hand with international government, and may be better served by a different approach. I explore the concept of degeneracy as a principle of institutional evaluation and design in international politics. Degeneracy is a characteristic of complex systems in which multiple components of the system offer overlapping (but not identical) functions, and is a key component in the robustness of such systems. Non-degenerate systems, by contrast, exhibit fragility in the face of adverse conditions. When applied to systems of governance, degeneracy commends polycentricity and allows for some evaluation of the robustness of different mechanisms and forms of polycentric governance. Cosmopolitan ideals are better served by providing alternatives to existing forms of governance than by building on them. I consider some concrete policy applications of this idea, focusing on immigration and intellectual property.*

I. Introduction

We live in a world of widely varying practices and institutions. Cosmopolitans seek to hold a mirror up to this world by insisting on certain universal moral norms — often articulated in terms of human rights — that transcend particular cultures and nations. Though they do not seek to homogenize different ways of life, cosmopolitans typically advocate various forms of international governance as a means of realizing their moral vision. These proposed forms of governance vary in the degree of centralization they endorse. Echoing the arguments made on behalf of nation-states, many cosmopolitans argue that a worldwide polis ought to be supported by a world government or something similar to one.[1] Other cosmopolitans have warned against the potential despotism of such an all-encompassing sovereign, instead preferring loose confederations of liberal nation-states.[2] Still other cosmopolitans defend a more decentralized approach to international governance, arguing that an international

* I would like to thank Carmen Pavel for her feedback and encouragement, and the other contributors to this volume. I also received helpful comments from Daniel D'Amico, Richard Wagner, and Adam Tebble. Any remaining errors are due to insufficient degeneracy between my own neurons.

[1] Luis Cabrera, *Political Theory of Global Justice* (London: Routledge, 2004); David Held, *Democracy and Global Order* (Stanford, CA: Stanford University Press, 1995).

[2] John Rawls, *The Law of Peoples* (Cambridge, MA: Harvard University Press, 1999).

doi:10.1017/S0265052515000084

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https://doi.org/10.1017/S0265052515000084 Published online by Cambridge University Press

rule of law is consistent with a patchwork of diverse jurisdictions stitched together through formal treaties and informal norms.[3]

This essay articulates and defends an orientation toward international governance that I refer to as *degenerate cosmopolitanism*, which seeks to achieve cosmopolitan ends through political fragmentation rather than centralization. In terms of the spectrum of positions outlined above, it falls on the far end of decentralized approaches. By delving into the insights of complex systems theory and the "Bloomington School" of political economy, I explain how the dangers of centralized governance can be avoided while still creating ample scope for realizing cosmopolitan values.

Since this is an essay in institutional design, I take cosmopolitanism in a broad sense. What follows assumes a minimal form of moral universalism. Moral obligations are not owed exclusively to our fellow citizens, and at least some of our moral commitments extend across borders. But except where moral norms themselves commend precise forms of governance arrangements, what forms of governance will best realize any given norm remains an open question of institutional design. This essay begins with the presumption that design is difficult and fraught with error. If there was a lever that banned only malign forms of governance, one might be justified in pulling that lever. But since such a lever does not exist, we are left with a choice: centralized or decentralized errors in governance.

And despite commending political fragmentation, I also mean cosmopolitanism to be taken in a sociological sense. Peaceful, voluntary cooperation and engagement between individuals from different cultures or nations is typically good. A world in which two strangers from different worlds are more able to fruitfully engage one another is, *ceteris paribus*, better than one in which they are less able.

Why "degenerate?" Most think of degeneracy as a negative quality. But it has another, technical meaning in complex systems theory. Two elements of a system are said to be degenerate if they are distinct but can serve as substitutes for one another. Complex systems with degenerate elements are both robust against negative shocks and evolvable, able to develop new capacities. Degeneracy is an important concept because complex systems *as a whole* defy prediction and centralized control. But since degeneracy refers to micro-level properties of elements of the system, it offers a tractable tool of evaluation. James Whitacre and Axel Bender thus refer to degeneracy as a "design principle for achieving robustness and evolvability."[4] Section II explains the concept of degeneracy in more detail.

Degeneracy can serve as a design principle not only for biological systems but for systems of governance as well. Elinor Ostrom and Roger Parks state

[3] Carmen Pavel, *Divided Sovereignty* (Oxford: Oxford University Press, 2014); Allen Buchanan, *The Heart of Human Rights* (Oxford: Oxford University Press, 2013).

[4] James Whitacre and Axel Bender, "Degeneracy: A Design Principle for Achieving Robustness and Evolvability," *Journal of Theoretical Biology* 263, no. 1 (2010): 143–53.

https://doi.org/10.1017/S0265052515000084 Published online by Cambridge University Press

boldly that "no matter their field or focus, political scientists study complex systems."[5] This essay explores what it would mean to take degeneracy seriously as a guide for evaluating, designing, and reforming complex systems of governance, with special emphasis paid to questions of international governance that cosmopolitans would find relevant. Section III applies the concept of degeneracy to governance, arguing that degeneracy corresponds to polycentricity and institutional diversity as explored in the work of the Bloomington School of political economy. Section IV applies these concepts to highlight problems with existing international governance arrangements, with a special focus on international intellectual property law.

In focusing on the implications of degeneracy, I do not mean to imply that it stands as an ultimate design principle that trumps other normative considerations. It is one important factor among many to consider when evaluating governance. Nonetheless, it tends to correlate with a range of outcomes typically considered desirable by cosmopolitans. Section V argues that this is particularly true for cosmopolitan liberals who seek to expand the recognition of human rights. Polycentricity and institutional diversity, while not guaranteeing respect for human rights, tend to coincide with advances in both liberty and welfare.

The point of this essay is not to argue in favor of any particular polycentric system of governance. Such systems are many and heterogeneous, which is part of the broader point. All such systems are far from ideal — because all real world governance systems are far from ideal — and some are repugnant. But that is also part of the point. Especially when it comes to problems of international governance, we would do well to look for ways to make the world less bad rather than to focus exclusively on what would make it good. The point, rather, is to illuminate the properties of governance arrangements that tend to facilitate social learning, so that would-be cosmopolitan reformers can learn from existing errors in order to avoid more costly or even tragic errors. Section VI concludes the essay, and — keeping the above in mind — offers only preliminary thoughts on what sorts of concrete reforms degenerate cosmopolitans might pursue.

II. Degeneracy in Complex Systems

Social scientists often utilize concepts from complex systems theory.[6] Complex systems are described in different ways, but four commonly

[5] Elinor Ostrom and Roger Parks, "Neither Gargantua nor the Land of Lilliputs," in Michael McGinnis, ed., *Polycentricity and Local Public Economies* (Ann Arbor, MI: University of Michigan Press, 1999), 284.

[6] Eric Beinhocker, *The Origin of Wealth* (Boston, MA: Harvard Business School Press, 2004) surveys the literature on complexity and economics. F. A. Hayek, "The Theory of Complex Phenomena" in *Studies in Philosophy, Politics, and Economics* (Chicago: University of Chicago Press, 1967) is an early example of thinking about complex systems across multiple domains. See also Ostrom and Parks, ibid.

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recognized characteristics are salient for the following discussion. First, relationships between the elements of complex systems exhibit structure. Elements are not all directly connected to one another, but rather comprise a network in which each node only connects to some subset of other specific nodes. Second, elements of the system are specialized; each performs only some subset of the functions that all elements together can perform. Third, specialization entails interdependencies between elements, which often rely on one another in order to function. Fourth, the combination of these three traits means that the nexus of networked relationships that constitute the system has emergent properties that affect both the system as a whole and how the elements of the system function.

In complex systems, specialization and interdependence create the possibility of fragility.[7] Each part of a complex system, in order to fulfill a certain function, requires the cooperation of other elements of the system. A system is fragile if some disruption or change in its environment causes a systemic breakdown of functionality. In the proverbial rhyme, a kingdom is lost for want of a horseshoe nail: a breakdown of one function (the nail securing a horseshoe to a horse) leads to the breakdown of another function (the horseshoe protecting the horse from injury), and so on.

Redundancy is the classic solution to the problem of fragility. If a single missing nail can render a horse lame, one might give riders access to multiple horses or send out multiple riders. Redundancy means that some elements of a system function identically. If one breaks down, the others pick up the slack. In economic theory, redundancy corresponds to roughly identical firms in a perfectly competitive market: each firm's output is a perfect substitute for the output of other firms. Redundancy between elements can make a system robust, which is the simple negation of fragility. Robustness is the ability of a system to withstand different kinds of shocks or stressors.

Degeneracy differs in a subtle but important way from redundancy: degeneracy refers to the ability of structurally *different* elements of a system to perform similar functions.[8] Degeneracy refers to the relationship between elements of a complex system. Elements exhibit degeneracy when they perform the same function under some circumstances but not other circumstances. Neural networks offer a prime example. Individual neurons are structurally distinct but densely connected, and offer many similar pathways for electrical impulses. Even if individual neurons are damaged, cognitive functions can continue as normal since there are substitute pathways for impulses to follow.[9] Like redundancy, then, degeneracy facilitates robustness by multiplying the means of realizing any given function.

[7] This terminology follows Nassim Taleb, *Antifragile* (New York: Penguin, 2012).

[8] Gerald M. Edelman and Joseph A. Gally, "Degeneracy and Complexity in Biological Systems," *Proceedings of the National Academy of Science* 98, no. 24 (2001): 13763–13768. James M. Whitacre, "Degeneracy: A Link Between Evolvability, Robustness, and Complexity in Biological Systems," *Theoretical Biology and Medical Modeling* 7, no. 6 (2010): 1–17.

[9] Ibid., 13765.

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But degeneracy *also* allows for the possibility of transcending mere robustness and achieving "evolvability." Evolvability is the emergent capacity of a system not only to withstand negative shocks but also to adapt to new circumstances or develop wholly new functions.[10] Pure redundancy can generate robustness but inhibit evolvability as system resources are spent maintaining a population of identical elements. A degenerate system, by contrast, can respond to new environmental conditions by developing new capacities. Since elements function differently under different circumstances, the system as a whole is more adaptable. In economic theory, degeneracy characterizes dynamic competition between different firms developing distinct products that are imperfect substitutes for one another. This is a form of competition that allows for experimentation and innovation, not just lower prices on given goods.

Nassim Taleb offers a helpful taxonomy of qualities of complex systems that correspond to the above discussion of the relationships between their elements: fragility, robustness, and anti-fragility.[11] He defines robustness and fragility in a manner equivalent with the above. Anti-fragility is not just the negation but the diametrical opposite of fragility: it is the ability of a system to take advantage of changes in its environment. Anti-fragile systems love volatility. Anti-fragility entails the ability to develop new capacities, and so corresponds to the conjunction of robustness and evolvability. Taleb's argument that anti-fragile systems respond to negative stressors through overcompensation, increasing the capacity of the system, corresponds to Edelman and Gally's association of degeneracy with 'adventitious compensation for error.'[12] Redundancy creates robustness, while degeneracy creates anti-fragility.

Taleb raises several important points about the evaluation of complex systems. First, robustness has a built in expiration date.[13] The best a robust system can do is resist adverse shocks. Without the capacity for evolution, a robust system cannot adapt to large changes or to exploit new possibilities. The conditions that allow a given system to thrive will eventually dissipate. Even if evolvability is not considered valuable for its own sake, it is necessary to adapt to adverse changes in conditions. A system is robust in the long run only to the extent that it is evolvable.

Second, one cannot judge whether a system is fragile, robust, or anti-fragile based only on its previous performance. Performance is the joint product of the qualities of the system and the circumstances it confronts. Notably, "black swans" — unexpected negative shocks — can reveal fragility in systems that previously appeared quite stable.[14] The financial

[10] The claim here is not that degeneracy causes mutation or change, but rather that only a system characterized by degeneracy can accommodate both change and robustness.

[11] Taleb, *Antifragile*.

[12] Edelman and Gally, "Degeneracy and Complexity in Biological Systems."

[13] Ibid., 8.

[14] Nassim Taleb, *The Black Swan* (New York: Random House, 2007).

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crisis of 2007 is one such example; the outbreak of World War I is another. Understanding whether a system is fragile, robust, or anti-fragile thus requires understanding how the elements that comprise the system relate to one another, not merely how the system has performed in the past.

Finally, it is worth making an obvious qualification: robustness and evolvability are both matters of degree and of kind. A system will be anti-fragile *to the extent that* relationships between its elements are degenerate and *with regard to* the functions which those elements perform. So it is possible for a system to be fragile, robust, and anti-fragile in different respects.

III. Degeneracy and Governance

Richard Wagner explores the implications of degeneracy for social phenomena.[15] He models social phenomena as emerging from networks comprised of both private and public enterprises. Degeneracy requires that there be substitutes for the functions performed by individual enterprises. A system is degenerate to the extent that enterprises have multiple pathways open for achieving their ends. "If an enterprise finds one node blocked, there are other nodes that can serve the same function in the enterprise's plan."[16] If any enterprise has a monopoly on some function, the system is less degenerate to that extent.[17] If all connections must pass through a single enterprise or all political enterprises are directly connected, there is zero degeneracy between nodes.

Mapping the concept of degeneracy onto governance more specifically requires exploring two key ideas from the work of Vincent and Elinor Ostrom and the broader Bloomington School of political economy: polycentricity and institutional diversity.[18] Polycentricity means that there are multiple sources of authority in a governance regime, and diversity means these sources of authority offer different bundles of governance services. To the extent that a regime is polycentric and diverse, relationships between jurisdictions exhibit degeneracy, and thus the system as a whole is anti-fragile.

As noted above, in making this argument I do not aim to enshrine polycentricity or diversity as ideals that always trump other considerations. In the first instance, though, it suffices to point out that anyone designing

[15] Richard Wagner, "Retrogressive Regime Drift in a Theory of Emergent Order," *Review of Austrian Economics* 19 (2006): 113–23.

[16] Ibid., 115.

[17] Ibid., 116.

[18] A wide selection of classic Bloomington School texts can be found in Michael McGinnis, *Polycentricy and Local Public Economies*, and Michael McGinnis, ed., *Polycentric Games and Institutions* (Ann Arbor, MI: University of Michigan Press, 2000). Two recent works that examine the distinctive aspects of the Bloomington approach are Paul Dragos Aligicia and Peter Boettke, *Challenging Institutional Analysis and Development* (London: Routledge, 2009) and Paul Dragos Aligicia, *Institutional Diversity and Political Economy* (Oxford: Oxford University Press, 2014).

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or reforming a system of governance should aim to limit its fragility to some extent. Any governance regime worth having is probably worth making nonfragile.

Polycentricity means that decision-making units are *independently constituted*.[19] Polycentric systems are comprised of "fragmented" and "concurrent" authorities.[20] The various organizations that develop, interpret, and enforce rules adjust their actions to one another rather than to some central authority. In a polycentric system, *there is no final authority* to which all other authorities submit.

Polycentricity should be distinguished from several similar but distinct concepts. Many organizations subdivide functions into manageable components for strictly administrative purposes, but reserve the authority to direct, override, or disband those lower level units at will. For instance, the marketing department in a firm is not independently constituted and does not make the firm polycentric.[21] It is not enough that a lower level authority implement or even determine policy if it is a mere appendage of a larger body.

Polycentic governance thus requires overlapping jurisdictions. Individuals fall under the jurisdiction of several authorities, with no one authority being reducible to the others. Vincent Ostrom identifies this condition with the distinction between a federal system and a "mere" confederation.[22] In a confederation the individual's relationship to a supranational government is mediated through his relationship to the national government. To the extent that this is true, the larger governmental unit provides no genuinely alternative avenue for the individual to pursue his ends, and thus provides no check on the smaller unit. Overlapping jurisdictions also distinguish polycentricity from "balkanization," in which the governing units are wholly exclusive entities and those subject to them have less scope for developing and acting on shared interests.[23] Avoiding the twin perils of balkanization and centralization means that governing jurisdictions should be independently constituted but related to one another through formal rules and informal norms.[24]

The other key ingredient for degeneracy is institutional diversity. Diversity connects to degeneracy in a straightforward and obvious manner. Independently constituted but identically organized jurisdictions would

[19] Vincent Ostrom, Charles Tiebout, and Robert Warren, "The Organization of Government in Metropolitan Areas: A Theoretical Inquiry," *American Political Science Review* 55 (1961): 831–42.

[20] Vincent Ostrom, *The Political Theory of a Compound Republic*, 3rd ed. (New York: Lexington Books, 2008), chaps. 5–7.

[21] Giuseppe Eusepi and Richard Wagner, "Polycentric Polity: Genuine vs. Spurious Federalism," *Review of Law and Economics* 6, no. 3 (2010): 328–45.

[22] Vincent Ostrom, *Compound Republic*, 11–12. See also 156–67.

[23] Elinor Ostrom and Vincent Ostrom, "Public Goods and Public Choices," in Vincent Ostrom, *The Meaning of American Federalism*, 193.

[24] Vincent Ostrom, *The Meaning of American Federalism*, 234–40.

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be redundant but not degenerate. Institutional diversity enables evolvability by allowing for experimentation, learning, and customization of rules to local conditions.[25]

The difficulties and complexities of governance make error inevitable. Errors in governance come in a variety of forms, but essentially involve the enforcement of rules that create perverse incentives. These rules may themselves be the result of opportunism by those making or enforcing them, or they may come about more innocuously through bad design.[26]

Complex systems defy simplistic predictive models. Especially in a cosmopolitan world of frequent international interactions, the idea that governing bodies or academics can design effective rules without substantial risks of failure is flatly implausible. Diversity enables (though of course it does not guarantee) error detection and correction, as individuals can observe how different sets of rules facilitate different types of social interaction. The most reliable way of learning about better rules is to try out different types of rules. Elinor Ostrom puts forward a strong case for experimentation:

> Instead of assuming that designing effective governance systems is a relatively simple analytical task that can be undertaken by a team of objective analysts sitting in the national capitol, or at an international headquarters, it is important that we understand policy design to require experimentation with combinations of large numbers of component parts.[27]

The other key benefit of institutional diversity is the fact of local diversity. Different areas exhibit different ecological, geographical, and cultural traits. Similarly, different domains of governance — property law, security, environmental protection, and so on — also exhibit great heterogeneity in their scope for conflict and cooperation. If we mentally "multiply" domains of governance by the time- and place-specific characteristics of different geographical areas, we glimpse the manifold and daunting variation in the problems confronting institutional design. Even absent the possibility of error, well-designed rules would exhibit substantial variation. Elinor Ostrom again draws the relevant conclusion:

> The sheer variety of cultural and biological adaptations to diverse ecological conditions is so great that I am willing to make the following assertion: any single, comprehensive set of formal laws intended to govern a large expanse of territory containing diverse ecological niches is bound to fail in many of the areas where it is applied.[28]

[25] Aligicia, *Institutional Diversity*, chap. 2.

[26] For an excellent discussion of these twin sources of failure, see Mark Pennington, *Robust Political Economy* (Cheltenham: Edward Elgar, 2011).

[27] In Aligicia and Boettke, 155–56.

[28] Ibid., 153.

Polycentricity without diversity lacks evolvability. Diversity without polycentricity lacks robustness. Consider two — admittedly unrealistic — limit cases. If all jurisdictions were perfect substitutes, then they would exhibit redundancy and thus robustness. Such a regime would exhibit the qualities of standard economic models of static competition, and could be imagined as a world of cookie cutter municipalities or city-states competing for citizens who are free to move from one to another. Now consider the alternative case in which all jurisdictions are *sui generis* and total, exhibiting a wide range of diversity. They are interdependent, perhaps relying on one another's exports. But movement between jurisdictions — whether for political or geographic reasons — is impossible. The system is perfectly balkanized. Such a regime would be highly evolvable, with different jurisdictions responding variously to any given change in circumstances. But it would not be robust. Any given jurisdiction, while capable of developing new capacities, will make some governance errors. If other jurisdictions are unable to compensate for these errors, the regime will gradually lose functionality as errors compound.

Polycentricity and diversity unleash the forces of dynamic competition, forces that are just as important to the provision of governance as for any other services. To take advantage of that competition, individuals require robust exit rights from jurisdictions. Access to alternative governance arrangements offers few benefits if jurisdictions do not have to compete with one another. The right of exit is a critical ingredient for robust and evolvable governance regimes, and that right can come in diverse forms. Migration or "foot voting" is the most intuitive example. This implication of degeneracy fits well with most brands of cosmopolitanism, which maintain a strong commitment to freedom of movement. Indeed, I argue in Section VI below that rights to migrate are the most important contemporary policy implication of degeneracy.

But many forms of exit allow individuals to geographically stay put. Jurisdictions can vary not only territorially, but also in the bundle of governance services they provide, creating more scope for them to overlap. A jurisdiction governing water usage need not also provide police services, and they may both operate far more effectively if they have different boundaries. Effective institutional design requires not only determining which governance services are needed, but also evaluating the bundling of governance services.[29]

Chandran Kukathas makes the important point that all associations are partial associations.[30] Governance providers are no different. If jurisdictions

[29] See Bruno S. Frey, "Functional, Overlapping, Competing Jurisdictions: Redrawing the Geographic Borders of Administration," *European Journal of Law Reform* 5, nos. 3–4 (2005): 543–55 for an important proposal along these lines, though not one aimed at international governance.

[30] Chandran Kukathas, *The Liberal Archipelago* (Oxford: Oxford University Press, 2003), 169–71.

https://doi.org/10.1017/S0265052515000084 Published online by Cambridge University Press

https://doi.org/10.1017/S0265052515000084 Published online by Cambridge University Press

are to be beneficent and effective, their judicial and spatial boundaries should be sensitive to a host of factors: biological, geographical, technological, and cultural factors, and potential relationships to other jurisdictions. Individuals demand governance services in order to better pursue their ends or to secure or expand their rights. But because both the form and substance of projects and rights will vary even for a single individual, governance services — in order to fulfill their manifold functions — can and should take a wide variety of forms.

Degeneracy as a design principle thus tends to commend political fragmentation while casting centralized state authority in a more critical light.[31] Vincent Ostrom consistently contrasts Hobbesian sovereigns with polycentric systems of fragmented authority that are genuinely rule-governed.[32] Taleb likewise notes the tensions between nation-states as a system of governance and the goals of robustness and evolvability, arguing that nation-states are a fragile social system. Centralized power tends to concentrate rather than distribute the negative consequences of governance errors and unexpected shocks.[33] As a result, although conflicts may be less frequent than with smaller units of governance, when conflagrations do occur they destabilize large areas and can lead to devastating consequences.

One weakness of centralized or final authority is that it tends to correlate and thus compound governance errors. Recall Elinor Ostrom's warning noted above: in complex social environments, errors of institutional design are inevitable. Both coping with and correcting such errors are vastly more likely in a polycentric system of diverse arrangements. A key insight of complex systems theory is that the *correlated errors* that affect every element of the system do the most harm. To the extent that errors are correlated, other elements of the system are not taking compensatory action. But even worse, such errors are likely to compound over time since they are not contrasted with alternatives. If different jurisdictions make different errors, it increases the probability that errors are detected and corrected. A lack of diversity and thus experimentation stifles social learning in precisely the social sphere in which it is most important to get the answers right: the rules by which we relate to one another. All of this is made yet worse by the fact that nation-states govern very large areas of diverse geographical and cultural characteristics, and modify rules relating to all sorts of social domains.

This essay advances no claim that these considerations are sufficient to call for a radical revision to existing forms of government. As noted above,

[31] Sovereignty is a storied and malleable concept in the hands of different authors, so of course only some conceptions of sovereignty will be flatly inconsistent with degenerate governance.

[32] Vincent Ostrom, *Compound Republic*.

[33] Taleb, *Antifragile*, chap 5.

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degeneracy is not the sole sound principle of institutional design. Other considerations, such as the ability of institutions to serve as focal points of coordination, also bear on judging the appropriate level of centralization. Furthermore, centralization may have some corresponding advantages, such as the incentive of elites to quell much internal violence.[34] Finally, historically existing nation-states are not idealized models of centralization. We must not confuse the abstract model of a sovereign state with institutional reality. Real world political regimes are already polycentric and thus degenerate to varying degrees. Anti-fragility, recall, is a matter of kind and of degree. Nonetheless, the next section argues that degeneracy can be particularly relevant for analyzing institutions of international governance.

The most obvious objection to placing a high value on polycentricity and diversity is that differing jurisdictions may come into conflict with one another. Other thinkers sympathetic to polycentric governance in international affairs have offered a number of convincing answers to this objection. Carmen Pavel offers a strong defense of the power of institutional pluralism to offer effective international governance.[35] Among several key points she makes is that any nondespotic governance arrangement relies on norms that govern interaction that lack a final enforcer. Insisting on a final authority confronts an infinite regress problem: How is the authority to be held to account? The relevant question is not whether there is an ultimate guarantee against conflict, but which sort of governance regime makes conflict least likely. Allen Buchanan offers an important point in this regard, noting that independent but related governing bodies can offer reciprocal legitimation: the Supreme Court of the United States enhances the legitimacy of the presidency by checking its abuses, and vice versa. This legitimation serves an important sociological function: it lowers the cost to authorities of securing compliance with their rulings.[36] I would add that, in so doing, it gives authorities an incentive to generate and adhere to norms of peaceful conflict resolution with other (potentially legitimating) jurisdictions.

Moreover, a sanguine analysis of human affairs recognizes that some amount of conflict between jurisdictions is inevitable. Given the inevitability of some conflict, it bears asking how different governance regimes respond to and recover from such conflict. Politically fragmented orders have several advantages in this regard. First, exit options for escaping from conflicts are greater.[37] And second, since rulers need subjects to prevail in such conflicts, they are more likely to offer increased economic

[34] See Steven Pinker, *The Better Angels of Our Nature* (London: Penguin, 2011) and Douglass North et al, *Violence and Social Order* (Cambridge: Cambridge University Press, 2009).

[35] Pavel, *Divided Sovereignty*, 167–68.

[36] Allen Buchanan, *The Heart of Human Rights*, 217–18.

[37] Erich Weede, "The Impact of Interstate Conflict on Revolutionary Change and Individual Freedom," *Kyklos* 46, no. 4 (1993): 473–95.

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and political liberties to subjects. Several scholars have argued that Europe's preindustrial political fragmentation made it more resilient to negative shocks than were other societies and paved the way for its modern success.[38]

Moving beyond general objections to this approach, several more-substantive objections may be raised to the specific application of these ideas to the realm of international governance. One objection is that, insofar as the above analysis is true, it is irrelevant because the international order is already largely characterized by degeneracy between jurisdictions. A second is that, even if degeneracy is important, the view of governance outlined thus far is incompatible with cosmopolitan ideals. How is degeneracy not a recipe for isolationism or rampant injustice? A third objection is that attempts to substantially implement degenerate institutions are infeasible. The remainder of this essay addresses each of these objections in turn.

IV. Do We Already Have Degeneracy?

One potential criticism of degenerate cosmopolitanism is that it is irrelevant. We already live in a world with polycentric and diverse jurisdictions governing international affairs. Allen Buchanan, for instance, defends a great deal of contemporary practice in international law precisely on the grounds that it arises from multiple sources of authority.[39] One might also point to the very real progress that has characterized the past few decades, in which liberalization and globalization have lifted billions out of poverty. These gains should not be undersold.

But current international governance arrangements nonetheless remain fragile in important respects. Recall Taleb's point that the fragility of a system cannot be ascertained simply by examining its past performance. Decades of low economic volatility preceded the "Great Recession" of 2007, and Europe had been at peace for many years prior to World War I. Detecting fragilities requires examining how the jurisdictions that provide international governance are constituted.

Organizations typically associated with international governance — the United Nations, World Trade Organization (WTO), International Monetary Fund, and so on — conform to Vincent Ostrom's definition of a confederation.[40] Their constituent members are nation-states. Citizens of those states who might appeal to those organizations do so *through the medium* of their respective national regimes. This is where the concept

[38] Weede, ibid., See also Chiu Yu Ko, Mark Koyoma, and Tuan-Hwee Sng, "Unified China and Divided Europe," SSRN working paper (May 2014), URL = <http://ssrn.com/abstract=2382346>

[39] Allen Buchanan, *The Heart of Human Rights*, chap. 5.

[40] Vincent Ostrom, *The Meaning of American Federalism*, 8.

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of degeneracy becomes especially helpful: it makes clear that organizations like the UN fail to constitute concurrent authorities. To the extent that individuals and organizations appeal to them through their national governments, nation-states act as a funnel or choke point through which international governance arrangements are made. So while states do not exercise monopolistic control over every aspect of citizens' lives, they come closest to a pure monopoly when it comes to questions international governance. This introduces a great deal of fragility into international governance.

Confederation, to the extent that it creates an organization with any power at all, tends to exacerbate the problems of centralization. First, it further centralizes and correlates governance errors. Central organizations place pressure on member states to adopt more uniform standards and thus eliminate institutional diversity. Second, confederation offers only blunt instruments for the enforcement of its rulings. Since members of a confederation are collectives rather than individuals, sanctions — economic, political, or military — cannot help but cause indiscriminate harm.[41] Consider the example of the Agreement on Trade-Related Aspects of Intellectual Property Rights (or TRIPS), adopted by the WTO in 1994.

Prior to TRIPS, international law typically held that local intellectual property (IP) law be extended to foreigners doing business in a country. This arrangement facilitated trade while allowing for wide variation in IP law from one country to another. In fact, IP was rarely seen as a trade issue until a concerted push by various lobbies in the United States in the 1980s. The International Intellectual Property Association and related groups eventually turned the Office of the U.S. Trade Representative into an IP enforcement agency, and the United States began wielding trade policy as a means of convincing other nations to enforce the IP claims of U.S. firms. Following this success, a smaller portion of the same group — the Intellectual Property Committee, comprised of just twelve firms — essentially wrote the TRIPS rules.[42] These rules make trade sanctions a generally acceptable response against countries that fail to enforce a certain set of IP laws, eliminating a great deal of institutional diversity. This is exactly the sort of bundling of governance functions that a degenerate approach is suspicious of, and reflects the dual problems of confederation noted above.

As a result of its origins, TRIPS reflects the ideas and interests shaping U.S. IP law in the years leading to its adoption. Not coincidentally, this period saw a cluster of governance errors regarding intellectual property. Not only was IP made into a trade issue, much legislation during this period was

[41] Ibid., 44.

[42] Susan Sells, *Private Power, Public Law* (Cambridge: Cambridge University Press, 2003). Peter Drahos, "Global Law Reform and Rent-Seeking: The Case of Intellectual Property," *Australian Journal of Corporate Law* 7, no. 1 (1996): 1–17.

https://doi.org/10.1017/S0265052515000084 Published online by Cambridge University Press

motivated by an economically illiterate fixation on "competitiveness" that foresaw the "deindustrialization" of the U.S. economy as a looming threat.[43] Simultaneously, the strengthening of both patent law and its enforcement unleashed a tidal wave of rent seeking by nonproductive IP holders.[44] In the United States, patent acquisitions are often used to initiate or ward off legal challenges rather than to alter production processes.[45]

With TRIPS, the WTO centralized these governance errors on a global scale, and promotes their enforcement with the indiscriminate bludgeon of trade sanctions. The results are well known and should be unsurprising. Despite the rapid expansion of IP law and enforcement into less developed countries over the past twenty years, there is no evidence of increased research into the diseases that tend to afflict these countries (including after the TRIPS reforms in the early 2000s).[46] This outcome is often lamented, and it is easy to recognize that good IP policies for poor countries are probably not the same as those for wealthier countries.

But there is a deeper point here: no one has any solid evidence about what a beneficial IP regime looks like under *any* circumstances, much less how it should vary across the many domains it might govern. There is no evidence that existing IP law increases innovation; studies that claim to support IP only show that it increases the number of patents or copyrights.[47] Proponents of IP and TRIPS rightly recognize that the incentives for innovation matter. Indeed, it would be odd if there were no governance arrangements that could increase innovation beyond that of a pure intellectual commons. But those arrangements will not be discovered as long as institutional diversity is stifled by the current international trade regime. This is especially true when it comes to fields in which technological conditions are rapidly changing. Any IP law is shooting at a moving target, while TRIPS insists that everyone aim along the same trajectory. The current system has proven woefully vulnerable to political capture, and as a result represents a potentially disastrous centralization of error.

Confederation engenders fragility by promoting the suppression of institutional diversity while failing to offer individuals an alternative avenue for seeking governance services. Even if states serve useful functions, it does not follow that they should be either the alpha or the omega of international governance. Increasing diversity in international governance, by contrast, would require creating wide scope for *circumventing* national governments rather than merely adding layers to them.

[43] Sells, *Private Power, Public Law*, 80.

[44] Eli Dourado and Alex Tabarrok, "Public Choice Perspectives on Intellectual Property," *Public Choice*, forthcoming.

[45] Michele Boldrin and David Levine, "The Case Against Patents," *Journal of Economic Perspectives* 27, no. 1 (2013): 3–22.

[46] Margaret Kyle and Anita McGahan, "Investments in Pharmaceuticals Before and After TRIPS," *Review of Economics and Statistics* 94, no. 4 (2012): 1157–1172.

[47] Boldrin and Levine, "The Case Against Patents."

A maximally degenerate system of governance would be open to both the formation of new governance associations and the dissolution of existing ones, as well as allowing free movement between them. The degenerate ideal, then, is quite far from a modified Westphalian world with smaller states. This raises a host of hoary questions about secession and dissolution that are far beyond the scope of this essay; the framework presented here is too thin to settle the difficult questions of territorial claims and obligations generated by existing jurisdictional arrangements.[48] As noted above, my purpose is not to claim that degeneracy trumps all other principles of institutional design. But it does merit weighty consideration, and there are intermediate forms of degeneracy that are less radical. As noted above, political fragmentation need not take the form of breaking up existing nations. Indeed, the degenerate approach denies the idea that smaller units of governance are always better. What matters is that jurisdictions are overlapping and competitive.

Degeneracy requires that individuals have alternative pathways open to them for seeking governance services. Degenerate cosmopolitanism does not reject the need for rules to govern interactions between members of different societies, but rather rejects that such interactions should always occur in the shadow of the nation-state. Vincent Ostrom alludes to this idea in several brief passages applying polycentricity to problems of international governance,[49] arguing that a self-governing international order requires "the opening of societies to diverse interpersonal and organizational relationships."[50] Ostrom imagines a world in which individuals and communities can enter into governance arrangements with one another *unmediated* by existing nation-states. It would be more accurate to refer to degenerate cosmopolitanism as a theory of *transnational* than international governance, a world of covenanting without borders.

This is all rather abstract, one might object. How might a degenerate system of international IP law look? Part of the point is that we cannot know what it would look like through armchair theorizing, but we can identify margins on which a regime could be more or less degenerate. Imagine a world of competing IP standards. Some apply more broadly, some to only specific types of goods like pharmaceuticals. Some standards are bundled with trade rules, others with public health, and some with no other laws at all. They offer varying degrees of protection and enforcement. And rather than whole nations falling under these rules, their members might be individual firms, trade associations, industrial parks, and distribution networks. On the margin, each of the above

[48] Kukathas, *The Liberal Archipelago*, 205.
[49] Vincent Ostrom, *The Meaning of American Federalism*, 240–43.
[50] Ibid., 261.

https://doi.org/10.1017/S0265052515000084 Published online by Cambridge University Press

characteristics increases the ability of individuals to seek alternative governance arrangements. This sort of system would allow for a great deal of experimentation with IP law, with competition between competing standards helping to illuminate and weed out less effective forms of governance.

This vision may seem unrealistic, but it is exactly the sort of process that created the *lex mercatoria* that governed international trade for centuries.[51] It is precisely because they had to solve the problems of competing local laws, competing standards, and the opportunism that plagues all systems of governance that merchants were able to develop effective rules — but not centrally imposed ones — that facilitated long distance exchange. Even today, private arbitration dominates the governance of international trade.[52] Other governance problems involving common pool resources or public goods may be more difficult, but — as I argue below — the benefits of degeneracy extend to those problems as well.

Finally, it is worth noting that, even to the extent that degeneracy obtains in the global order, it is still a useful concept for evaluating proposals for new forms of governance. Few cosmopolitans today advocate for a world-state, but the framework elucidated here provides a compelling account of why such a move would be extremely dangerous by correlating governance errors and inducing fragility. Centralized states are not the only source of fragility, however. A monopoly over some governance function eliminates degeneracy in that policy domain. This is the problem with proposals for worldwide governance bodies that fall short of a world state, such as a body that would govern the environment or trade. While such bodies would not induce fragility on the level that a world state would, they would nonetheless centralize and compound governance errors within their particular domain. An institutional regime will be evolvable and adaptable over a range of various domains according to the level of degeneracy between jurisdictions within each domain. Similarly, degenerate cosmopolitanism offers an important critique of calls to synchronize laws across countries. Even without a central body initiating such changes, attempts to homogenize rules can stifle institutional diversity. The drive to eliminate bad laws should not be confused with the attempt eliminate differences between jurisdictions.

V. Can Degeneracy Promote Cosmopolitan Ideals?

Degeneracy resonates well with the original sense of cosmopolitanism from the Cynic Diogenes, for whom the word "cosmopolitan" was primarily

[51] Bruce Benson, "The Spontaneous Evolution of Commercial Law," *Southern Economic Journal* 55, no. 3 (1989): 644–61.

[52] Peter Leeson, "How Important is State Enforcement for Trade?" *American Law and Economics Review* 10, no. 1 (2008): 61–89.

https://doi.org/10.1017/S0265052515000084 Published online by Cambridge University Press

a negation of any special obligation to any particular polis.[53] Individuals and communities should enter and exit from a variety of governance arrangements — including those that reach across traditional borders — according to their own values and interests. Polycentricity fits comfortably with the idea of not owing one's allegiance solely to any one government.

Some cosmopolitan theories should thus find degeneracy intrinsically appealing. The ideal of degenerate cosmopolitanism most closely maps onto Chandran Kukathas's *Liberal Archipelago*.[54] Kukathas argues that the proper metaphor for a liberal society is an archipelago of smaller societies. He recognizes the importance of the independent constitution of associations, and argues that his vision breaks down the distinction between domestic and international society.[55] For Vincent Ostrom, polycentricity is coterminous with the concepts of the rule of law and self-government: if, in the last resort, there is a final authority issuing, interpreting, and enforcing rules, then governance becomes an exercise in mere command.[56] He argues that polycentricity is the true "meaning of democracy," without which governance is left to the mere accident of force and history.[57] For individuals attracted to these and similar ways of thinking, degenerate cosmopolitanism commends itself.

To thinkers who do not share similar moral or political ideals, degenerate cosmopolitanism may seem like a betrayal of the concept of cosmopolitanism since it advocates strong institutional diversity that can conflict with moral universalism. Cosmopolitan ideals are often rooted in a liberal conception of human rights, which aim to protect the welfare and liberty of individuals.[58] But moral norms such as human rights are usually formulated in an abstract fashion, and can be realized in different ways. There is no *prima facia* reason to believe that universal adherence to moral norms is incompatible with institutional diversity. Degeneracy enables experimentation with different institutional means of realizing deeper normative aims, incentivizes jurisdictions to realize those aims, and provides an exit option for those who live in unacceptably bad regimes.

Degeneracy, recall, is valuable in complex systems precisely because it both avoids fragility on the downside and enables evolutionary learning on the upside. In what follows I argue that degenerate jurisdictions promote particular forms of robustness and evolvability: they tend to protect

[53] Pauline Kleingeld and Eric Brown, "Cosmopolitanism," *The Stanford Encyclopedia of Philosophy* (Fall 2013 Edition), Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/fall2013/entries/cosmopolitanism/>.

[54] Kukathas, *The Liberal Archipelago*.

[55] Ibid., 30–35.

[56] Vincent Ostrom, *The Meaning of American Federalism* (San Francisco: Institute for Contemporary Studies, 1999), chap. 9.

[57] Vincent Ostrom, *The Meaning of Democracy and the Vulnerability of Democracies* (Ann Arbor, MI: University of Michigan Press, 1997).

[58] See, e.g., Allen Buchanan, *The Heart of Human Rights*, and Thomas Pogge, *World Poverty and Human Rights*.

https://doi.org/10.1017/S0265052515000084 Published online by Cambridge University Press

https://doi.org/10.1017/S0265052515000084 Published online by Cambridge University Press

(on the downside) liberty and welfare in bad conditions and tend to promote (on the upside) increases in liberty and welfare.

By "liberty" I simply mean the sorts of procedural rights that liberals tend to value, such as property rights, freedom to trade, political and civil liberties, equal protection under the law, and so on. "Welfare" I interpret in the broadest possible sense, but focus on economic well-being and efficiency, simply because economic well-being is robustly correlated with other measures of welfare. I avoid making any claims at all regarding the moral foundations, metaethical status, or proper weighting of liberty and welfare. I simply assume that, in general, more of each is preferred to less.

Moreover, I am out to establish only comparative and functional relationships. Many jurisdictions will get it wrong. But an errorless system is not on the table. Polycentric and diverse institutional arrangements *generally* do a better job promoting liberty and welfare than do monopolized arrangements. Degenerate jurisdictions have historically been fertile soil for the advance of liberty and welfare, exhibiting evolvability. And they do a better job protecting individuals against gross violations of liberty and welfare, exhibiting robustness.

A. Degeneracy and liberty

Degeneracy as a design principle commends strong exit rights between politically fragmented jurisdictions as a mechanism for checking violations of liberty. Exit rights serve two important functions in this regard. First, they allow some individuals to escape from rights violations directly. Such exits can be very costly. In an ideal world, none would have to uproot (or leave) their families and lives to secure basic liberties. But in a world like our own it is better that they have the option, since even costly migration is often better than the alternative. Second, the possibility of flight often places pressure upon governing authorities to avoid violating liberty in the first place, or to stop as individuals exit the jurisdiction. Competitive pressure promotes anti-fragile security of liberties by both checking the excesses of illiberal governance and rewarding jurisdictions that expand the liberties they offer to those who live under them.

Barry Weingast's classic article popularizing the concept of "market-preserving federalism" makes several salient points.[59] Interjurisdictional competition proved important in the earliest days of the industrial revolution as nascent producers sought to escape laws designed to protect existing industries from competition. Exit makes restriction of competition and trade more costly for local jurisdictions. Political fragmentation also allows jurisdictions to serve as counterweights to one another.

[59] Barry Weingast, "The Economic Role of Political Institutions: Market-Preserving Federalism and Economic Development," *Journal of Law, Economics, and Organization* 11, no. 1 (1995): 1–31.

For example, Chinese reformers began the process of liberalization through fragmenting political authority. Local governments have a great deal of autonomy in setting economic policy. In the late 1980s and early 1990s, there was a concerted push by Communist hardliners to roll back the reforms, but the toothpaste was already out of the bottle. On account of the preceding fragmentation, local authorities were no longer as beholden to central government ministries, and were able to play an important role in blocking the attempted counter-reformation. Even in otherwise illiberal conditions, then, polycentricity can help bolster the robustness of liberty.

Migration between jurisdictions is also a constraint on the abuse of civil liberties, for the same reason: the easier it is for individuals to flee, the less they need to. Robert Fleck and Andrew Hanssen examine the "neighborhood constraints" on rulers.[60] Countries with poor protection of individual liberty tend to be clustered geographically. If a neighboring country offers better protection for individual rights, a ruler can only push his own citizens so far before they are willing to bear the costs of moving — including, potentially, the costs of evading border controls. Consequently, more robust protection of civil and political liberties in neighboring countries and lower costs of movement strongly and positively correlate with domestic liberties.

This is also true of the expansion of rights to groups that have not enjoyed them before. Jayme Lemke argues that competition between state governments led to the expansion of women's property rights in nineteenth century United States.[61] Up to that time, common law held that a woman could not own property, retain wages, sign contracts, or stand in court. But local elites in frontier territories benefited if they attracted a large enough population to apply for statehood. Since initial settlers were usually men, this required attracting women, often with offers of more equitable legal status. There was fierce competition for migrants, businesses, and governments actively advertising more liberal divorce laws, property laws, and even enfranchisement. As can be expected, the process was messy, unfolding unevenly and at different speeds in different jurisdictions. But by 1920, forty-three out of forty-eight states recognized married women's property rights. This rapid legal evolution took place not primarily due to enlightened ideas about equality for the sexes, but rather because of the pressures of exit and jurisdictional competition.

In fact, many scholars have argued that the core rights associated with liberal institutions emerged in a primordial way from the political

[60] Robert K. Fleck and F. Andrew Hanssen, "When Voice Fails: Potential Exit as a Constraint on Government Quality," *International Review of Law and Economics* 35 (2013): 26–41.

[61] Jayme Lemke, "Polycentrism, Self-Governance, and the Case of Married Women's Rights Reform," *The Annual Proceedings of the Wealth and Well-Being of Nations* 4 (2012): 69–88.

https://doi.org/10.1017/S0265052515000084 Published online by Cambridge University Press

https://doi.org/10.1017/S0265052515000084 Published online by Cambridge University Press

fragmentation of Europe in the Middle Ages and early modern period.[62] The absence of a strong imperial power on the European continent meant that rulers had to offer progressively more secure rights to their subjects. The conflicts between ecclesiastical and secular jurisdictions added further scope for experimentation and exit, while the patchwork territorial arrangements of feudalism and the rise of semi-autonomous cities kept political borders fluid. Political fragmentation went hand in hand with many broadly shared cultural norms, however, enabling movement between jurisdictions. The result was that European rulers faced intense competitive pressure in retaining subjects. Far from being an exceptional case, Lemke's account of the revolution in women's rights fits into this broader narrative about how polycentricity gives birth to new liberties. Again, this process was messy, uneven, and often painful. But in response to these stressors and conflicts, liberal rights, rules, and ideas emerged. In a historically momentous sense, polycentric Europe was an anti-fragile governance regime for liberty owing to the degeneracy of its jurisdictions. Insofar as liberalism grew up in the soil of polycentric and diverse governance, cosmopolitan liberals have good reason to endorse degeneracy as a principle for evaluating institutional arrangements and reforms.

B. Degeneracy and welfare

Cosmopolitan liberals are also generally united in wanting to expand prosperity to all corners of the globe. But concretely improving welfare confronts a practical problem of institutional design. Empirically, three governance functions stand out as being extremely important in realizing this aim[63]:

1. Securing liberty rights — especially economic freedom — that create scope for market competition and cooperation.
2. Enabling forms of collective action that enhance welfare.
3. Constraining the ability of elites to extract wealth from broader populations.

[62] Erich Weede, "Ideas, Institutions, and Political Culture in Western Development," *Journal of Theoretical Politics* 2, no. 4 (1990): 369–89, provides an excellent summary of this line of argument. Harold Berman's *Law and Revolution* (Cambridge, MA: Harvard University Press, 1983) offers the classic exposition of how the conflict between secular and religious courts played a significant role in the formation of the Western legal tradition.

[63] The obvious omission from the list of functions is a capacity for wide-scale redistribution. Many cosmopolitans place substantial weight on concerns about distributive justice, even on a global scale. They would be right to worry that robust exit rights might empower wealthy individuals to flee to less egalitarian jurisdictions, but degeneracy is not wholly at odds with all concerns for distributive justice. By enabling exit, polycentricity insulates individuals from the "fat tail" of truly awful governance outcomes. Degenerate cosmopolitanism is thus compatible with a sufficientarian understanding of the demands of distributive justice.

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Empirically, securing the economic liberties necessary for the market to flourish (property rights freedom of contract, and so on) is by far the most important contribution of governance to welfare. As explained above, degeneracy between jurisdictions tends to promote economic freedom. But we can go further: healthy markets are themselves degenerate governance systems.[64] Individuals can experiment with new sets of rules in the forms of contracts and firms. In Kukathas's terms, markets are archipelagos. When exit rights are robust — that is, when there is ample freedom of entry for potential competitors, and monopolies do not serve as a source of systemic risk — markets are anti-fragile.[65] They both produce tremendous innovation (evolvability) and mitigate the effects of negative shocks by allowing rapid adaptation to changing circumstances (robustness). Economic freedom is thus associated with higher levels of wealth and lower levels of economic volatility.[66]

Table 1 shows the relationship between economic freedom and GDP per capita in quartiles. Table 2 shows the relationship between economic freedom and GDP per capita for the bottom 10 percent of income earners for countries in each quartile, evincing both the evolvability and robustness of markets as a form of governance.[67] Relative to the effects of economic freedom, other influences on welfare are a second order consideration at most.

The ability of market institutions to generate such astounding wealth is itself a strong argument in favor of degenerate governance. But this is not to say that market institutions are always the best way to provide for welfare. Some services require the solution of collective action problems that individuals acting in market institutions are not best poised to solve. There is wide and vociferous disagreement about how lengthy a list of such services would be. But irrespective of how expansive or restrictive such a list might be, the work of Vincent and Elinor Ostrom provides ample evidence that even traditionally public services are usually better provided by polycentric and diverse forms of governance.

A key episode in the development of the Bloomington School is the metropolitan reform debate.[68] Throughout the 1950s and 1960s, the dominant

[64] See Oliver Williamson, "The New Institutional Economics: Taking Stock, Looking Ahead," *Journal of Economic Literature* 38, no. 3 (2000): 595–613.

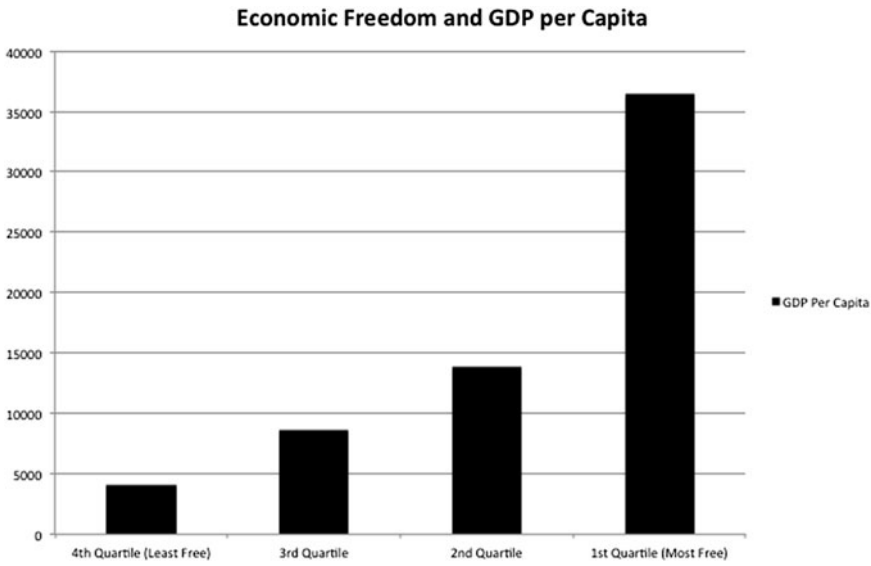
[65] Taleb, *Antifragile*, chap. 4.

[66] John W. Dawson, "Macroeconomic Volatility and Economic Freedom — A Preliminary Analysis," *Economic Freedom of the World 2010 Annual Report* (Fraser Institute, 2010).

[67] Economic freedom is measured by the economic freedom index, found in James Gwartney, Robert Lawson, and Joshua Hall, *Economic Freedom of the World: 2013 Annual Report* (Fraser Institute: 2013). Other data is taken or calculated from the *World Bank Development Indicators*, found at data.worldbank.gov. All GDP figures are from 2011 and adjusted for purchasing power parity; income share of the bottom 10 percent is the most recent available figure.

[68] The classic essays from the Bloomington side of this debate are gathered in McGinnis, *Polycentricity and Local Public Economies*.

TABLE 1. *Economic Freedom*



school of thought regarding urban public administration insisted on the benefits of centralization. The problems confronting cities, reformers argued, were not adequately addressed by a multitude of competing and overlapping jurisdictions and special governmental bodies. Centralization would improve public services provision by eliminating redundant functions, lowering the information costs borne by residents by consolidating points of contact with local officials, regularizing divergent standards and practices, ensuring equity between neighborhoods, leveraging expert knowledge, and avoiding conflicts between distinct authorities.[69]

The Bloomington School challenged this approach, generating both a theoretical framework and a wealth of case studies showing that — under many circumstances and for many public services — the "crazy quilt pattern"[70] of diverse and overlapping jurisdictions provides better services at lower cost and with greater responsiveness. The theoretical framework they developed, emphasizing the polycentric formation of governance institutions, has already been discussed in Section III above. It has been applied far beyond the scope of urban public administration, successfully diagnosing the challenges and opportunities in

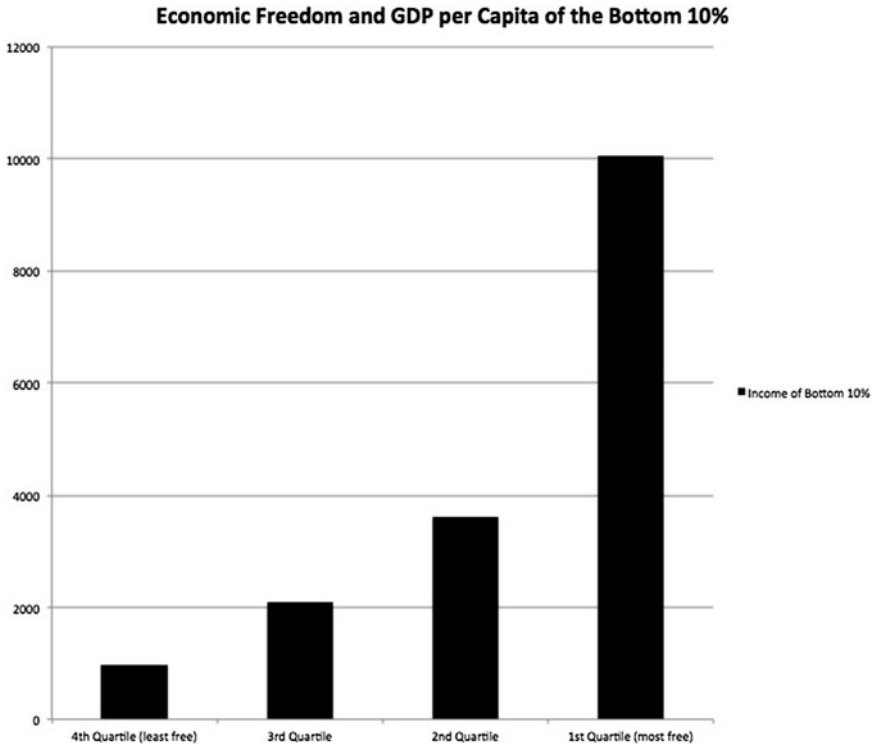
[69] See the essays collected in McGinnis, *Polycentricity and Local Public Economies*, especially Elinor Ostrom, "Metropolitan Reform: Propositions Derived from Two Traditions."

[70] Ostrom, Tiebout, and Warren, "The Organization of Government in Metropolitan Areas," 831.

https://doi.org/10.1017/S0265052515000084 Published online by Cambridge University Press

https://doi.org/10.1017/S0265052515000084 Published online by Cambridge University Press

TABLE 2. *Economic Freedom of the Bottom 10 percent*



various forms of collective action including environmental stewardship and foreign aid.[71]

The final governance function that has a tremendous impact on welfare is the ability of institutions to constrain state predation.[72] When pondering questions of international governance, it is a fatal error to assume that all or even most states are benign and function to protect the interests of their citizens.[73] The greatest moral horrors of history have been carried out by predatory states.[74]

Constraints on state predation are in some ways the other half of the ability of institutions to protect market exchange. For reasons noted in the previous section, polycentric governance can provide a substantial check against the grasping hand of the state. In addition to the logic of

[71] Elinor Ostrom, *Governing the Commons* (Cambridge: Cambridge University Press 1990), and Clark C. Gibson, et al., *The Samaritan's Dilemma* (Oxford: Oxford University Press, 2005).

[72] Daron Acemoglu and James Robinson, *Why Nations Fail* (New York: Random House, 2012).

[73] See Peter Leeson, *Anarchy Unbound* (Cambridge: Cambridge University Press, 2014).

[74] R. J. Rummel, *Death by Government* (New Brunswick, NJ: Transaction Publishers, 1994).

market preserving federalism, this finding fits with Mancur Olson's logic of collective action: the larger a group, the harder it is to collectively organize.[75] Centralization enables more state predation by eliminating checks and balances, incentivizes predation by expanding the number of prey, and diminishes the incentives to resist predation. Conversely, polycentric organization makes predation more difficult by diffusing authority, and increases the possibility of exit when predation becomes severe.

VI. Conclusion: Is Implementing Degeneracy Feasible?

Degenerate cosmopolitanism takes seriously the hard problems of aligning incentives and coping with human ignorance. Degeneracy commends a system of polycentric and diverse governance arrangements, held together by robust exit rights to promote competition and experimentation. Such systems are less vulnerable to negative shocks and capable of generating new and better forms of governance than more centralized systems, and there is ample evidence that degenerate governance promotes both more liberty and greater welfare.

But all of these arguments are for naught if implementing degenerate governance is implausible. I consider two versions of this objection here. The first is that degenerate cosmopolitanism assumes an unrealistic moral psychology. A polycentric order requires that rules and norms guide interactions between independent centers of authority without particular jurisdictions exercising dominance. Inattentiveness to these rules tends to result in either balkanization or centralization, both of which sacrifice the benefits of degeneracy.

Maintaining such rules, Vincent Ostrom properly notes, requires citizens who are willing to take up the burdens of self-governance and practice the Tocquevillian art of association.[76] Institutional craftsmanship is necessary in forging particular rules and in negotiating relationships between jurisdictions. This may seem like a heavy burden, but the Bloomington School did not begin with idealized citizens. Rather, the analysis of polycentric and diverse institutions began with the empirical, comparative investigation of real world governance systems. Such practices have existed all throughout history in all corners of the world.

The relevant challenge is not whether this model can function, but whether it can function across borders and whether it will be allowed to grow. Degenerate cosmopolitanism views universal citizenship not as an abstract moral ideal but as a willingness to search out better rules on which to ground social cooperation among diverse individuals and groups. Calling for degeneracy does not involve abstaining from judgments of

[75] Mancur Olson, *The Rise and Decline of Nations* (New Haven, CT: Yale University Press, 1992).

[76] Vincent Ostrom, *The Meaning of Democracy and the Vulnerability of Democracies*, chap. 11.

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institutions, but views improving them as an ongoing process of cooperative artisanship that can only be effected from the inside out. We should be sanguine that the threat of such conflict is always present; polycentric orders are different not in that the potential for conflict exists but in that it is diffuse rather than concentrated. The alternative to polycentric governance, Ostrom makes clear, is not enlightened despotism but accident and force, driven by either populist or elitist whims.

The second, more salient objection to the foregoing analysis is that degeneracy is itself the outcome of bewilderingly complex interactions among a multitude of governance institutions and organizations. It is not a blueprint for reform. Degeneracy may be a blessing when it happens to coalesce, but itself provides no guidance since it is essentially an historical accident. This is especially true to the extent that degenerate cosmopolitanism itself eschews top-down reforms.

This argument is compelling, but it goes too far. Anti-fragility as a systemic property cannot be designed, but degeneracy between jurisdictions *can* be intentionally cultivated. There are policies and reforms that individual jurisdictions can adopt that can increase the degeneracy of international governance arrangements even if other jurisdictions do not adopt them.

The general policy stance that a degenerate cosmopolitan can advocate is one of "opening doors": seeking marginal additions to exit rights from one jurisdiction to another. Degeneracy and polycentricity are matters of degree. More robust exit rights allow for more experiments in governing and more competition between jurisdictions. Exit rights do not have to come all at once to produce good consequences. Increased jurisdictional competition puts pressure on existing jurisdictions that can lead to reform; but even if it does not, at least those who are allowed to exit are likely made better off. *Marginal* additions of exit rights allow for gradual reform and experimentation without revolutionary changes in existing governance arrangements.

Concretely, the most important single policy issue from a degenerate cosmopolitan perspective must be international migration, especially migration from less to more developed nations. Freedom of movement and freedom of association are vital components of both economic and political liberty. They allow immigrants to directly improve their own lives, as well as to aid family and friends back home through remittances. Moreover, they do this by generating wealth. Economists' estimates of the gains from completely free migration cluster around 100 percent of global GDP.[77] Worldwide production could probably double if there were no restrictions on free exit. And this probably underestimates the gains, because these models take the existing quality of governance as a given. As noted above,

[77] Michael Clemens, "Economics and Emigration: Trillion Dollar Bills Laying on the Sidewalk," *Journal of Economic Perspective* 25, no. 3 (2011), 83–106.

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the ability to exit a regime puts pressure on rulers that tends to result in more-liberal governance.

Outright open immigration strikes people as radical. This is precisely why marginal additions to exit rights are an attractive approach. Each incremental step to liberalize immigration controls at least allows for some gains, and helps address legitimate countervailing concerns. This is especially true when we recognize that exit rights have different dimensions. Consider two possible reforms. First, a jurisdiction might require immigrants to pay an immigration tax roughly equal to the expected cost of providing him or her with public services (including possibly funding retraining programs for displaced workers).[78] This policy addresses the concerns of those who worry about immigrants being a fiscal drag. It also allows those who wish to improve the lives of potential immigrants to do so, by paying the tax for them. And it secures at least some incremental exit rights, enhancing degeneracy.

Second, priority may be given to some incremental exit rights over others according to other normative principles. A jurisdiction might create special immigration allowances for individuals in particularly poor countries. Such a move should appear to be an attractive first step for those who are concerned with distributive justice, who may worry that freer migration would be used by the rich to avoid paying their fair share in taxes. But allowing individuals to migrate from desperately poor countries would have far more effect than any welfare program. By far the largest windfall that the world's truly poor can reasonably expect is the opportunity to participate in an advanced economy. This would have the added benefit of putting pressure on the rulers of precisely those nations most in need of more liberal governance.

Two related proposals address more fundamental problems of governance: charter cities and startup cities.[79] The idea of both reform efforts is to create semi-autonomous municipalities that offer bundles of public services and — much more importantly — governance arrangements to residents. Modeled on special economic zones or districts, both proposals aim at creating a space in which the institutions that primarily drive economic and social development can be changed all at once in a small area without asking existing governments to surrender their control.

[78] See Gary Becker, *The Challenge of Immigration: A Radical Solution* (London: Institute for Economic Affairs, 2011).

[79] Charter cities have been proposed by economist Paul Romer, who wrote a detailed proposal in "Technology, Rules, and Progress: The Case for Charter Cities," Center for Global Development mimeo (2010). Romer's original proposal involves more-developed nations providing governance in charter cities, which met with substantial resistance from those weary of new forms of colonialism. Startup cities advocates likewise propose semi–autonomous areas but instead push for local determination of the legal regime and public service provision. There is no detailed academic proposal for Startup Cities at the time of this writing, but there is a Startup Cities Institute at Universidad Francisco Marroquin that maintains a web presence at http://www.startupcities.org.

https://doi.org/10.1017/S0265052515000084 Published online by Cambridge University Press

Again, even if the creation of such jurisdictions does not set off a chain reaction of greater political competition and innovation, at least those who are able to opt into such arrangements might find better lives.

But perhaps more importantly, degenerate cosmopolitans should cast a suspicious eye on moves towards greater centralization of international governance. Trying to regularize practices or create uniform policies across nations eliminates the crucial forms of diversity that are the engine of social learning. Enforcement of such policies also tends to create entrenched interests with little patience for reform. Standardization can sometimes be beneficial but should always be approached with caution, with avenues for robust challenges to any such standards carved out in advance. Governance is a complicated and messy affair even at the most local of levels. Anyone serious about promoting beneficent interactions between individuals of radically different cultures and histories should adopt an attitude of humility about the best way to govern those interactions. Degenerate cosmopolitanism idealizes the discovery, not the imposition, of new ways for individuals with diverse backgrounds and cultures to live better together.

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https://doi.org/10.1017/S0265052515000084 Published online by Cambridge University Press