



Andreas Thiel, William A. Blomquist, and Dustin E. Garrick (eds.): *Governing Complexity: Analyzing and Applying Polycentricity*

Cambridge University Press, Cambridge, UK, 2019, xviii + 295 pages, USD 110.00 (hardback)

Pablo Paniagua¹

Accepted: 10 March 2021 / Published online: 21 March 2021

© The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2021

There is growing academic interest in exploring the idea of polycentricity and applying it to social challenges. In the hyperconnected and complex world in which we live, many of the main challenges we face are actually polycentric governance situations. Complex governance issues such as financial instability, global warming, pandemics, and migration challenges all have some relevant features of polycentricity. Yet most academics and policy makers are still trapped, as Elinor Ostrom pointed out, in the Hobbesian paradigm of thinking about governing social dilemmas from one single center of power. *Governing Complexity* provides an updated conception of polycentric governance relevant to these, and similar, issues. With eleven contributions from leading academics in the field, the book makes three valuable claims about polycentric governance.

It claims, first, that polycentric governance is a ubiquitous social phenomenon and hence worthy of serious academic attention by economists, political scientists, and anyone interested in the governance of collective affairs; second, that it is possible for polycentric arrangements to perform well, be robust, and thus persist for long periods and adapt; third, that whether those arrangements perform well, solve social dilemmas, and adapt is an empirical question, and the answer depends on multiple factors that are reviewed carefully throughout this book.

The chapters are divided in three broad sections: Part I explores the theoretical foundations for studying polycentric governance, thus providing the conceptual tools to analyze polycentricity more generally. Part II addresses the operation and practice of polycentric governance by delving into some case studies to illustrate the analysis and their performance in actual settings. Finally, part III analyzes the micro- and macro-level cultural, constitutional, and legal dimensions of how polycentric governance works, emerges, and changes over time.

Chapter 1, written by Mark Stephan, Graham Marshall, and Michael McGinnis, is a valuable conceptual introduction to the notions of both polycentricity and governance, which

✉ Pablo Paniagua
ppaniagua@fppchile.org

¹ Fundación Para el Progreso, Santiago, Chile

are used throughout the book to guide the analysis. The chapter explores the intellectual roots of the idea of polycentricity, tracing it to the work of Michael Polanyi. Polycentricity was later introduced to political economy by Vincent Ostrom, Charles Tiebout, and Robert Warren in their renowned 1961 essay. The chapter correctly distinguishes between polycentricity and polycentric governance, suggesting that “polycentricity goes well beyond governance” (p. 23). Governance is defined as “a process by which the repertoire of rules, norms, and strategies that guide behaviour... are formed, applied, interpreted, and reformed” (p. 24). Polycentric governance then is distinguished from its opposite, monocentric governance, by the fact that it lacks a uniquely designated final authority over all important decisions related to the governance of a group or community. In such an arrangement, the overarching and shared rules can be agreed upon and enforced by the different decision centers themselves, “without an ultimate center for decision-making” (p. 26). The chapter ends by introducing and presenting the main characteristics of several key concepts and categories for analyzing polycentric governance.

In chapter 2, William Blomquist and Nadine Schröder explore the essential details of polycentric governance. The chapter deals with identifying regularized patterns in complex governance situations and what it means to examine those patterns by thinking about them as potentially polycentric. This chapter is a valuable invitation to “seeing polycentrically” (p. 45) since it proposes an original mode of inquiry—based on crucial questions about social arrangements—by which one might determine the extent to which a given governance situation resembles polycentric governance. When social scientists encounter a multiorganizational and multilevel governance structure, they need to consider whether it is truly a polycentric arrangement or a fragmented and uncoordinated mess. This challenge can be tackled through an inquiry-based approach. Thus, the chapter presents a sequence of questions that analysts can ask before reaching institutional conclusions about the nature, operation, and efficiency of complex governing arrangements. In sequence, the questions concern the different decision centers; the characteristics of the social problem; independence and interdependence; coordination; emergence, transition, and decline; and, finally, effects and efficiency. The chapter ends with a very important point for academics interested in polycentricity: polycentric governance arrangements are neither inherently good nor inherently bad. Thus, the goal of inquiry is to gain a degree of understanding of a given polycentric structure to allow for an institutional assessment of its operation and effects on the governance of real social affairs. Accordingly, it illuminates the crucial non-normative relationship between public choice theory, comparative institutional analysis, and institutional economics.

In chapter 3, Andreas Thiel and Christine Moser take a deeper look at the main approach of the book: “thinking polycentrically” (p. 88). In particular, they explore three of the most essential elements and foundational components of polycentricity. First, they explore how polycentric governance arrangements operate within, and are shaped by, the overarching set of rules—the metaconstitutional context that establishes the rule-governed framework within which people form social structures. Second, it examines how the perceived characteristics of social dilemmas affect the governing structures that individuals develop to address them. Third, they review how heterogeneity of communities can influence the collective choices people make when devising governance arrangements. They show that polycentric governance does not emerge in a void but rather is configured by a combination of overarching rules, social-problem characteristics, and community heterogeneity. They illuminate this discussion with some empirical findings from case studies of water-governance institutions in Germany and Spain.

Chapter 4, written by Andreas Thiel, Raúl Pacheco-Vega, and Elizabeth Baldwin, focuses on change and evolution within governance arrangements. The chapter theorizes about how institutional change takes place within polycentric structures. It frames institutional change as centered on analysis of individual negotiations (“bargaining problems”) over institutions and social dilemmas, and it connects this change to a set of both endogenous and exogenous factors shaping institutional change. Exogenous sources include changes in the overarching set of rules and economic or environmental shocks. Endogenous sources include alterations in people’s perceptions of social dilemmas and changes in preferences and local information. Endogenous change might also originate within one of the multiple centers in a polycentric structure, and then through interactions it could initiate a ripple effect among them. The chapter ends by revealing how institutional change “affects performance assessment of the corresponding dynamics” (p. 92) and by applying these insights to cases of water governance in Kenya and Mexico.

Part I is a much-needed conceptual contribution to our understanding of what polycentric governance is, what its most important determinants are, how we might evaluate its performance, and how we can start analyzing, mapping, and comparing them. The chapters are valuable for economists interested in applying the concepts of polycentricity and complex governance to contemporary social dilemmas in order to start seeing the world polycentrically.

Part II focuses on the actual operation of polycentric governance by paying attention to three kinds of interactions: cooperation, conflict, and conflict resolution and competition. To analyze how the centers take each other into account, the chapters identify three key elements affecting the incentives and interactions among the centers: (1) authority (how it is dispersed and exercised), (2) information (how information is generated and disseminated among citizens), and (3) resources (how economic and public resources are shared and distributed).

Chapter 5, written by Tomas Koontz and Dustin Garrick, explores the first aspect (cooperative interactions) by drawing on empirical findings from case studies in ecosystem restoration efforts in Puget Sound, Washington. The chapter focuses on cooperation and how it comes about. Of the three main factors affecting cooperation—authority, information, and resources—the authors identify resources as the “key element in collaboration” (p. 117) and information as “the lifeblood of collaboration” (p. 116). The empirical findings suggest that the most crucial factor explaining success is adequate resources and their distribution. By exploring ecosystem restoration efforts, the chapter emphasizes how, at the collective-choice level, information and funding are “powerful tools in shaping locally created Ecosystem Recovery Plans” (p. 124). One of the key insights is that the government-encouraged collaboration should not be based on directing and commanding the actions of other organizational structures but rather should incentivize the creation of governing plans that reflect the priorities of higher-level structures through leveraging information sharing and resource distribution in cooperation with the lower-level structures. Well-deployed and distributed resources and grants can incentivize cooperation among the overlapping structures better than coercion does.

Chapter 6, by Tanya Heikkilä, addresses the second form of interaction among different centers—conflict and conflict-resolution mechanisms—as illustrated by case studies of hydraulic fracturing and shale development in New York State and Colorado. The chapter engages in a comparative institutional analysis concerning how conflict and conflict-resolution interactions unfolded in two different systems related to the governance of gas and shale oil in two US states. It shows how important authority is and how it can be exercised, affecting the positive or negative final results of conflict.

In chapter 7, Dustin Garrick and Sergio Villamayor-Tomás delve into the third and final form of interaction: competition among local and public authorities. The authors illustrate competition through a comparative case study of water allocation in the Ebro Basin in Spain and in the Columbia Basin in the United States. Competition among decision centers is a crucial feature of polycentric governance systems, allowing them to deliver public goods while creating the potential for desirable social and self-regulating tendencies, mimicking the invisible hand of the market. The chapter identifies different types of competitive interactions and examines the factors that shape them and the implications for system performance. It also reminds us of the crucial interdependency and tensions between competition, cooperation, and conflict resolution, which can occur at all levels. The authors' comparative analysis is insightful since it illustrates neatly "how [allocative] efficiency comes at the expense of accountability and representation, and vice versa" (p. 170), which suggests an inexorable institutional trade-off among different performance criteria.

Chapter 8 ends this section with a distillation, by all the contributors to part II, of the major findings of the empirical cases explored. Specifically, it encapsulates the comparison of all the governance cases into clear institutional and performance assessments, using multiple evaluation criteria that cover procedural elements and aspects related to outcomes. The comparison uses the gathered empirical information to suggest how performance might vary across cases while also illuminating a crucial point: the differences in the performance of diverse polycentric governance arrangements do not make them more or less polycentric per se. Overall, this comparative analysis of the performance of the three kinds of interactions provides a basis for future work on measuring the performance of polycentric arrangements.

Part III deepens our understanding of polycentric governance both in a conceptual and in a practice-oriented manner, furthering the polycentric research agenda. Chapter 9, coauthored by Graham Marshall and Anas Malik, takes a micro-level perspective in addressing the manner in which polycentric governance shapes and is affected by individuals' culture and civic motivations. They explore how civic and virtue-related aspects of citizenship, and the people's values regarding the governance of public affairs, determine the robustness and responsiveness of polycentric governance. They also emphasize two crucial points stemming from the research agenda initiated by Vincent Ostrom: first, governance structures and political procedures are non-neutral toward civic-public virtues and the manner in which we conceive of and engage in active citizenship; and second, for democracy's sake, the concept of democracy needs to be understood as much more than just voting in general elections for representatives. In this manner, the chapter clarifies the crucial normative and philosophical reasoning that underpins the relevance of polycentric governance for the Bloomington school of public choice; particularly the symbiotic relationship between self-governance, democracy, citizenship, and polycentricity.

Chapter 10, written by Vlad Tarko, Edella Schlager, and Mark Lutter, complements the previous chapter by exploring the constitutional relationship between polycentric governance, the limits of power, and the maintenance of the rule of law as a crucial aspect by which polycentric systems operate. The authors illuminate a crucial, yet largely overlooked, part of the Ostroms' research agenda: metaconstitutional and cultural environments may encourage, discourage, or simply allow the development of polycentric forms of governance. The crucial challenge for polycentric governance is what the authors call crafting well-balanced "Faustian bargains" (p. 219), meaning that the decision centers need to craft and enforce overarching rules applicable to all in a manner that devises governing arrangements sufficiently robust to act, resolve conflict, and enforce rules yet not so strong as to encourage dominion and unchecked power. Thus, the chapter explores challenges related

to constitutional craftsmanship, power distribution among decision centers, and nested authority-sharing processes. The authors argue that polycentric governing structures are a particular form of a Faustian bargain intended to limit dominion and abuse while still encouraging cooperation and collective action to reap social benefits among the centers. The chapter concludes with examples of constitutional craftsmanship via Faustian bargaining in New York City's watershed arrangements and Somalia's postconflict constitution making.

In the final chapter, Bryan Bruns reflects on how to practice and apply polycentricity in real-life governance situations and in policy making. He addresses practitioners and policy making practices that seek inspiration from polycentric governance in order to improve the management of natural resources and the response to commons dilemmas. It describes tools that can be used to assess governance constellations and introduces conceptions to encourage local initiatives and self-organization in natural resource management. The chapter also proposes four Ostromian principles for practicing polycentric governance: (1) organize at multiple scales, including linking horizontally and across scales; (2) embrace self-governance through acknowledging the importance of the consent of the governed; (3) customize solutions that go beyond panaceas, and avoid imposing the oversimplified standard solutions; and (4) learn from multiple experiences and information dissemination. The chapter closes with a relevant discussion about power, suggesting that "power is often oversimplified into merely a matter of control and coercion, 'power over,' while a polycentric perspective is very concerned with enabling the capacity for self-governance of communities and other organizations, 'power to' (power as freedom, capacity to act)" (p. 254).

Taken as a whole, *Governing Complexity* is both a compelling invitation to start thinking polycentrically and a valuable contribution to the scholarship on polycentricity and governance. It directs the Bloomington school of political economy toward new areas of research by enabling economists, political scientists, and political philosophers to start creatively analyzing—and finding alternative solutions to—new complex challenges. This book is both well written and carefully structured and edited, making it valuable not only for all social scientists interested in learning about the Ostroms' take on polycentricity and public choice, but also for those interested in applying and extending the ideas of self-governance and polycentric governance to uncharted territories such as pandemics, financial crises, migration, climate change, and cybersecurity, among other pressing fields of inquiry. It is essential reading for all social scientists engaged in the scholarly discussion about institutional analysis, public choice, and public administration.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.