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Agency and Architecture: Producing Stability and Change

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Chapter Highlights

- Earth System Governance (ESG)–Agency scholars are at the forefront of exploring novel forms of agency within changing global governance architectures, such as the emergence of transnational and private governance, over the past decade.
- Agency and architecture influence each other in a range of ways, underpinning processes of change in institutions, governance, and politics.
- Greater focus is required concerning causal mechanisms of agency–architecture interplay, and their role in producing reflexivity and transformations in governance systems under pressure.

8.1 Introduction

The purpose of this chapter is to summarize the ways in which Earth System Governance (ESG) scholars have studied the interplay between Agency and Architecture over the last decade, and identify priorities and opportunities looking forward (see Chapter 1). 'Architecture' refers to 'the interlocking web of widely shared principles, institutions, and practices that shape decisions at all levels in a given area of earth system governance' (Biermann et al., 2009, p. 31). In other words, it refers to structural aspects of governance systems, within which agency is situated. Agency–Architecture interplay has been a strong theme in ESG research. After all, the structure–agency dialectic is a foundational premise in the social sciences, and thus it is not surprising to see this reflected in the large body of ESG scholarship on agency over the past decade (Chapter 15).

Yet often agency and architecture are difficult to separate, both conceptually and empirically. ESG scholars show a core concern for understanding the effects that

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agents have both within and on governance systems. For example, this is reflected in studies on the role of policy entrepreneurship in sectoral transitions, the ways in which private actors exert authority in world politics, and the potential for transformative effects of agency on environmental governance institutions (Westley et al., 2011). Attention to agency in interaction with architecture is crucial for understanding processes of change in governance systems (both intentional and emergent). Arguably, though, this may also reflect a search for sources of optimism for explaining and theorizing intentional change in environmental governance systems towards sustainability.

Broader social science accounts of political and governance change also often ascribe explanatory weight to agency-related factors. For example, policy change theorists have proposed explanations for change that involve policy entrepreneurs who act to broker solutions to problems during political windows of opportunity (Kingdon, 2014). Institutional theorists have proposed explanations of gradual change driven by agents interacting within certain political and institutional opportunity structures (Mahoney and Thelen, 2010). Organizational theorists have proposed explanations of strategic and ongoing micro-institutional behaviours that contribute to creating, maintaining, or disrupting institutions at a broader level (Lawrence et al., 2009). Sociologists have proposed explanations of change and stability in social life as underpinned by 'strategic action fields' involving endogenous political jockeying and coalitional dynamics, as well as endogenous shocks (Fligstein and McAdam, 2012). Consequently, insights on agency and architecture interplay that are gleaned by ESG scholars have potentially generalizable resonance for theories in a range of social science disciplines.

The 2009 ESG Science Plan presciently observed substantial emerging activity among nonstate actors at the time, including among cities and regions, intergovernmental bureaucracies, public–private alliances, and business associations (Biermann et al., 2009, p. 37; see also Chapter 2). It particularly highlighted the public–private character of many of these emerging configurations of authoritative actors exerting novel forms of agency extending beyond advocacy, to the reshaping of rules, procedures, and norms (Biermann et al., 2009, p. 37; Chapter 6). As these initiatives have indeed expanded in number, scope, and form over the last decade, they exert new and oftentimes unforeseen influences on architectures of earth system governance. For example, a major area of cutting-edge scholarship concerns transnational governance (Bulkeley et al., 2014; Chan et al., 2015; Hale and Held, 2011), where traditional governance architectures are being reconfigured across political borders in highly diverse ways portending a plethora of shifts in authority, power, and rules. This raises urgent questions about the interplay between agency and architecture: conceptually in terms of how scholars understand, theorize, and predict processes of change in governance systems, and
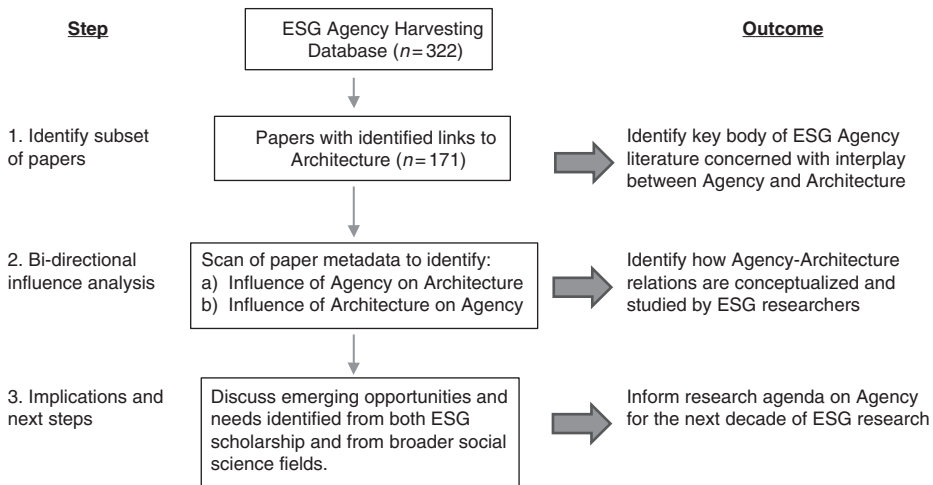
Figure 8.1 Systematic analysis protocol based on the ESG–Agency Harvesting Database.

empirically in terms of how these processes can be studied in ways that suitably take account of both agential and structural factors.

This chapter conducts a high-level thematic analysis to interrogate and synthesize ESG scholarship on the interplay between Agency and Architecture over the past decade. This synthesis is based on the ESG–Agency Harvesting Database (Chapter 1 and Appendix). First, a systematic approach was employed to identify all papers within this dataset coded as being linked to the theme of Architecture. Second, a synthesis of paper metadata (title, abstract) for this same subset was conducted to explore the key ways in which Agency and Architecture are conceptualized and studied in two directions: (1) the influence of Agency on Architecture and (2) the influence of Architecture on Agency. Finally, a broader discussion of needs and opportunities in studying Agency and Architecture looking forward is presented. This approach is summarized in Figure 8.1.

8.2 Types of Interplay

This section interrogates the ways in which interplay between Agency and Architecture is conceptualized in the identified subset of ESG Agency scholarship (Step 2 in Figure 8.1). The 2009 ESG Science Plan explicitly recognized the importance of studying the interplay between Agency and Architecture, posing questions about the ways in which architectures (involving rules, procedures, and norms) shape the behaviour of agents and the nature of broader co-evolution processes in governance systems (Biermann et al., 2009, pp. 39–40). Here,

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Box 8.1 Types of Agency–Architecture interplay

 (i) Agency influencing Architecture:
   • **Creation** – agents *creating* new institutions (e.g., introduction or promotion of new rules, procedures, and norms)
   • **Disruption** – agents *disrupting* existing institutions (e.g., purposeful or de facto efforts to call into question existing rules, procedures, and norms)
   • **Maintenance** – agents *maintaining* existing institutions (e.g., reinforcement of existing rules, procedures, and norms)

 (ii) Architecture influencing Agency:
   • **Enabling** – architecture *enables* efforts by agents to take desired actions (e.g., legal context enables introduction of new policies, international agreements support cooperative actions)
   • **Constraining** – architecture *constrains* efforts by agents to take desired actions (e.g., legal context constrains introduction of new policies, international agreements limit cooperative actions)
   • **Gaps** – a lack of existing architecture provides an incomplete or ambiguous framework that affords opportunity for agents to develop new architectures (e.g., creation of new transnational rule structures, addressing emerging issues such as climate change adaptation)

(iii) Not determined

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a framework of theoretical categories is applied which encompasses broad ways in which Agency may influence Architecture, and vice versa.

The categories of Agency–Architecture interplay applied are presented in Box 8.1. The categories in Group (i) (*Agency influencing Architecture*) draw on Lawrence et al. (2009), who present the notion of 'institutional work' as a comprehensive approach to understanding the influence agency on institutional structures within organizational settings. This approach is increasingly generalized in the context of environmental governance (Bettini et al., 2015; Beunen et al., 2017; Beunen and Patterson, 2016). The categories of Group (ii) (*Architecture influencing Agency*) are broad categories that seek to encompass the range of ways in which institutional structures may exert influence in Agents in practice. Lastly, Group (iii) (*Not determined*) captures papers for which the specific forms of Agency–Architecture interplay are not clear based solely on the metadata analyzed.

The results of applying the categories in Box 8.1 to the subset of ESG scholarship on Agency and Architecture (171 articles) are presented in Table 8.1. This shows that the majority of papers focus on *Creation* of new institutions in Group (i)

Table 8.1 *Forms of Agency–Architecture interplay*

Group and category	% of papers[a]
(i) Agency influencing Architecture:	
Creation	51
Maintenance	4
Disruption	9
(ii) Architecture influencing Agency:	
Enabling	33
Constraining	15
Gaps	11
(iii) Not determined:	2

[a]Coding in these categories is not mutually exclusive; i.e., a paper may relate to more than one category. In total 21% of papers address more than one category.

and the *Enabling* role of architecture in Group (ii), which are also the two highest rated categories overall. The remaining categories in Groups (i) and (ii) were substantially less represented.

8.2.1 Agency Influencing Architecture

Creation of new institutions (e.g., rules, procedures, and norms) was the most highly represented category in this group, and of Agency–Architecture interplay overall (see also Chapter 6). This spans scales from local to global. For example, creation of new rules may occur at a local level through environmental nongovernmental organizations (NGOs) acting as institutional entrepreneurs to reshape water governance arrangements (Davidson and de Loë, 2016), or at an urban level through the crafting of both dedicated and mainstreamed urban climate governance initiatives (Uittenbroek et al., 2016). In transnational settings, rule-setting may be conducted by private entities, although this raises questions about whether more 'open' or 'closed' forms of rule-setting lead to more effective outcomes (Kalfagianni and Pattberg, 2013; see also Chapter 14). Through investigating the role of the Marine Stewardship Council in certifying sustainable fisheries, Kalfagianni and Pattberg (2013) observe both direct problem-solving effects as well as broader political and socio-economic effects, but also a risk of reinforcing poor practices from suppliers outside of certified channels. At a global level, Jinnah and Lindsay (2015) found cross-national secretariats to have potential for improving rules associated with environmental issues within international trade agreements. In general, though, power relations

fundamentally condition the ability of agents to impact on regime complexes (Orsini et al., 2013; see also Chapters 5 and 6).

There was also a notable emphasis on the creation of new norms across scales (Chapters 9 and 10). For example, at a local level this includes the influence of actor preferences on the institutionalization of participatory processes in climate change governance (Kabiri, 2016). At an urban level, this includes the ways in which urban experimentation cultivates new constellations of municipal and non-municipal actors with potential to 'open up new political spaces' (including new norms) for climate change governance (Castán Broto and Bulkeley, 2013). At a transnational level, the emergence of initiatives involving new configurations public and private actors (Bulkeley et al., 2012) appears to be creating new norms about how climate change is governed in dispersed both transnationally (Bulkeley et al., 2014) and polycentrically (Jordan et al., 2018). Yet such activities challenge accountability norms (Chapter 13). For example, Kramarz and Park (2016) interrogate account-ability in global governance, questioning its potential to improve environmental outcomes, but concluding that accountability needs to be applied to actors responsible for designing and executing environmental governance, thus explicitly bringing an accountability lens to the behaviour of agents.

At a global level, Okereke and Coventry (2016) observe that political debates between nations over justice issues have shaped the normative character of the Paris Agreement, and more generally Dombrowski (2010) considers whether NGOs can help to address gaps in civil society representation in global climate change negotiations, especially to better involve the views of marginalized groups. Specific venues have also been considered in terms of their norm-related influence on global governance, including the role and operation of the High-Level Political Forum (HLPF) and its role as an orchestrator (Abbott and Bernstein, 2015), and the role of minilateral forums feeding ideas and expectations into global climate change negotiations (Karlsson-Vinkhuyzen and McGee, 2013).

The creation of new procedures is closely linked to rules and norms, yet may have contradictory effects. For example, new procedures may be created in implementing global agreements, but this may maintain existing power relations (Chapter 5). For example, scholars have argued that the development of the REDD+ (Reducing Emissions from Deforestation and forest Degradation) regime was shaped by donor countries in Europe and North America which persists through continued regime centralization (Gallemore and Munroe, 2013). In another case, the delegation of implementation roles to private companies in implementation of the Clean Development Mechanisms was seen to allow these actors to essentially become 'street level bureaucrats' shaping the development of the mechanism over time (Lund, 2013). Alternatively, Wallbott (2014) observes the role of indigenous peoples acting as entrepreneurs for new norms in UN climate negotiations. Therefore, the

influence of agents working to *create* new institutions is multifaceted, and dynamics of rules, procedures, and norms need to be considered jointly.

Disruption and *Maintenance* of existing institutions were much less prominent topics, but nonetheless observed by some scholars. At a local–national level, Bergsma et al. (2012) observe disruption to existing governance regime caused by an increasingly dominant neoliberal political paradigm has disrupted the existing water governance regime by causing confusion about responsibilities, fragmenting knowledge, and producing conceptual tensions about goals. On the other hand, Mirumachi and Van Wyk (2010) observe the maintenance of existing procedures and norms in the water governance regime of South Africa including that nonstate actors continue to have limited decision-making power despite the introduction of new progressive arrangements intended to reconfigure these relations (Chapter 10). From a global perspective, Orsini (2013) points out the potential for disruption by nonstate actors engaging in venue shopping within already fragmented systems, which can drive further fragmentation. On the other hand, normative ideas about partnerships for sustainable development have served a maintenance role as a legitimating strategy for UN agencies in an increasingly multilateral global governance context (Bäckstrand and Kylsäter, 2014).

8.2.2 Architecture Influencing Agency

The *Enabling* role of architecture on agency was the most highly represented category of this Group, with focal scales ranging from local to global (see Chapter 6). From an ecosystem perspective, scholars have examined how marine fisheries management approaches enable climate change adaptation by practitioners at the ecosystem scale (Ogier et al., 2016), and the ways in which participatory process setups shape interaction among actors (either collaborative or conflictual) in ecosystem management (Berardo et al., 2014). At a transnational level, de la Plaza Esteban et al. (2014) observe growing interest among actors linked to new private steering mechanisms in global environmental governance, suggesting an emerging enabling role for these schemes. New architecture may also provide new sites of contestation by agents seeking to shape its form and operation; for example, it has been argued that the EU Energy Union provides a vessel for a wide range of actors to seek to impart their objectives on energy policy, thus both enabling discussions about a new regime while also being created by actors seeking to influence its setup (Szulecki et al., 2011). From a global perspective, Fujisaki et al. (2016) study the enabling role of REDD+, observing an enabling role for national governance structures in supporting stakeholder participation. Others have argued that despite questions about impact, REDD+ nevertheless provides a vital forum for dialogue in the context of broader political

conflicts, thereby providing a de facto enabling role by helping to manage fragmentation (Gupta et al., 2016).

Constraining effects of architecture on agency were a less common focus. Sometimes these are discussed in terms of mixed enabling and constraining effects. For example, the contested effects of national flood risk policy that transfers risks and responsibilities to local authorities (Thaler and Priest, 2014). At a transnational level, differing logics may underpin transnational private governance initiatives (e.g., control through rules vs. empowerment of marginalized groups) which has a variety of implications for actors associated with these initiatives (Auld et al., 2015). Constraining effects may be relatively clear, such as constraints on the HLPF to exert agency within the 'emerging governance architecture for sustainable development' due to limited authority and resources (Abbott and Bernstein, 2015). However, such effects may also be more subtle. For example, the operation of 'power as domination' in the global climate change regime unknowingly conditioning the preferences of subjects of the regime such as smallholder farmers (Sova et al., 2015; see also Chapter 5), and a lack of institutional arrangements for successful REDD+ implementation (e.g., benefit sharing, dispute resolution, financial accountability) that leads to 'ambiguous legislation' and 'weak institutional capacity' hindering stakeholder participation (Dunlop and Corbera, 2016).

Lastly, *Gaps* in institutional architecture may afford opportunities for agents to develop new architectures, particularly in light of new issues or knowledge emerging about global environmental governance needs (Chapter 7). For example, emerging transnational climate partnerships may seek to address governance gaps in the global climate regime but lack rule-setting authority, yet nonetheless contribute to shifting patterns of authority between state and nonstate actors (Bäckstrand, 2008). Scholars have also analysed the changing role of the International Energy Agency (IEA) within shifting geopolitical contexts, including how institutional gaps drives rethinking on its role and operation (Van de Graaf, 2012), and how G8 nations have contributed to adapting the role of the IEA in the face of new global energy governance demands (Lesage et al., 2009). More broadly, scholars have argued that there is a key need to address gaps in the global institutional capacity to govern planetary boundaries (Galaz et al., 2012a), including a need for a United Nations Sustainable Development Council to guide transformations in the face of global nonlinear, abrupt, and irreversible global change (Kanie et al., 2012).

8.3 Next Steps and Future Directions

This section discusses needs for future research on Agency–Architecture interplay, and the broader opportunities where this work stands to make significant

contributions both within ESG scholarship and within broader social science literature (Step 3 in Figure 8.1).

8.3.1 Needs

ESG scholars identify a variety of ways in which Agency and Architecture interact. The emphasis on *Creation* of new institutions and the *Enabling* role of architecture (Table 8.1) may reflect a particular interest among ESG scholars in understanding drivers of change in governance systems, particularly in seeking to explain the dynamics of the global environmental governance landscape over the last decade (e.g., the emergence of new forms of transnational governance). Alternatively, it may also reflect a particular interest among ESG scholars to constructively identify opportunities for improvements in governance systems (e.g., sources of optimism). Yet the areas that are more weakly addressed in Table 8.1 may be areas requiring greater attention looking forward. For example, more work appears to be needed on the 'dark side' of agency, that is, agents working to undermine efforts to address environmental issues such as through maintenance of existing arrangements (Chapter 15). This relates to issues of power which are a priority in Chapter 4.2 of the new ESG Science Plan 2018–2028 (Earth System Governance Project, 2018a; see also Chapter 5). Relatedly, disruption is another area requiring greater attention, including both purposeful as well as unintended disruption, which may open up new opportunity contexts for agency and sites of political contestation. Overall, a key observation is the presence of multiple types of Agency–Architecture interplay in political struggles within and over governance systems, which often may need to be considered simultaneously (Chapters 2 and 14).

Looking forward, the explicit study of Agency–Architecture interplay will require attention to causal mechanisms of interplay, within a framework such as that applied in this chapter as a starting point. This requires substantial theoretical and methodological innovation to rigorously conceptualize and test hypotheses about such causal mechanisms across diverse issues, contexts, and scales (e.g., see Beach and Pedersen, 2013; Chapter 3). However, it also requires linking this work to relevant broader frameworks of governance in service of larger goals. For example, the study of Agency–Architecture interplay has potential to help (re)theorize dynamics animating governance systems and their evolution over time, to move beyond the often static conceptual models that often continue to be employed. This is especially relevant in light of the plethora of unfolding transformations across many spheres of human society (see Chapter 3.1, ESG Science Plan 2018–2028).

8.3.2 Opportunities

Three key areas in which research into Agency–Architecture interplay stands to make major scholarly contributions are (1) understanding processes of transformation in governance systems, (2) explaining processes of institutional change and development more generally, and (3) responding to fundamental new governance imperatives in the Anthropocene.

Calls are rapidly increasing for urgent transformations in governance systems across local to global levels to address many social and environmental problems (e.g., climate change, biodiversity, inequality, health), particularly in governance systems that are no longer fit-for-purpose in changing global contexts (Biermann et al., 2012, 2016). Yet understanding of how the needed transformations in governance systems may occur is sorely lacking, particularly regarding the political and governance aspects (Patterson et al., 2017). Recent scholarship gives increasing attention to topics such as innovation in governance (Jordan and Huitema, 2014a, b), overcoming path dependency and lock-in (Seto et al., 2016), and the politics of decarbonization (Bernstein and Hoffmann, 2018). Chapter 3.1 of the new ESG Science Plan 2018–2028 gives significant recognition to multiple unfolding transformations which earth system governance needs to contend with. Agency–Architecture interplay is central in both responding to transformations and to actively shaping transformations in governance systems (Earth System Governance Project, 2018a). ESG scholars thus stand to make fundamental contributions in these areas.

In addition, institutional change has become a key topic at the forefront of multiple social science disciplines in recent years (e.g., political science, sociology, planning). For example, Hall (2010) argues that institutionalist literature has traditionally focused on exploring how institutions shape behaviour (a 'first-order problem'), and is now shifting towards understanding how institutions themselves change (a 'second-order problem'). Influential arguments have been advanced that current theories of institutional change are lacking because they emphasize either stability (e.g., self-replication) or radical change (e.g., in response to shocks), but fail to explain more gradual and evolutionary modes of change that are actually most common (Mahoney and Thelen, 2010; Thelen, 2009). Studying Agency–Architecture interplay opens up novel opportunities for explaining institutional change within environmental governance and beyond, which gives ESG scholars a unique vantage point for contributing to the development of institutional theory in broader political science and sociology. Yet this is also crucial practically for addressing pressing problems of democratic decay (Fukuyama, 2014) and gridlock in political institutions (Hale et al., 2013) which increasingly intersect with efforts to address environmental governance challenges.

A final key contribution is understanding of the role of Agency–Architecture interplay in cultivating reflexivity in the Anthropocene. The changing boundary conditions for environmental governance systems caused by the Anthropocene (e.g., surpassing planetary thresholds and triggering nonlinear climate and environmental changes) are likely to severely stress existing governance and social systems and push many to failure. This is recognized in Chapter 3.3 of the new ESG Science Plan 2018–2028 (Earth System Governance Project, 2018a). The profound material, political, and philosophical consequences of this situation are poorly understood, yet what is clear is that reflexivity in societies and governance systems will be fundamental to navigating new unfolding realities over time (Dryzek, 2016; Galaz, 2014). Agency–Architecture interplay will be central to cultivating reflexivity, because this depends on finding ways for societies and governance systems to intelligently reflect on their performance in context, and change not only their operation but possibly also their overall structure, goals, and raison d'être. This casts Agency–Architecture interplay in a new and open-ended light in future scholarship.