

Regime Complexes: A Buzz, a Boom, or a Boost for Global Governance?



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*Understanding the impact of regime complexes on global governance calls for creative policy thinking. This introduction provides a new and more precise definition of the concept of regime complex. It also suggests specific tools to characterize regime complexes and analyze their impacts on global governance. The articles in this issue deepen the analytical understanding of complexes by examining concrete examples in various domains of global governance such as piracy, taxation, energy, food security, emissions reduction, carbon sinks, biosafety, and refugee governance. In addition to providing an in-depth description of a variety of different regime complexes, this issue is innovative on three accounts: (1) it presents complexes both as barriers and opportunities for global governance and gives explanations for these diverse outcomes; (2) it shows how a broad spectrum of actors is necessary for understanding the creation and evolution of complexes; and (3) it qualifies former claims to the effect that only powerful actors can impact regime complexes. **KEYWORDS:** regime complexes, networks, institutional centralization, institutional fragmentation, institutional density.*

A GROUP OR A SYSTEM HAS PROPERTIES THAT DIFFER FROM THOSE OF ITS constitutive parts. Galaxies do not rotate at the same speed as stars; ecosystems evolve in a more stable manner than their biological components; crowds are usually more impulsive than individual human beings; and H₂O quenches thirst much better than two spoonfuls of hydrogen and one of oxygen. There is nothing new about this observation. Scientists have known for a long time how important it is to distinguish systems from their components. Yet scholars of international relations often fail to seriously consider systems populated with international institutions.

In earlier times, most intergovernmental organizations (IGOs) and multilateral treaties were relatively independent from one another. But as the number of new treaties has grown at an exponential rate and existing intergovernmental organizations have crept into neighboring issue areas, global governance has become denser. It is no longer possible to negotiate new arrangements on a clear institutional table. One of the most recent multilateral environmental agreements, the 2010 Nagoya Protocol on Access to

Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization, provides a clear illustration. While the 1992 Convention on Biological Diversity hosts the protocol, negotiators had to navigate carefully through existing international rules and norms related to trade, agriculture, health, intellectual property, indigenous and local communities' rights, and biodiversity conservation.

Another sign of institutional density is the growing practice of liaison diplomacy that is taking place among the secretariats of IGOs over and above the traditional diplomacy of member states. In this way, IGOs open liaison offices and ask for observer status in other venues. The World Trade Organization (WTO), for instance, has observer status in thirty-one other IGOs and more than sixty IGOs have observer status at one or more WTO bodies. Likewise, more than ninety IGOs are formal observers at meetings of the UN Framework Convention on Climate Change—this does not include UN bodies that do not need formal approval to attend. At the 2010 session of the Conference of the Parties to the Climate Change Convention, around 1,000 participants represented various IGOs, a greater amount than the number of delegates representing all twenty-seven member states of the European Union.

In the mid-1990s, as it became apparent that international institutions seldom stand alone, Oran Young offered a preliminary taxonomy of institutional interplay.¹ Toward the end of the 1990s, the Science Plan for the long-term project on the Institutional Dimensions of Global Environmental Change (IDGEC) identified the “problem of interplay” as one of three analytic themes ripe for attention as cutting-edge concerns for environmental governance analysis.² Thus began an effort to identify and explore various forms of institutional interplay, which has expanded rapidly over the past fifteen years.

One incentive for this research initiative was the expectation that the rapid growth in the number of international institutions would generate severe—though often unintended—conflicts among regimes created to deal with different problems. Tensions between the trade regime and various environmental regimes were often given as the main examples. But research on institutional interplay soon demonstrated that the consequences of interaction are more complex than initially expected.³ Although conflict does occur in some cases, interplay can also lead to mutual adjustments and even generate collaboration that is beneficial to all institutions involved.

To understand interlocking structures that lie between the poles of fully integrated governance systems on the one hand and total fragmentation on the other, Kal Raustiala and David Victor coined the term “regime complex.”⁴ This issue aims at improving the understanding of the specific properties of regime complexes as well as the challenges they raise for effective

governance. In order to do this, a series of case studies and analytical reflections are used. To set the stage for the articles that follow, we begin with an effort to sharpen the concept of a regime complex and to explain why this idea is important.

How Do You Recognize a Regime Complex When You See One?

Raustiala and Victor define a *regime complex* as an “array of partially overlapping and non-hierarchical institutions governing a particular issue-area.”⁵ While useful as a point of departure, this definition has several ambiguous features that impede further analysis. Therefore, we propose an alternative definition of a *regime complex* as a network of three or more international regimes that relate to a common subject matter; exhibit overlapping membership; and generate substantive, normative, or operative interactions recognized as potentially problematic whether or not they are managed effectively. This reformulation contains six key elements that are essential in identifying regime complexes and analyzing their effects.

First, the constitutive elements of regime complexes must be clearly defined. The concept of an institution is so broad and encompassing that its use runs the risk of overestimating the scope of regime complexes. Instead, we argue that the constitutive elements of regime complexes are distinct regimes in their own right. *Regimes* are commonly defined as “sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors’ expectations converge in a given area of international relations.”⁶ A single regime can encompass several IGOs and treaties. The regime dealing with labor rights, for example, includes an array of conventions covering questions such as freedom of association, forced labor, child labor, and discrimination. Although these conventions overlap, they do not constitute a regime complex because they share the same norms and principles; therefore, their interactions are not problematic. Regime analysis is more suitable than regime-complex analysis to study their effects. Regime complexes always exhibit a degree of divergence regarding the principles, norms, rules, or procedures of their elemental regimes.

This divergence makes relations among elemental regimes at least potentially problematic. Once these potential conflicts or redundancies are solved, specialization or synergies appear among the different elements of a complex. Consequently, while the existence of divergence is a defining feature of a regime complex, complexes may also contain nondiverging relations. For instance, the human rights regime appears to be synergetic with the initial refugee regime in the current regime complex for refugee protection (see Alexander Betts in this issue).

Second, our definition specifies that a regime complex is at least composed of three elemental regimes. This requirement, implicit in most discussions of regime complexes, reflects the qualitative change that occurs when we move from two to three distinct entities. Two constitutive elements are not sufficient to introduce network properties, such as density and centralization, which distinguish regime complexes from their components. This is not to deny that binary relations between two regimes have important repercussions.⁷ But a regime complex, like any other network, requires three or more constitutive elements. The global food security complex, for instance, includes the human rights, international trade, and agriculture regimes (see Matias Margulis in this issue).

Third, the trickiest feature of Raustiala and Victor's definition of a regime complex is the reference to an issue area that constitutes the environment within which regime elements overlap. However, the concept of an issue area cannot define the boundaries of a regime complex since it is already a key component of the traditional definition of a regime. The result would be the danger of finding regimes and regime complexes lurking behind every door. Robert Keohane defines *issue areas* as sets of issues that are "dealt with in common negotiations and by the same, or closely coordinated, bureaucracies."⁸ Is it clear that an issue area is associated with the delimitation of an individual regime. The constitutive elements of a regime complex are not necessarily negotiated jointly or by the same group of coordinated bureaucrats (see Jean-Frédéric Morin and Amandine Orsini in this issue). Therefore, we argue that regime complexes focus on a specific subject matter, often narrower in scope than an issue area. The articles in this issue show that subject matter such as maritime piracy, refugee protection, or food security can all become the empirical basis of regime complexes, being at the crossroads of regimes focusing on broader issue areas such as maritime transportation, trade, intellectual property, security, labor, and agriculture. While Raustiala and Victor use the expression "issue area" in introducing the concept of a regime complex, they refer to a specific subject, that is, plant genetic resources. This implies that elemental regimes overlap only partially and may play a role in different regime complexes.

Fourth, a proper definition of regime complex must include the requirement that elemental regimes have memberships that overlap at least partially, but seldom entirely. Regional regimes with distinct memberships can certainly influence one another through processes such as emulation or regulatory competition. Policy diffusion at the regional level regarding trade, fishing, nuclear proliferation, and water management is common. Nonetheless, this need not generate problematic interactions, unless the regional regimes overlap with multilateral regimes such as the case of the Organisation for Economic Co-operation and Development (OECD) and the global

taxation regime (see Dries Lesage and Thijs Van de Graaf in this issue). Incorporating the notion of membership into the definition of a regime complex is also a useful reminder that IGOs are not the only actors actively shaping them.

Fifth, any set of three or more regimes does not automatically constitute a regime complex. Under Raustiala and Victor's definition, regimes have to overlap partially, although it is not clear how and to what extent they must overlap. The elemental regimes of a complex can be brought together through different forms of interaction. They can interact at the political and material levels when their subjects are perceived as intrinsically interconnected. This can be at a normative level when their norms, rules, and procedures are related or at an operative level when compliance with the provisions of one regime affects (positively or negatively) the performance of another regime.⁹ However, a regime need not interact with all the other components of a complex to be part of it. It must interact with at least one of the other regimes of the complex. In our definition, interaction replaces the condition of nonhierarchical relations among the elemental regimes, an ambiguous and unnecessary feature of the former definition. Of course, the elemental regimes of a complex do not typically exhibit hierarchical relations that are as clear and vertical as those linking a framework convention to its protocols or an organization to its programs. Otherwise, their interactions would not seem problematic. That said, a legal hierarchy does not govern world politics since political and ethical hierarchies are equally at play in creating complex interactions in terms of competing hierarchical scales. This means that a regime complex can bring together a set of regimes linked by distinct and sometimes incompatible hierarchies. The food security complex, for example, features intransitive relations between a legally powerful trade regime, a resourceful finance regime, and a normatively sacred human rights regime (see Margulis).

Sixth, policymakers and stakeholders must see the simultaneous existence of elemental regimes as being actually or at least potentially problematic for a regime complex to exist. Regime complexes are not abstract tools that analysts create to conceptualize world politics. Indeed, practitioners live them in their day-to-day life. This component of the definition helps in determining which elemental regimes to include in a complex. It also brings up the question of intersubjectivity. What creates a regime complex is not the subject itself or the related rules and their impacts, but the perceptions of actors regarding these matters. A regime complex can emerge as a result of change in the understanding of the problem without any formal institutional change. Perceptions draw the boundaries of the complex, indicating which regimes are recognized or not as elements of a complex.

Would You Like Your Complex Fragmented, Centralized, or Dense?

To bring our understanding of regime complexes to the next level, formulate generalizations, and provide policy recommendations, we need to develop tools that enable comparison between regime complexes. This means developing easily identifiable variables in terms of which complexes differ.

Several case studies have shown that what matters is neither the size of a complex nor the relations among its elements, but the conflictual or synergetic nature of its links.¹⁰ The global trade regime complex, for example, became so synergetic that it evolved into a regime in its own right. Indeed, it currently includes several interlocking elements dealing with subsidies, tariffs, antidumping, and other trade-related issues tightly linked around a common ordering principle known as embedded liberalism. However, other complexes encompass competing units, each fighting to become the central node of a unified governance system. The international forest regime complex with its numerous competing international fora, including the UN Forum on Forests, the Food and Agriculture Organization's Committee on Forests, and the International Tropical Timber Organization, is a striking example. The problem with this taxonomy, however, is that it is difficult to operationalize. How can we measure conflicts and synergies across the individual components of a regime complex?

Given that regime complexes are a network structure, network analysis—a tool already used in various disciplines ranging from physics to sociology—offers an interesting resource for the analysis of regime complexes.¹¹ A first step in network analysis is to map out the network by locating the nodes and identifying the links between them. The nodes of regime complexes are the elemental regimes and the links are the interactions occurring between them. Instinctively, researchers who analyze regime complexes present their case studies using such diagrams. In this issue, for example, Morin and Orsini offer a visual presentation of the life cycles of regime complexes; Lesage and Van de Graaf present the major components of the taxation and energy regime complexes graphically; and Betts draws out the boundaries of the refugee regime complex.

We can enrich this visual representation by indicating plus or minus signs next to the links to reflect their synergetic or conflictual consequences or by transforming the links into arrows to represent directional flows of influence. Based on such preliminary mapping, network analysis offers variables to characterize entire networks, subsystems within networks, interactions between nodes, and the position of individual nodes. Network analysis also provides clear indicators to measure these variables. We can differentiate networks, for example, in terms of centralization and density.

Dense networks are not necessarily centralized. An extremely dense network connects all nodes to one and other while a centralized network connects several nodes to a central node. The degree of density can be measured by dividing the sum of the actual links among the nodes by the number of potential links. Centrality is measurable in terms of the relative number of ties that one node has with other nodes. When both centrality and density are low, a fragmented complex results. This issue presents examples of all categories, ranging from fragmented complexes (piracy and food security) to rather centralized (energy, refugee protection, taxation) and dense (trade and environment) complexes.

Focusing on the management of regime complexes also implies understanding the different natures of the links that unite the nodes of a complex. A complex can be constructed encompassing regimes that cover different sectors (genetic resources related to agriculture vs. genetic resources related to health); play different functions (standard setting vs. information gathering); cover different areas (territorial vs. global); or deal with different categories of international actors (public vs. private). Again, the sample of regime complexes covered in this issue encompasses all cases. The energy regime complex is organized around several sectors such as oil, gas, and renewable energy (see Lesage and Van de Graaf). The food security complex is organized around functions such as the production of food, its distribution, and its consumption (see Margulis). The discussion of the trade and environment complex presents a key dilemma of areas where actors wonder about creating—or not creating—exceptions for environmental purposes, knowing that they might expand to other areas of world politics (see Fariborz Zelli, Aarti Gupta, and Harro van Asselt in this issue). Finally, the piracy regime complex is partially organized around actors, with the International Maritime Bureau proposing measures to be taken by private actors while the other elements of the complex are linked to governmental efforts (see Michael Struett, Mark Nance, and Diane Armstrong in this issue).

Why Should Political Actors Care About Regime Complexes?

Recently, the journal *Perspectives on Politics* published articles that explore the political effects of regime complexes in reorganizing global governance. Karen Alter and Sophie Meunier, in their introduction to those articles, identify “five different pathways through which international regime complexity changes the strategies and dynamic interactions of actors.”¹² These pathways include a shift of political activities toward the implementation phase of regimes, the outbreak of chessboard politics, the revival of bounded rationality, the increase of small group environments, and the appearance of

feedback effects such as competition, unintentional reverberations, and changes in responsibility and loyalty. Overall, Daniel Drezner argues, regime complexes tend to create ambiguity that may lead to strengthening the power asymmetries to favor the already powerful players.¹³

Rather than describing the consequences that regime complexes have on microdynamics how actors behave within regime complexes we concentrate on their broader impacts on global governance. In a global governance system that features a variety of regime complexes, will it be easier or harder to resolve or manage new transnational problems? Do regime complexes contribute to global normative evolution by fostering path dependency? Conversely, does the existence of a complex limit the policy options available to decisionmakers?

Robert Keohane and David Victor suggest that regime complexes facilitate flexibility across issues and adaptation over time.¹⁴ They set forth the argument that complexes facilitate renovation of the architecture of governance by simplifying its organization. Here, we go further by suggesting that regime complexes can produce both opportunities and obstacles for cooperation, depending on the characteristics of the complex. By identifying internal variables for comparison, and in particular the character of a complex (fragmented, centralized, dense), we can see certain correlations between characteristics and governance outcomes.

In this issue, Struett, Nance, and Armstrong show that fragmented regime complexes are subject to tension. Analyzing the growing problem of maritime piracy, they seek to understand the extent to which preexisting institutions can fill the cooperation gap regarding this matter. They show that institutional dissonance is strong in what emerges as a highly fragmented and inefficient regime complex.

Margulis also deals with a fragmented complex, again demonstrating that fragmented complexes could be detrimental to governance outcomes. He investigates the shift from an international food security regime to a regime complex for food security, a much weaker global governance arrangement that contains several inherent contradictions. A divergence of rules and norms across the elemental regimes of the food security complex—composed of agriculture and food, trade, and human rights elemental regimes—constitutes a major source for transnational conflict that hampers efforts to solve the global hunger problem.

But other articles in this issue demonstrate that regime complexes can also enhance international cooperation. Betts shows how, responding to the emergence of a refugee regime complex, the Office of the UN High Commissioner for Refugees (UNHCR) has taken on new roles relating to humanitarian concerns and migration that fall outside its original mandate limited to refugee protection. Exploring how the UNHCR has acted as a “challenged institution” in the refugee regime complex, he suggests that

institutional proliferation can lead to positive restructuring of an IGO's mandates. In this case, the centralization of the complex around the UNHCR has been beneficial since this IGO has worked for the progressive integration of the complex in a dense structure and thereby boosted problem solving.

Lesage and Van de Graaf also suggest that a centralized complex, in their case organized around the OECD, can produce positive governance outcomes. They explain this in terms of the efforts of the OECD to maintain an important position in energy and taxation matters, which leads the organization to compromises and adjustments.

The refugee, taxation, and energy complexes are all examples where complexes are centralized around a benevolent node, advocating for density rather than stronger central authority. While there is no example yet of a centralized complex whose center would promote fragmentation, this remains a possibility. Yet Morin and Orsini present several mechanisms that usually push complexes toward increased density.

Finally, we could expect that dense complexes have positive effects on governance outcomes. Zelli, Gupta, and van Asselt surprisingly demonstrate how the trade and environment complex, organized around the global norm of liberal environmentalism, is actually generating poor results in terms of environmental outcomes. Here, density is positive in terms of complex stability—they show that the global consensus around liberal environmentalism will be hard to challenge—but not in terms of outcomes. The complex seems to maintain a counterproductive normative environment in terms of governance efficiency.

Overall, the articles in this issue show that problem solving is enhanced in a context of regime complexes, even if the complex is fragmented, because the existence of a complex means that potential problems are likely to be sorted out. This appears clearly in the analytic model that Morin and Orsini present, but also shows through in several case studies where authors call for an enhanced consideration of the varied links playing around the IGOs present in their domains (see Margulis or Struett, Nance, and Armstrong). To be solved, a problem must first be recognized.

In our case studies, complexes organized around sectors or areas (energy, trade, environment) appear to be more stable than complexes organized around functions (refugees, food security) or actors (piracy). But again, we would need to scrutinize other case studies to confirm such a generalization.

Who Plays the Game of Regime Complexes?

Because complexes influence global governance outcomes, it is important to understand who or what shapes complexes and makes them evolve. How

did the network arise and which actors manage its structure? We borrow the term *management* from Sebastian Oberthür and Olav Schram Stokke, who define it as “conscious efforts by any relevant actor or group of actors, in whatever form or forum, to address and improve institutional interaction and its effects.”¹⁵ Although management is seen through a positive perspective here, we argue that it can also take the form of strategic behavior, which aims at fragmenting the different elements of a complex instead of solving conflicts. A synonym would be (re)organizing complexes, playing with their different elemental regimes.

It would be wrong to assume that regime complexes evolve naturally. The interplay among regimes is not a natural process in which regimes develop lives of their own that are independent from the interests of the actors who create and operate them. These systems are full of interest-based actors with their own norms and belief systems, from Baptists to bootleggers, that possess distinct power bases. The resulting political games constitute a fundamental force in the formation and reorganization of regime complexes. While these properties of complexes are rarely negotiated on a clear institutional table, the development of these institutional arrangements is not a random process.

To the best of our knowledge, the literature thus far states that the coupling and the decoupling of different regimes mostly occurs through state politics.¹⁶ Many articles in this issue share this point of view. Morin and Orsini propose an extended model that details the reciprocal relationships linking governments and complexes. They argue that states are the most important contributors to and recipients of the norms embedded in regime complexes. However, nonstate actors can also perceive and manage problematic relationships among the different elemental regimes. Margulis shows how the Nobel Prize had an impact on the recognition of the importance of access to food. Zelli, Gupta and van Asselt underline the role of environmental nongovernmental organizations in the development and contestation of the institutional arrangements of the trade and environment complex. Finally, Struett, Nance, and Armstrong explain how business actors are playing a prominent role in the fight against maritime piracy.

Most authors in this issue assume that the actors that are able to manage regime complexes are likely to be the same as the ones that create these governance structures. However, there are signs that the management of complexes requires skills—a good overview of the complex, institutional flexibility, broad authority, and legitimacy—that are complementary to the management of independent elemental regimes. While others argue that complexes tend to favor traditionally powerful actors, we contend that the skills required to manage regime complexes are different from the classical definition of power. In particular, this issue shows that international organizations appear to be particularly skillful at managing complexes.

Lesage and Van de Graaf, for instance, explore the role of the OECD, as challenger to the UN system, in the management of the taxation and energy regime complexes. Margulis also points to international groupings, in particular the Group of 20 (G-20) and Group of 8 (G8), as potential organizers of regime complexes.

While agency matters, the evolution of complexes is driven also by norms. Looking at complexes from a broad perspective, Zelli, Gupta, and van Asselt focus on the idea that global norms and discourses, supported by existing institutions and by transnational coalitions, shape the evolution of complexes. They demonstrate that this is the case in the environmental domain, particularly around the concept of liberal environmentalism. Although they recognize that complexes leave room for contestation to arise, path dependency is likely. Complexes are broad structures that do not easily move off current trajectories.

Once we determine who the actors are and the constraints they face, we need to identify the tools at their disposal to make regime complexes work. Others have recently emphasized the mixed results of interplay management, with particular reference to the domain of environmental governance.¹⁷ The articles in this issue show that several practical procedures are available to enhance the performance of regime complexes. Interactions take place over at least three dimensions: over (both material and political) substance, over norms, and over compliance. This leaves plenty of room for using tools such as careful avoidance, functional specialization, legal arbitration, and cooperative agreements. According to Betts, international organizations need to consider complementary and contradictory overlaps and to go and look for complementary partnerships as a tool to manage complexes. Lesage and Van de Graaf also suggest that an intergovernmental organization, the G-20, acts as an adviser for interplay management by overseeing the institutional division of labor in the taxation and energy regime complexes and playing the role of intermediary. Struett, Nance, and Amstron see information diffusion as another important tool for managing complexes. It is particularly lacking in the case of maritime piracy where no “norm entrepreneur” is able to link the potential elemental regimes together (Struett, Nance, and Amstron). All of these tools are contributing toward resolution of the existing divergences among complexes. In their concluding article in this issue, Thomas Gehring and Benjamin Faude share this rather optimistic view of complexity management, seeing a division of work among the constitutive elements of complexes as a prominent alternative to open conflict. 🌐

Notes

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