13 Toward Future Internet Governance Research and Methods: Internet Governance Learning

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As this book demonstrates, there has been an increase in Internet governance research over the years, including in the number of disciplines used, the number of researchers from various countries involved, and the number of research methods implemented. Yet there are gaps (and concomitant opportunities for new work) in the methods used. This chapter provides an example of one such gap, work on policy learning as it applies to Internet governance. (Policy learning refers to "adjusting understandings and beliefs related to public policy" [Moyson, Scholten, and Weible 2017, 162].) It then poses several concluding questions regarding how we can study the broad panoply of Internet governance processes, including Internet governance policy learning in the future. It also builds on work from related research arenas to provide a foundation for these future studies, including a discussion of emerging research methods.

A Gap: Policy Learning Research and Internet Governance

To set the scene for an understanding of Internet-governance-related learning, the concept of policy space (Lambright 1976) provides an important frame. It originally referred to a single US government agency that had primary responsibility for a specific policy type. In the case of Internet governance, the US Department of Defense with its DARPA (Defense Advanced Research Projects Agency) was the original policy space for Internet studies (Braman 2011; Braman's chapter 2). This early research focusing on policy space paid little attention to the idea of learning as a process occurring in a policy space. With regard to methodology, early work on given policy spaces used the case study method and, often, stemmed from the public administration field.

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Recognizing the incipient Internet's commercial and global potential, the policy space for Internet-related US governmental matters expanded over time to include other US agencies (the Department of Commerce and the Department of State), as described in Braman's chapter 2 and Mueller and Badiei's chapter 3. As the Internet expanded globally, policy spaces emerged in other national and then regional arenas and in international organization spaces. With the arrival of multistakeholderism (see DeNardis's chapter 1 and Hofmann's chapter 12), nonstate actors, including technical experts, the private sector, and civil society, began to occupy these rapidly expanding policy spaces, characterized by fuzzy boundaries.

This chapter highlights five often-interrelated types of learning that can occur in today's multiplex, nuanced, Internet-related policy space. It also calls for additional longitudinal research to capture more effectively the evolution of these processes, such as who is learning (and at what levels) over time. Note that learning can be intentional or unplanned; successful or failed. It can occur at the individual, small group, organizational, and even interorganizational levels. See figure 13.1 for an overview.

Researching fully these five types of learning calls for an examination of the processes as well as the context (characteristics of the policy spaces) and outcomes. This requires recognition of the multiple levels of analysis noted previously—from the individual to the organizational and even to the interorganizational. Adding to this complexity are related, diverse multiple

- *Governance Learning*
  - How new ideas, knowledge become acquired and used for governance purposes, especially involving information flow among state and nonstate actors
- *Network Learning*
  - How formal or informally linked sets of individuals or organizations become aware of, acquire, use, and regularize new knowledge
- *Policy Learning*
  - How individuals or organizations adjust "understandings and beliefs related to public policy" (Moyson, Scholten, and Weible 2017)
- *Interorganizational Learning*
  - How formal or informal sets of connected organizations become aware of, use, and routinize new knowledge across and within networked connections
- *Organizational Learning*
  - How "organizations identify, interpret, use, and even regularize new knowledge" (Argote and Miron-Spektor 2011)

Figure 13.1
Five learning types.

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actors as the chapters in this book highlight: nation-states, regional organizations, global institutions, international organizations, civil society, and private sector organizations. Each of these actors also evokes what I call the culture kaleidoscope: cultural variables (including national and occupational and additional cultures and subcultures) that may (explicitly or implicitly) shape the choice of research methods and even affect the levels of analysis examined. Add to this the legal kaleidoscope of national laws and regulations and regional and international laws (see Weber's chapter 5).

Lewis (2011) describes well the connection among actors in the highly complex, networked, and even kaleidoscopic global governance policy spaces that now exist (although her work does not focus on Internet governance). She writes that "new forms of governance have been created to address new governing challenges in a world where few things can be clearly separated in meaningful ways. Network governance seems to be both the right metaphor to describe the increasing fragmentation, the growth of problems that are ill-defined and which span boundaries, and the resulting dynamics of interconnection that define contemporary governance and policy-making, and to signal a set of governing responses to this changed environment" (2011, 1222). While these words do not specify whether they apply to individuals or organizations in a networked policy space, they do capture well the arena or ecosystem that is the messy global, multistakeholder, interorganizational topography of Internet governance learning today. Indeed, no one governance policy space stands alone; thus, this chapter also calls for the tracking of cross-policy-space learning.

The Contexts

Figure 13.2 summarizes key contextual elements (characterizing the environment or setting surrounding Internet governance or policy learning) already identified in the preceding chapters and in the larger literature. One element, central to a number of methodologies, is the *type of technology* and any possible interactions among the technologies and other elements in an environmental setting (DeNardis 2012; DeNardis's chapter 1). A second is the *availability of resources* (munificence); resources include the availability of technology as a resource, money, people, power (Castells 2007; Nye 2011, 2014), and information supply (technical, political, social). Third is the presence of *cultures*. I have written about the culture kaleidoscope (culture at small-group, organizational, national, diasporic, and occupational

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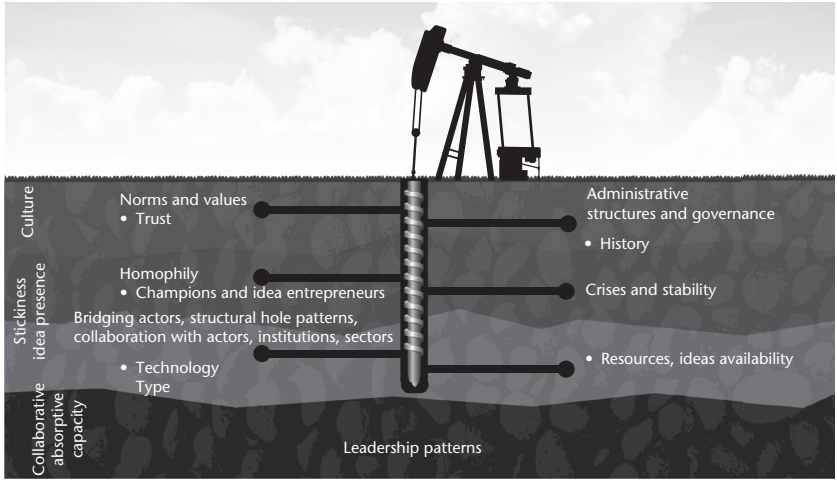

Figure 13.2
Contextual elements.

levels) (Levinson 2012). Additionally, there are age- and generation- and gender-related cultural characteristics. Each type of culture constitutes an element in the environment and has potential for shaping processes in and beyond that setting.

Fourth is the *absorptive capacity* present (Cohen and Levinthal 1990), referring to the ability of an organization to soak up new information. There are many types of absorptive capacities, ranging from the technical (the ability of an organization to absorb new technical knowledge or technologies themselves) to a general organizational learning capacity. Particularly helpful in the context studied here is the work of Easterby-Smith, Lyles, and Tsang (2008, 678) that discusses absorptive capacity with a focus on the organizational level as an "ability to recognize the value of new knowledge and to assimilate and use that knowledge."

There is, of course, an important interaction between cultures and absorptive capacity. See the work, for example, of Hofstede (1983) for a discussion of national culture and its propensity for organizational learning. Related to the notion of absorptive capacity and also cultural contexts is the work on how "sticky" new knowledge is (Szulanski 2002). As Kamkhaji and Radaelli (2017) point out in their study of European Union learning prompted by crises (another dimension of the context), the acquisition

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of knowledge and its utilization and routinization over time is central to policy learning.

A new dimension, yet to be analyzed in the Internet governance field, is what I call *collaborative absorptive capacity*. This refers to the ability or potential of an organization or network of organizations to collaborate whether on a joint project or policy design, implementation, or evaluation. The *degree of stability* in an environment is a fifth characteristic, followed by a sixth, the holistic *history* of a particular environmental setting. This includes trends over a long period. Here early work in the field of population ecology (Hannan and Freeman 1977) argues that a particular set of characteristics in a given environment shapes the organizations that survive over time in that environment.

Related to these characteristics is the *presence (or absence) of ideas* in an environmental setting. Diane Stone (2013, 175) puts it well when she traces, using case study and network analysis methods, how ideas created by think tanks flow transnationally. An example present in the Internet governance policy space is the concept of multistakeholderism. See the chapters by DeNardis (chapter 1), Braman (chapter 2), Mueller and Badiei (chapter 3), and Hofmann (chapter 12), which illustrate this concept, its study, and its stickiness in the Internet governance arena.

For example, the setting is rewarding (per the population ecology model) both moving away from prior governmental monopolies of telephone and telecommunications networks and moving toward coprocesses. Note that the mere presence of multistakeholderism does not imply the concomitant presence of truly collaborative processes. An additional element is the presence of *norms and values* (Finnemore and Hollis 2016; Henry 2011). This dimension of the environment is even more relevant currently, as various actors grapple with developing and articulating norms and values related to platforms.

Next, we need to pay attention to the *actors* in the context. Who or what unit is doing the learning? The presence or absence of *homophily* (perceived similarity among individuals) fosters trust in learning processes (Reagans 2011). There is also a need for clarity on which levels of analysis are studied and on any interactions among these levels (Pahl-Wostl 2009). Another view of actors outlines the roles they play. Some serve as bridging actors (Spekkink and Boons 2015), occupying roles that link organizations. They can, indeed, also bridge structural holes and foster the flow of ideas

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across organizational and network boundaries (Burt 2009). Note that new social media can instantaneously bridge structural holes. (With regard to bridging, boundaries and boundary organizations are important concepts in science and technology studies research (see DeNardis's chapter 1 and Musiani's chapter 4).

The term "actors" also goes beyond the individual level to include the organizational and even the institutional (Craft and Wilder 2017): governments, private sector organizations, and civil society organizations and institutions (including international organizations such as the Organization for Economic Cooperation and Development (OECD) or the UN's Educational, Scientific, and Cultural Organization (UNESCO), International Telecommunication Union, and Conference on Trade and Development (UNCTAD) that are of much interest in Internet governance and related global governance studies. Galaz et al. (2017, 11) find "complex institutional interactions and actor constellations crisscrossing institutional levels, sectoral policies, and established public-private partnerships." The flow of information across these interactions, as noted earlier, is important to track.

We also see the emergence of new institutions in policy spaces. An outcome of the UN-sponsored World Summit on the Information Society (WSIS) was the 2006 creation of an entirely new entity—distinctive, dialogue-focused, and multistakeholder in nature but not decision-making—the Internet Governance Forum (IGF) (see Braman's chapter 2, Mueller and Badiei's chapter 3, Cogburn's chapter 9, and Hofmann's chapter 12). This multistakeholder setting can be a locus for policy learning. (See Levinson and Marzouki [2016] for examples of such learning episodes.)

Finally, there are four additional and relevant characteristics of the environment. First, Weber and Khademian's (2008) work highlights both initial reputation-based *trust* and prior development of knowledge-based trust as key contextual elements for successful interorganizational transfer of practices. Second, additional work examines *governance patterns* of any formal sets of organizations or formal networks and their effects on idea flow and use. Third, the public administration field (Stone 2019) yields research that identifies the presence or absence of potential or actual *champions or idea and policy entrepreneurs* as key factors in idea or policy transfer. Fourth, research in the environmental governance field (Wurzel, Liefferink, and Tomey 2019) highlights *leadership* patterns at the individual, organizational, or even network (interorganizational) levels in terms of such impacts.

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The Processes

What is taking place with regard to policy and Internet governance learning processes? To which concepts should we pay attention to understand the nuanced happenings in Internet governance processes, especially policy learning, organizational learning, or governance learning? Each of these processes has a representative literature with slight cross-fertilization. (See figure 13.3 for a list of major learning processes that can be applied to Internet governance and its ecosystem.)

Separate but sometimes overlapping bodies of research are dedicated to policy learning, organizational learning, and more recently, network learning and governance learning. With regard to organizational learning, scholarship most often originates in the business management or organization and cognitive psychology fields, primarily with private sector arena focus—again with little cross-disciplinary dialogue (see Argote and Miron-Spektor 2011). The work on policy learning and network or governance learning tends to come from the public administration and political science fields. These scholars use research methods common in their fields. Finally, while governance learning as a concept dates back to at least Ruggie's (2001)

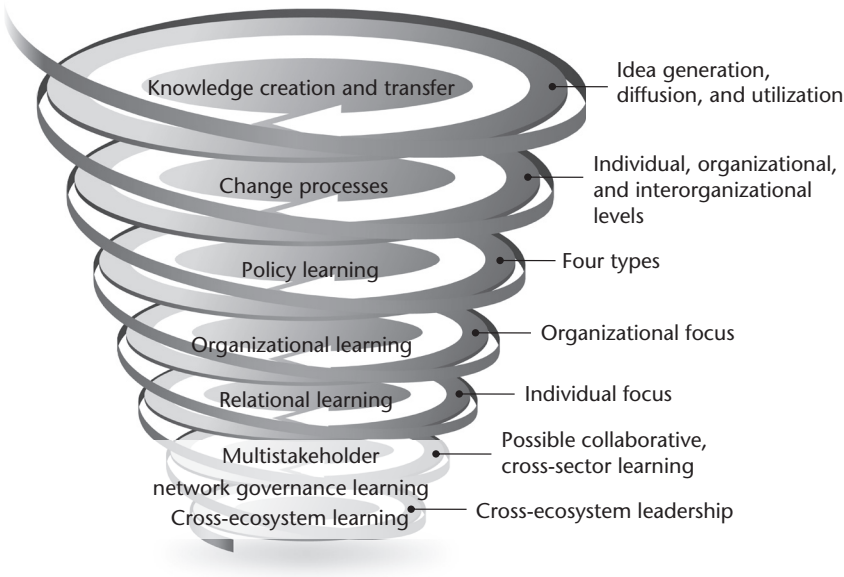

Figure 13.3
Learning processes.

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work, more recent scholarship (especially in the area of environmental governance) examines network governance and network governance learning, as discussed later. Here the unit of analysis is more than one government agency and can include nonstate actors or organizations as well.

Policy Learning, Organizational Learning, and Network Governance

"In short, network governance rests on a recognition that policy is the result of governing processes that are not fully controlled by governments. Policymaking occurs through interactive forms of governing that involve many actors from different spheres" (Lewis 2011, 1222). Lewis's analysis applies well to the multistakeholder setting in much of Internet governance work.

Research on the attitudes that government policy makers bring to their work and that may shape policy learning is emerging. Jeffares and Skelcher (2008) used social network analysis and pioneered a Q methodology that allowed them to survey the attitudes of English and Dutch civil servants to understand better what these policy makers bring to the table. They identified different attitude clusters: pragmatism, realism, adaptation, and optimism. Having Internet governance research that focuses on stakeholders in multistakeholder settings and their attitudes and discourse as they begin to interact in such settings provides a valuable addition to our knowledge base. (See Cogburn's chapter 9 and Hofmann's chapter 12 for examples.)

Argote and Miron-Spektor (2011, 1124) provide an overview of organizational learning and define it as "a change in the organization that occurs as the organization acquires experience"; it involves three sub-processes: "creating, retaining and transferring knowledge." There are differences between organizational learning in the public sector and in the private sector, thus possessing implications for networked governance (with a focus on networked organizations) learning. Visser and Van der Togt (2016) highlight these sectoral differences and link them to differing scholarship traditions in public administration compared with business management.

Governance learning itself relates to "the processes and procedures of multistakeholder decision-making and planning" (Challies et al. 2017, 289). Challies and colleagues study novel European Union water governance formats that are multistakeholder and multilevel in nature; they are especially interested in how policy makers design and run participatory processes. This work can inform Internet governance studies, in which often the same participatory, multistakeholder phenomena are at work. (See also Apgar et al. 2017.)

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Newig, Günther, and Pahl-Wostl (2010) and Newig et al. (2016) underline various types of governance learning. These include parallel learning (from other policy fields), serial learning, learning from endogenous sources, and learning from exogenous sources (from other jurisdictions and from other fields). Thus, the emphasis here on characteristics of contexts and the actors in those contexts is key regarding learning from exogenous sources.

The field of Internet governance needs additional studies of governance learning processes, whether developing- or developed-nation policy spaces. What are the actual knowledge flow processes across individuals and across unlike organizations over time? Is new knowledge or evidence actually used and, if so, how in governance processes? Does this new knowledge stick? What research methods work well for such studies?

Linking governance learning (which goes beyond organizational learning) to policy learning, Lewis (2011) sees policy as the result of multistakeholder-infused governing processes. Thus, she argues that governments no longer have total control of policy processes. Further, Dunlop and Radaelli (2013, 603) note that policy learning can involve four types of learning: reflexivity, pluralistic bargaining, epistemic, and hierarchical.

While Dunlop and Radaelli focus on European fiscal policy (finding the pluralistic bargaining and hierarchy modes most prevalent in their study of two European Union countries), their policy learning typology holds power for other global governance domains. Internet governance policy learning has the following additional categories, each of which can have present one or more of the Dunlop and Radaelli types: policy learning related to design, implementation, or evaluation.

A fascinating addition to the literature is work on policy learning via policy experiments. This work links policy learning to environmental governance and defines policy experimentation as "a process that generates learning through an explicit intention to test new ideas" (McFadgen and Huitema 2017, 1767). It also highlights a category of learning McFadgen and Huitema term "relational learning"—"a change in trust, the ability to cooperate, and understanding of other parties" that occurs in policy experimentation. Calling for future research to consider quality of leadership, demographics, and motivations of participants, this work possesses much potential for understanding the complex Internet policy space, especially those spaces involving multistakeholder participation. A rare example of an experimental approach in the Internet governance field is the Fishkin et

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al. (2018) study in which the researchers use deliberative polling as a data collection tool.

Knowledge Creation and Transfer Processes

In this complex and relatively new multidimensional policy space, knowledge creation, dissemination or transfer, and use become key targets of study, along with innovation creation, diffusion, and use. This literature has had its own research arena, primarily in the communication studies field (Rogers 1962), with little cross-fertilization until the advent of the Internet. There is much opportunity now to trace an idea or practice or policy moving from the environmental governance arena to the Internet governance and security arenas or vice versa. We also need to consider the time, or longitudinal element, in such learning.

Contemporary work in the field of policy making increasingly highlights evidence-based policy making (Head 2016). There is some research that focuses on knowledge brokers and how they might promote information transfer. Howlett, Mukherjee, and Koppenjan (2017) identify five types of brokers, or bridging actors: coordinators, consultants, gatekeepers, representatives, and liaisons. Looking at governance learning or collaborative governance learning possibilities, Head identifies eight main knowledge transfer and exchange modes for brokers (2016, 478–479):

- Face-to-face exchange between policy makers and researchers
- Educational meetings for policy makers
- Networks and communities of practice
- Meetings with facilitation between researchers and policy makers
- Cross-disciplinary and interactive workshops
- Capacity building
- Web-based information and communication
- Steering committees that interpret research and integrate local experts' ideas into design

This work also underlines the absence of effective brokering. It may be—future research will inform us—that the coprocess and participatory approach detailed earlier can minimize the need for brokering and maximize the effective incorporation of research or evidence from practice into policy making. Yet it may also be true that brokering remains an important function, given the highly technical nature of Internet infrastructure and, especially, emerging and converging Internet-related technologies.

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There is a need, too, for more cross-policy-space work on what catalyzes policy learning in each domain and across global governance domains. Some of the works cited here include a focus on crises as a catalyst for policy learning, but further research is needed to understand the full panoply (as well as rich impacts) of catalytic factors. Future research should consider findings (and methods) from work on improvisation and bricolage (Crossan 1998) as responses to crises or uncertainty.

Additionally, the actual presence of informal or formal networks, as in multistakeholder contexts, gives rise to possible coprocesses leading to collaborative governance learning or absence thereof (Baird, Plummer, and Bodin 2016; Boivard et al. 2016). Moyson (2017) discusses cocreation processes in three settings and highlights how context counts in Estonia, the Netherlands, and Germany. Elsewhere, Levinson and Marzouki (2016) begin to analyze coprocesses in the context of global Internet governance, using document analysis and in-depth interviews.

While Internet governance research has begun to analyze coprocesses, it has taken little notice of research using the advocacy coalition framework (ACF) approach. That approach appears primarily in the political science and public administration literature. Weible, Sabatier, and McQueen (2009, 132) define "(advocacy) coalitions as consisting of members who share policy core beliefs and engage in a nontrivial degree of coordination." There is a need to compare this ACF approach (Weible and Carter 2017) with a multistakeholder approach (Raymond and DeNardis 2015; see also Jørgensen's chapter 8 and Hofmann's chapter 12) wherein stakeholders can and do have differing policy core beliefs. The ACF links to knowledge transfer and policy learning as a result of advocacy coalitions sharing information with policy makers, whereas a multistakeholder approach encompasses greater complexity with regard to the disparate cultures, power panoplies, sectors, countries, institutions, and individuals involved, each with distinct perspectives and policy beliefs. ACF shares research methods with Internet governance scholars. This includes the use of interviews, surveys, and document and archival analysis; ACF work also emphasizes the need for a longitudinal dimension, often calling for a 10-year period for analysis.

Beginning with either the birth of the Internet Engineering Task Force (approximately 1986), the network of technical experts from around the world who came together and continue to meet to craft many Internet-related standards, or the creation (in 1998) of the Internet Corporation for

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Assigned Names and Numbers (ICANN) (Klein 2002; Kleinwächter 2000; also see DeNardis's chapter 1 and Ten Oever, Milan, and Beraldo's chapter 10), we can trace knowledge transfer episodes both within and across unlike organizations. Indeed, we can also trace the growth of multidirectional learning both within informally connected networks and across formal network organizational arrangements. Networked organizations concerned with Internet policy matters and across global governance policy domains also provide rich examples of knowledge transfer and coprocess episodes (Levinson 2015).

Elsewhere, using case study approaches and content analyses rooted in communication and organizational sociology, Levinson (2012) has documented the dissemination and use of multistakeholder approaches, which are especially evident in the IGF, created as a multistakeholder entity in 2006. The IGF's advisory board, at its inception, was called simply the advisory group. It was not until almost a year later that the name was changed to the Multistakeholder Advisory Group. Central to this change was the executive director of the IGF, Nitin Desai, who formerly had worked on environmental governance challenges at the United Nations and, thus, had become aware of the idea of multistakeholder approaches at an environmental summit before taking on his role in the Internet governance arena.

The IGF by its very constitution is not a decision-making or direct policy-making body, but it provides a locus for informal policy learning. The IGF website itself advertises that the IGF is a place designed for cross-sector or multistakeholder dialogue, thus having the potential to catalyze policy learning.[1] The annual IGF meetings, held in locations throughout the world, place proceedings' transcripts online. Content analyses of these proceedings provide evidence of the transfer of ideas through awareness raising and dialogue (see Cogburn's chapter 9); this knowledge flow can be traced to nation-state government decision-making. For example, the announcement of the US Department of Commerce decision to end much of its contractual relationship with ICANN in its historic affirmation agreement with ICANN in 2009 uses the language of multistakeholder, international bottom-up governance, echoing discourse at the IGF.

In the case of cybersecurity, the September Group of Seven Declaration in Turin, Italy, (Group of Seven 2017, declaration point #6) highlights a similar phenomenon. It calls for governments to have increased cooperation with the private sector and beyond: it is "crucial to engage proactively with

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the private sector, scientific community, academia, the technology community and civil society in an open, inclusive and transparent approach to developing our policy responses and initiatives." And its annex 3 on cybersecurity underlines the need for cooperating with the private sector. Trust, awareness, and information sharing emerge as important.

Carrapico and Farrand (2017) underline this increasing role of the private sector in cybersecurity and cyberspace policy. They and Van Eeten (2017, 433) find a "surprising amount" of voluntary activity. The expansion of Internet governance policy space to include private sector and even civil society actors also gives rise to accountability questions (Eggenschwiler 2017) and to power-differential questions related to learning processes. Deibert's chapter 11 adds to the accountability dimension and provides an in-depth view of power roles in Internet governance policy making. Studying these dimensions calls for research methods such as in-depth qualitative or experimental approaches that can capture rich nuance.

The Outcomes

Much more work in the area of outcomes is needed, in at least two categories: the identification of outcome types and of research methods for studying the presence or absence of collaborative learning and governance (Baird and Bodin 2016; Challies et al. 2017). See figure 13.4 for an overview. Kamkhaji and Radaelli (2017) talk about policy learning itself as an outcome, particularly in the face of crisis, and argue that policy learning follows change. Similarly, Or and Aranda-Jan (2017) write about governance after the global financial crisis and underline civil society joining nation-states as key actors.

Some public administration literature examines outcomes in terms of network effectiveness (and as a subset, network management) (Provan and Kenis 2008; Provan and Lemaire 2012; Steijn, Klijn, and Edelenbos 2011). Provan and Lemaire (2012) also highlight barriers to network effectiveness (with a focus on US public service delivery) while Raab, Mannak, and Cambré (2013) track how network structure, context, and governance relate to network effectiveness in the context of 39 interorganizational networks focused on reducing recidivism in the Netherlands. Note that Raab, Mannak, and Cambré examine outcomes at the community level. They find that network effectiveness depends on how aligned the strategy and goals, governance mode, structure, people, and management processes are and

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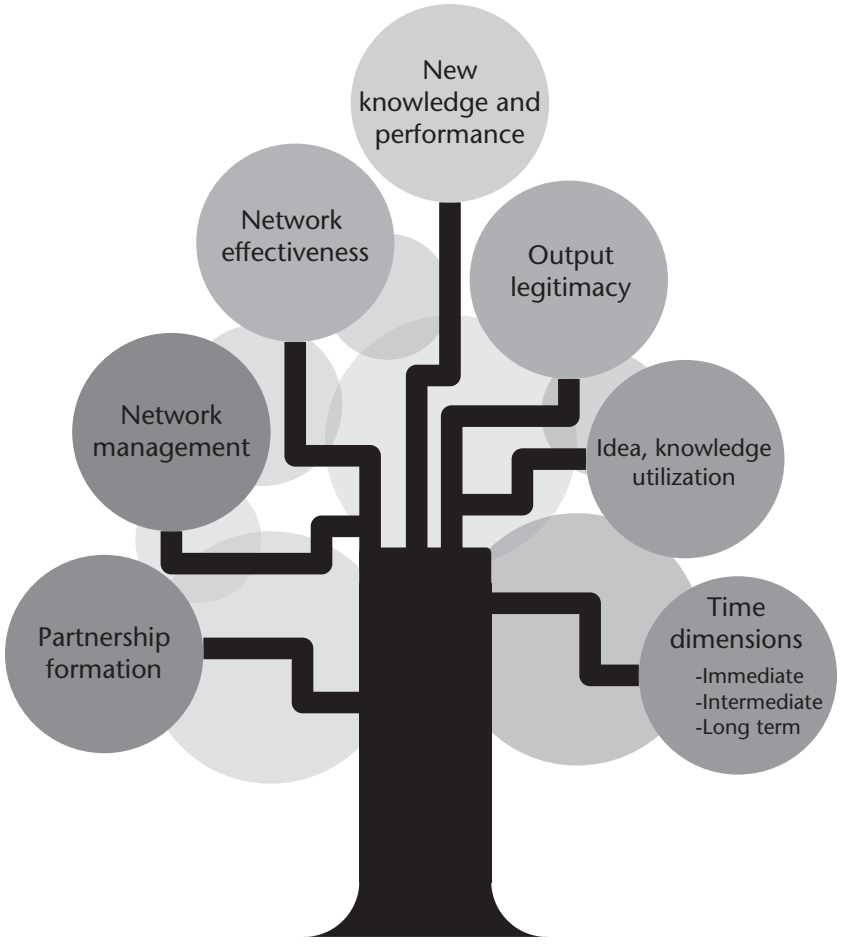

Figure 13.4
Outcomes.

how they match the environmental context. There is also work on leadership of networks and network effectiveness (Busch and Barkema 2019; Wurzel, Liefferink, and Tomey 2019).

Scholars have already studied two specific outcome types in policy learning settings: the development of new knowledge and the change in beliefs (Leach et al. 2013; Moyson 2017). Moyson (2017) examined consistency and cognition in policy learning, finding that core policy beliefs in the groups he studied appear to be stable over time.

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Other research (Allan 2017, 131) focuses on climate change and global governance and describes outcomes as the result of a "dynamic, interactive process between states and scientists" rather than a one-way knowledge transfer from scientists to states. Using a science and technology studies approach, Allan illustrates the ways in which political figures play a key role in knowledge production; further, he argues that on the basis of his research one cannot separate the science (and scientists) from politics. In sum, his study provides an example of nuanced, nonlinear coproduction processes and also possesses implications for how policy makers use information. (See also Weiss [1979] for an early study of how US policy makers use information and Nwagwu and Iheanatu [2011] for a study of Nigerian policy makers' use of information.)

In the health and the security arenas, there are similar discussions regarding research on outcomes. Krahmann (2017) underlines performance measurements as outcomes and argues for adopting a performative approach that finds international, as opposed to local, actors determining outcomes. This work also raises ethical issues, as the author questions "output legitimacy" (Krahmann 2017, 60).

Another study (Galaz et al. 2017) argues that research does not give enough credence to the power and roles of international institutions and networks. The particular focus of this work is risks related to climate change, food crises, and financial crises. In sum, they find that international institutions do have impacts on state institutions. This corresponds to findings from Levinson and Marzouki (2016) in the Internet governance arena in which international organizations play complex roles with regard to generating and sustaining novel ideas that are not always consonant with individual member states' positions. These ideas feed into the policy learning process at international levels. Finally, work on land mines discusses the power of nongovernmental organizations and networks to bring about policy change through nation-state participation in an international setting (Rutherford 2000).

Research Methods and Approaches

The work on international institutions and networks and the complexity and turbulence that characterize the Internet governance field raise a significant research challenge similar to that posed in DeNardis's chapter 1: How can we best study the outcomes of learning processes related to

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coproduction (or other), whether the coproducing involves the effectiveness (or management) of a network or the design or implementation or even evaluation of a policy or simply governance learning over time? This book's chapters provide a rich and representative portfolio of methods, including qualitative, quantitative, and mixed methods. These include archival analysis, discourse analysis, automated text analysis, social network analysis, interviews, focus groups, participant observation, surveys (including online surveys), and case studies. Experiments and simulation also supply rich and nuanced data.

As we consider measuring or analyzing outcomes, it is vital to incorporate a longitudinal time frame (Moyson 2017; and see Jardine's chapter 7). As change logic analysts argue, there are at least three time-linked dimensions in outcome categories: outputs (immediate), outcomes (intermediate time range), and impacts (long-term time range). See, for example, the Kellogg Foundation's Logic Model Development Guide (2004).

Moreover, there are many organizational learning contexts on which to focus, each of which has its own culture and absorptive capacity. For example, the United Nations, its UNESCO, and its International Telecommunication Union subsystems are real examples of the presence or absence of interorganizational and cross-sector learning. Or one can use ICANN or the Internet Engineering Task Force or IGF as focal organizations, as do many of the chapters in this book. One can also explore intraorganizational or endogenous learning; in the UN system, for example, one can study staff roles vis-à-vis member-state representative roles within each organizational unit.

Researchers who work on specific global governance arenas have an important opportunity now to undertake additional comparative studies that include attitudinal dimensions and examine organizational learning, policy learning, and networked governance learning contexts, processes, and especially, outcomes. Research methods need to go beyond those discussed here and be shared across governance arenas. As technologies emerge and converge, there are numerous opportunities to innovate and experiment in our studies.

While this chapter provides the example of policy experiments as a type of policy learning, there is much potential also for actual experiments to illuminate organizational, policy, and governance learning. There is also an important opportunity and need to examine intricate interrelationships among organizational, policy, and governance learning and to, especially,

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incorporate cultures and infrastructure (Musiani et al. 2016; see also DeNardis's chapter 1 and Musiani's chapter 4) into the discussion. To do this, a combination of qualitative and quantitative methods is necessary. One approach discussed earlier, that of science and technology studies scholars (DeNardis's chapter 1; Musiani's chapter 4), possesses much potential (see also Epstein, Katzenbach, and Musiani 2016; Katzenbach et al. 2015). Another approach used in global governance policy spaces is that of participatory action research. This participatory focus is particularly powerful in analyzing policy spaces characterized by collaborative or coprocesses.

Another new approach focuses on the individual level and incorporates methods from cognitive psychology to capture changing belief processes and learning. Finally, the time is ripe for using knowledge transfer theory and methods regarding any cross-governance (and cross-cultural) policy space learning, especially with a focus on absorptive capacity.

Shared Research Challenges: Implications for Future Studies

Internet governance (including policy learning) shares at least six research challenges with other global governance arenas such as environmental or health governance:

- A technical or scientific dimension
- Multiple levels of analysis (from the individual to the interorganizational)
- Increasing involvement of nonstate actors
- Multilayered interactions including cross-border, cross-cultural, and transnational
- Complex regulatory questions
- Uncertainties (including technological developments and convergences) and turbulence that contribute to added complexity

Taken together, the chapters in this book also highlight what is distinctive about the Internet governance field we research. The five elements below, from a research perspective, echo the five features that DeNardis in chapter 1, using a practice perspective, argues distinguish Internet governance:

- The nature of the Internet itself—the infrastructure
- The inextricable links among infrastructure and social, political, and economic dimensions

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- The time dimension with the Internet's instantaneous impacts
- The information intensities of Internet-related activities
- The emerging synergies with science (e.g., nanotechnologies), mechanics (e.g., the Internet of Things), and other yet undetermined fields

The conceptual frames and research methods we use need to match these complex and dynamic characteristics. Clearly, as illustrated in this book, there is no one method to capture all the complexities of Internet governance as it exists in 2020 and in the years ahead. Yet the methods presented here do presage emerging methods, including the increasing use of ethical experiments and clinical models for the conduct of research. Cross-research field dialogue such as can be seen in Hofmann's chapter 12 with its discussion of the environmental global governance field can facilitate sharing methods that work and do not work in one's own research arena. This can be especially useful with regard to the "landscape of tensions" (Gustafsson and Lidskog 2018, 4) among multilayered governance, multiple levels of analysis, and cultural complications that exist in many global governance fields. Such dialogue can assist Internet governance researchers (and especially civil society research consumers) to get out ahead on complex policy issues. (Some have argued that industry, especially in the cybersecurity arena, is out in front of the rest, e.g., governments and civil society.)

Emerging Research Methods and Opportunities Ahead

Research methods developed for studying cross-cultural communication at the individual, team, and organizational levels can be useful in recognizing intercultural interactions in multistakeholder settings and related learning processes. Here there is scant research work on stakeholder, cross-cultural dialogue styles and stakeholder power-related strategies. Nor is there much work with a focus on gender. To measure these dimensions, studies outside the Internet governance field have used self-reported survey measures (Schneider and Heinecke 2019). Possible methods for analyzing these dimensions for the Internet governance field are simulations, games, and experiments. Another underexplored research arena is that of indigenous research methods. Such methods (Schneider and Heinecke 2019) could be powerful in studying collaborative processes such as those in which local communities are a part of codesign, coimplementation, or coevaluation.

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Internet governance research focuses on the emergent topic of platform governance (DeNardis and Hackl 2015; Gorwa 2019; Hein et al. 2016; Schreieck et al. 2018). It primarily serves to frame, define, and raise important questions with regard to private sector technology-based platforms, including social media platforms. Little attention has yet been paid to the methods we use for researching platform governance. See Jørgensen's chapter 8 for one useful example. Additionally, there are opportunities to study new blockchain technologies as governance platforms. Here there are exciting questions about how best to research blockchains as platform governance, including examinations of power within the blockchain.

There is new and relevant work in the public administration field on governance platforms (Ansell and Gash 2018; Ojo and Mellouli 2018). Unlike platform governance research, which focuses on actual private sector technology platforms (excluding blockchain, in which involvement goes beyond the private sector), the public-administration-based research on governance platforms focuses on nongovernment as well as government involvement in governance networks. Ansell and Gash (2018, 19, 30) coined the term "governance platform," inspired by the presence of platform governance. Future work on platform governance, governance platforms, and related research methods could also add to our understanding of norm development, another area of emerging importance in Internet governance locally and globally. Indeed, a dialogue between platform governance and governance platform researchers could advance both research arena agendas.

As we study the path of Internet governance locally and globally, a question of long-term importance arises: How do societies develop what some have called dynamic resilience (Ansell and Trondal 2018; Fonseca, Lukosch, and Brazier 2019)? How do we study this? Certainly, we need a longitudinal dimension for such a study. Crises do and will emerge over time. (See research on Kondratieff curves and international affairs in Goldstein [1991].) What research methods, perhaps in combination with economic analysis, might best fit this research question as it applies to the complex and dynamic field of Internet governance studies? On the basis of the work of Ansell and Trondal (2018), researchers can consider the following approaches: observation, improvisation, conduct of experiments, tracking of networks, and tracing other interinstitutional arrangements through interviews, observation, and network analysis. Could researchers craft an

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index of societal dynamic resilience with regard to Internet governance? A focus on dynamic resilience could provide rich data, given complex emerging technologies such as artificial intelligence and robotics.

A concluding question relates to the funding of research and research methods. How does the pattern of funding for research questions (and research methodologies) shape, if at all, the portfolio of research frames (including disciplines and cross-disciplines) and approaches to be applied in the work ahead? Stone (2013) highlights the ways in which think tanks shape idea diffusion. What might be the road ahead for future funders of Internet governance research? And always mindful of ethics (see especially Hall, Madaan, and O'Hara's chapter 6; Jardine's chapter 7; and Ten Oever, Milan, and Beraldo's chapter 10) and power (see especially Deibert's chapter 11), where might that road lead in terms of Internet governance research parameters, methods, and outcomes?

Note

1. Internet Governance Forum, accessed December 21, 2019, https://www.intgovforum.org/multilingual/.

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