Review Article: Global Governance in a Complex World

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Abstract: This essay reviews the literature on international regime complexity and international institutional complexity published in three high impact journals between 2009 and 2022. The analysis identifies conceptual ambiguities as it discusses the definitions of complexity proposed by the scholarship. The goal is to highlight indicators of complexity in international politics, with a focus on global governance. These indicators are observable, subject to measurement and comparison. Based on some of these indicators, the essay explores the relationship between complexity and compliance -- or to what extent states implement the legal commitments that they adopted internationally, in light of the literature. The essay makes an original contribution when it chronicles and organizes the scholarship on complexity in terms of agency, scope, and effectiveness. It also analyses the presence and levels of a hierarchical relationship amongst the elements that make up a complex regime or institution. The Scholarship reviewed here constitutes essential reading for any researcher that is interested in global governance, international law, and compliance.

Keywords: Global governance, international law, compliance, institutional complexity.

INTRODUCTION

Information from the United Nations Treaty Collection reveals that there are more than five hundred and sixty multilateral treaties in existence. These are legal commitments that states entered into in order to regulate distinct aspects of international politics. Together with these multilateral treaties, there are thousands of bilateral treaties and soft legal commitments that compose the global governance grid. Scholars of International Law and International Relations have often analyzed subsets of this vast universe, but only recently have they attempted to cross disciplinary boundaries in their analysis. This effort has enhanced our knowledge about the design of international treaties, together with their shortcomings with respect to compliance, effectiveness and impact. Moreover, there is an important measure of interconnectedness amongst the parts of this global governance grid. Some of these links are deliberate, while others result from a parallel expansion of mandates; some of these links have hierarchical properties, while others resemble chaotic arrangements. It comes as no surprise that the naked eye is confused when it stumbles on the global governance system that resulted from the interaction of so many treaties and state commitments of a non-binding nature. This is true at the policymaking level as well as within the academic sphere. Authors began to write about "gridlock," suggesting a negative association between interconnectedness and efficiency (Hale, Held and Young 2013). Others have used the

term "continent" to refer to the vast array of treaties, with a focus on the institutional design features that states mobilize when they bring their legal commitments to light (Koremenos 2016). Skeptics and agnostics alike agree on one diagnosis: the regulation of global governance has become more complex. This convergence is at the core of a booming research agenda that has sought to study the phenomenon of institutional complexity through various lenses. Their effort has yield important insights as to how complexity emerges, how does it influence state compliance, and what are the consequences of institutional complexity for global governance at large.

This bibliographic essay identifies and chronicles the recent literature on institutional complexity with the goal of advancing our understanding with respect to the challenges that complexity brings for global governance and for International Law. The essay acknowledges complexity as a ubiquitous phenomenon that for several scholars of international relations is at the root of contemporary challenges for global governance. In spite of growing skepticism about the consequences of institutional complexity for the performance of global governance institutions, the state of the art of the literature has not established a direct association between rising complexity and institutional underperformance. Thus, the quest as to what is the impact of institutional complexity on global governance remains an open avenue and a fertile territory for those interested in international politics. The question is important as scholars often associate the failure of international institutions and organizations with the multiplicity of treaties and soft legal arrangements regulating one aspect of international politics. This is the case in the realm of human rights (Hafner-Burton

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2013; Hafner-Burton and Tsutsui 2007; 2005). More recently, the crisis of the World Trade Organization has also been associated with the emergence of parallel regimes, such as preferential trade agreements. As far as international security regimes are concerned, it appears that their longevity is no longer the rule, rendering security arrangements much more unstable and vulnerable to the ups-and-downs of power politics. A more thorough understanding of the nuts-and-bolts of institutional complexity and of its consequences for global governance is in order.

In spite of the need to understand the consequences of institutional complexity for global governance, the literature that has confronted this challenge suffers from ambiguity and definitional problems. For example, for a few authors we are dealing with international *regime* complexity, whereas others prefer the term international *institutional* complexity, or institutional complexity too short. With respect to the central concept of complexity, some scholars describe a conflicting pattern amongst the parts that make up the institutional complex, while others accept that overlap can occur without competition. Moreover, it is not clear for these authors if complexity will lead to a better standard of global governance, or the other way around.

Solving these ambiguities is an essential step toward a deeper understanding of institutional complexity, its engines, and its consequences for global governance. In order to contribute toward this goal, this bibliographic essay retrieves – in a comprehensive approach – the scholarship on institutional/regime complexity that was produced between 2009 and 2022. The focus is on research that was published in high impact academic journals, given the potential of this research to influence the debate that follows. Thus, the essay draws primarily from three outlets: *Perspective on Politics* (2009), the *Annual Review of Law and Social Science* (2018), and the *Review of International Organizations* (2022).

The essay proceeds as follows: The next section depicts institutional complexity as a ubiquitous phenomenon. It mobilizes the literature that has documented growing complexity in the four key areas of international politics, i.e. human rights, environmental protection, international trade and international security. Once complexity as a contemporary empirical regularity has been established, the essay identifies a cluster of indicators of institutional complexity. These indicators render

complexity an observable phenomenon, subject to measurement and comparison. This section also explores the divergent views found in the literature with respect to the agents, the scope and the consequences of institutional complexity. The second section tackles the definition of complexity

The third section brings about the question of performance, seeking to identify positions that argue for an association between distinct levels of complexity and thresholds of performance. The goal is to entertain the existence of an association between greater complexity and underperformance (or the other way around!).This section also distinguishes the notion of complexity – as it is mobilized here – from other neighboring concepts. In particular, the notions of networks and interdependence are addressed in order to delineate their specificities and how they are distinct from the concept of complexity – as tackled by the present bibliographic essay. This section renders more explicit what complexity is, by identifying what it is not.

The final section concludes and identifies questions for future research with respect to the future of global governance institutions, in light of inexorably growing complexity. In this section the underlying question is design and effectiveness. In other words, how can we think prospectively about institutions that will be more effective at reaching their stated goals? More specifically, what the literature on institutional design and choice architecture has to say about global governance institutions within an increasingly complex world?

INSTITUTIONAL COMPLEXITY AS A UBIQUITOUS PHENOMEN ON

The relationship between complexity and compliance has been on the radar of social scientists for a long time, beginning with the contribution of Elinor Ostrom and her co-authors (Workshop in Political Theory and Policy Analysis at Indiana University). This group of scholars pioneered efforts to accumulate knowledge on complexity generated in other fields of study; they also advanced counter-intuitive claims that complexity might be associated with higher levels of efficiency and compliance. They proceeded to design and conduct research in order to assess these novel claims with respect to the role of complex systems. Their contribution has focused on governance of the commons, with significant advances in the area of environmental protection and management of common pool resources (Ostrom 2010;1990). The literature on

institutional complexity in international politics also includes early work by Snyder and Jervis (1993) and Aggarwal (1998). Nevertheless, these important efforts have not confronted the issue of effectiveness or compliance head on.

A systematic look into the impact of institutional complexity on international politics came with the Symposium on International Regime Complexity, which yield a special issue of *Perspective on Politics*, edited by Karen Alter and Sophie Meunier in 2009. The introductory article by the editors is followed by issue-specific analyses that study international regime complexity in such areas as trade (Christina Davis 2009), election monitoring (Judith Kelley 2009), the regime on intellectual property (Helfer 2009), international security (Hofmann 2009), climate change (Keohane and Victor 2009), and human rights (Emilie Hafner-Burton 2009), amongst others.[1] Individual contributions to the special issue mobilize the definition of regime complexity proposed by the editors, which privileges three aspects of institutional complexity: overlap, parallelism, and nesting.

Beyond bringing the topic of international regime complexity to the spotlight, the 2009 special issue offers a major contribution to the literature on international organization when it identifies several facets of complexity. The editors settle on three facets, which are observable, subject to measurement and comparable. Alter and Meunier proceed to identify and analyze the defining characteristics of i. overlapping, ii. parallel and iii. nested institutions. Starting by the latter, when international institutions are nested, there is a relationship amongst institutions whereby they are embedded vis-à-vis the others. The image of Russian dolls comes in handy, as a visual metaphor. On the other hand, when institutions pertaining to a regime complex are parallel, they exist independently of each other. Each institution that belongs to the regime has its own locus, thus rendering their position vis-à-vis other parallel institutions rather independent. Furthermore, parallel institutions coexist without necessarily coordinating their mandates and activities, as their respective spheres of operation entail little intersection. The third category identified by the authors is overlap. In this case, there is more than one institution addressing the same issue, with juxtaposition among them. Unlike the case with parallel institutions, here the intersection with respect to mandates and activities is much larger. In some cases, the intersection encompasses the whole mandate of each overlapping institution taken separately.[2] In Alter and Meunier's typology, how each institution relates to the other geographically becomes the key criteria to differentiate between overlap, parallel, and nested institutions (Alter & Meunier 2009:15).

Since the focus of the special issue is admittedly the *consequences* of international regime complexity (as opposed to its causes), the introductory article also identifies possible pathways for influence. The authors preface their discussion of pathways by highlighting the protagonism of the implementation stage. It is during this moment that state interests and strategies vis-à-vis the regime will become clear and observable; regime complexity constitutes yet another input in this process. The implementation phase offers the stage where states will operate, and complexity may hinder or it may facilitate the process. Second, the authors warn that international regime complexity can compromise rational decision-making due to the challenges of processing information; according to Alter and Meunier, complexity forces bounded rationality on actors (Alter & Meunier 2009: 17).They also suggest that complexity is likely to foster small group environments, with important consequences for the socialization dynamic that ensues. Finally, international regime complexity may entail (unintended) adverse consequences. The special issue includes a few articles wherein complexity is associated with competition and reverberation amongst the institutions that make up a given regime complex.

The distinction between nested, parallel and overlapping institutions has implications for research on institutional design and performance. With respect to design, complexity may be a deliberate choice, as it is often present from the moment institutions are conceived. Conversely, regime complexity may be a byproduct of institutional development. Along the way, as researchers and policymakers discuss institutional reform, they may have an option to "resolve" adverse consequences associated with regime complexity. When it comes to institutional performance, regime complexity increasingly features as a key intervening

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[1] The 2009 special issue uses the term "international regime complexity," which derives directly from Kal Raustiala and David Victor's concept of "regime complex (Raustiala & Victor 2004)." Elsewhere, the term "international institutional complexity," or simply institutional complexity, will prevail. This bibliographic essay uses these two terms interchangeably.

[2] Karen Alter and Sophie Meunier argue that the absence of hierarchy is a defining feature of international regime complexity in itself (2009:13).

variable for scholars that are interested in analyzing regime effectiveness, compliance and impact (Carneiro & Lutmar 2018; Mitchell 1994; Neumayer 2005). It follows that international regime complexity is likely to be central to the concerns of international relations and international law scholars in the future.

The special issue concludes with a skeptical note on the possibility of a systematic study of the consequences of regime complexity, one that could lead to a theory of complexity in the realm of international politics. This is mostly due to the conflicting outcomes of the efforts to explore regime complexity within the special issue. There is also concern that international regime complexity may favor more powerful states, which is a red flag raised by Daniel Drezner in the conclusion (Drezner 2009). The 2009 special issue launched a conversation that is still ongoing. Spill over examples can be found in Hafner-Burton (2013), Hale, Held &Young (2013), and Carneiro & Wegmann (2017).

The 2009 special issue was followed by two recent efforts to theorize and to systematize the accumulated knowledge on international institutional/regime complexity. The first is led by two international law scholars, Karen Alter and Kal Raustiala, and published at the *Annual Review of Law and Social Science* in 2018. The second is headed by two political scientists/international relations scholars; it was published at *The Review of International Organizations* in 2022. It is worth noting that the terminology remains unsettled, as the 2018 article uses the term "international regime complexity," whereas the 2022 one refers to "institutional complexity." This goes to show that the definitional conundrum remains alive. Aside from their definitional differences, these two articles embrace separate goals. Karen Alter and Kal Raustiala offer an analytical review of the state-of- the art literature on international regime complexity. Mette Sangiovanni and Oliver Westerwinter, on the other hand, write an introductory piece to a special issue that "examines the nature and consequences of institutional complexity in global governance (2021:233)." The two articles constitute required readings for anyone interested in complexity and international politics.

Alter and Raustiala specify the key components and the rationale for regime complexity. With respect to components, three features must be present in order to characterize international regime complexity: 1) the presence of several "elemental" institutions with an authority claim over a particular issue; 2) the absence of hierarchy among "elemental" regimes; and 3) system effects.[3] The authors proceed to list a number of factors that work to promote regime complexes in global governance. Among these factors is the density of existing institutions and the nature of the issues they address. New regulatory initiatives must account for existing institutions as well as for the multi-faceted nature of the problems they attempt to resolve. There are also more instrumental reasons for choosing complexity. Alter and Raustiala single out sovereign states' reasons to mobilize complexity in order to account for power shifts over time; the same holds for preference changes. On the other hand, new trends in international politics may bring about higher levels of institutional overlap. The authors discuss the consequences of multi-stakeholder governance and the growing role for local governance (Alter and Raustiala 2018:338). These are some of the pathways that lead to international regime complexity. But what are the consequences of regime complexity? Are these effects predominantly positive or negative? In a somewhat inconclusive manner, the article tends to side with scholars who argue that regime complexity empowers well-endowed states. In simple words, it grants more power to the powerful. The authors do not hesitate, however, to associate international regime complexity with instability (Alter and Raustiala 2018: 340).

This essay now turns to Mette Sangiovanni and Oliver Westerwinter's introductory piece, which leads the reflection of the special issue of *The Review of International Organizations* on institutional complexity and global governance. In their words, "[the] special issue examines the nature and consequences of institutional complexity in global governance, by which we understand the growing *number*, *diversity*, and *interconnectedness* of institutions and actors involved in governing global policy issues (Sangiovanni and Westerwinter 2021:233)." The authors set out to explore variation in institutional complexity with the goal of producing theoretical insights that can be generalized. To that end, Sangiovanni and Westerwinter propose the novel concept of a global governance complex. This concept centers around two phenomena: a) a system of overlapping institutions and actors; b) a particular global policy issue governed by those institutions/actors. Here the focus is less on the shape that regime complexity assumes, i.e. overlap,

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[3]Underlying the notions of "elemental institution" and of "elemental regime" is the idea of a unit of analysis that cannot be further reduced. Here, the term "regime" appears to refer to the ordering or governing mechanism associated with an elemental institution.

parallelism, nesting -- and more on the mechanisms that produce complexity. The authors conceive three such mechanisms: hierarchy, task-differentiation, and management. Unlike previous efforts to conceptualize regime complexity that have focused on the absence of hierarchy, here the authors treat hierarchy as a variable, thus broadening the scope of possible instances of complexity.

The introductory article draws from previous studies dealing with polycentric governance, network analysis, complexity theory and regime complexes to propose an ordering reflection through the concept of global governance complex. The authors put forward the concept of global governance complex as a meta-term, an organizing and overarching concept, to connect previous efforts to analyze similar phenomena. The ultimate goal is to unite independent efforts to theorize about complexity and its facets in order to promote a research agenda that will go beyond accumulated knowledge on specific issues, such as climate change or election monitoring. This endeavor produces knowledge across time and space, thus enabling research designs oriented by a logic of inference. Key to this process is operationalization and measurement. The article proceeds to enumerate two aspects of complex global governance systems that emerge as consensual in the existing literature: institutional overlap and shared membership (Sangiovanni and Westerwinter 2021:236). These two aspects are also observable and subject to measurement. They represent constitutive elements of the author's definition of a global governance complex.

The special issue and its concept of global governance complexes is at odds with previous efforts to theorize about institutional and regime complexity in at least three aspects. First, Sangiovanni and Wester

winter contemplate institutional complexity even when there is a hierarchical relationship amongst the parts that make up a global governance complex; they refer to the possibility of "pockets" of hierarchy as well as to the possibility of informal hierarchy. In fact, from a research agenda standpoint, the authors speak of degrees of hierarchy rather than the complete absence of an ordering mechanism. Second, they reject the notion that a degree of conflict is inherent to the institutions which make up the global governance complex, thus conceiving of complexity in the absence of competing mandates or institutions. Third, the authors acknowledge the protagonism of intergovernmental institutions -- as fundamental pillars of global governance complexes, but they do not restrict agency to them. Here, state and nonstate actors are on equal footing when it comes to analyzing the structure and elemental parts of a global governance complex.

Table **1** highlights the elements that these three strands of the scholarship on international regime/institutional complexity propose as key to their analysis. The table is organized along four dimensions in order to identify the characteristics of agency, relationship, scope, and effectiveness -- as they emerge in this bibliographic essay. Agency refers to who has the prerogative to participate in the regime that will constitute an element of complexity; in other words, do we treat international regimes as an exclusive arena of sovereign states? If so, regime complexity is circumscribed to interactions amongst intergovernmental organizations. Relationship is an assessment of how the elements that constitute a regime complex organize the locus of authority. Is there formal subordination, or hierarchy? Scope refers to the reach of the analysis. Is the scholarly contribution

Table 1: Elements of International Institutional/Regime Complexity in the Literature

Source	Agency	Relationship	Scope	Effectiveness
Alter & Meunier (2009)	States Intergovernmental organizations	Absence of hierarchy	Issue centered analysis	Complexity may have positive effects, depending on the issue area. General concern with power imbalances.
Alter &Raustiala (2018)	States Intergovernmental organizations	Absence of hierarchy	Issue centered analysis	Potential for adverse consequences
Sangiovanni&Westerwinter (2021)	State and nonstate actors	Possible hierarchy, formal or informal	Overarching Meta-theory	The question of effectiveness is contingent on a more robust investigation Defense of a larger study, across time and space

addressing a specific issue, such as election monitoring or climate change? Or, conversely, is it analyzing broader themes, such as security, trade, human rights? Finally, effectiveness assesses whether this literature draws conclusions with respect to the consequences of regime complexity for compliance and impact. In other words, does the scholarship suggest an association between greater complexity and higher levels of effectiveness?

As Table **1** shows, there is considerable variation amongst these three strands of literature with respect to key characteristics of international regime complexity. The differences are important for the study of regime complexity and its consequences. For example, Sangiovanni & Westerwinter's reservations on the topic of effectiveness reinstate that there is a gap in the literature to be filled. On the other hand, their inclusion of non-state actors as agents in the complexity equation suggests a redefinition of the scope of this gap.

The next section tackles the definition of institutional complexity in light of the developments chronicled above. The goal is less to provide a concept and more to highlight the key elements that these literatures foresee as essential elements of regime complexes. There is a natural intersection amongst these different strands of literature; from this core, this bibliographic essay derives a broader notion of complexity that has traction within the International Law and International Relations scholarship.

ON THE DEFINITION OF COMPLEXITY

A definition of complexity must take into consideration the *locus* wherein the concept will operate. The analysis within this bibliographic essay focuses on complexity as it relates to global governance, thus to the realm of international politics. This is an arena where sovereign states and international organizations are key protagonists. However, global governance has been undergoing a transformative process, which can be chronicled by the "humanization" of international law (Buergenthal 2006) and a greater role for non-state actors -- to list two key factors. Therefore, a definition of complexity should grasp these nuances as they present important challenges for global governance.

If on one hand the possibility to mobilize indicators of institutional complexity constitutes a powerful methodological tool, on the other hand, the inclusion of non-state actors appears to be unavoidable. The

definition that is decanted from Alter and Meunier (2009) and from Sangiovanni and Westerwinter (2022) encompasses the presence of overlapping, parallel or nested institutions as well as the participation (agency) of non-state actors. The resulting complex institutions may or may not compete amongst themselves, as conflict is not a defining characteristic of complexity for these authors.

A definition of complexity must also engage with the choice that scholars make with respect to key terms. In particular, can we resolve the dichotomy "regime complexity" v. "institutional complexity?" Let's start by locating the debate. Alter and Meunier (2009) introductory article is titled "The Politics of International Regime Complexity." Throughout the text, the authors consistently maintain their choice for the term "regime complexity." Along the way, several titles that make up the special issue embrace the notion of overlapping *institutions* as an indicator of *regime* complexity. For example, the article by Stephanie Hoffmann carries the following title: "Overlapping Institutions in the Realm of International Security: The Case of NATO and ESDP." Along the same lines, the article by Christina Davis is titled "Overlapping Institutions in Trade Policy." (Hofmann 2009; Davis 2009). The choice of the term *regime* is kept by Karen Alter and KalRaustiala, in their 2018 article. In both instances, the term *regime* complexity suggests a reference to Stephen Krasner's definition of international regimes (Krasner 1982):

> "Regimes can be 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 (Krasner 1982:186)."

In order to fully grasp the consequences of the dichotomy regime complexity v. institutional complexity, it is imperative to understand what Krasner's definition of international regimes implies. First, it emphasizes the role of actors' expectations as an integral part of the concept, as opposed to the notion of a legal norm or even a moral imperative. This is important because, under this definition, we can conceive of international regimes that are not legally binding as well as regimes that have no legal mantle. Second, beyond "principles, norms, rules," that are typical elements of an international order, Krasner also includes "decision-making procedures" as possible constitutive elements of an international regime. These can also be implicit!

The definition of international regimes proposed by Stephen Krasner is indeed broad.

Conversely, when we think of international institutions we often imply an organization that was assigned a specific mandate, which implies jurisdiction over a particular issue -- for a given time and space. Institutions may or may not have headquarters, they may also have a bureaucracy empowered to decide on day-to-day operations as well as monitoring and interpretation over issues pertaining to their respective mandates. In this sense, institutions (as opposed to regimes) appear to have more concrete aspects to them, at least most of the time. It is hard, for example, to think of "decision-making procedures" as an institution. Though not required, institutions are often created by a legal document which describes their mandate, their members, the rules of operation, etc. In this sense, institutions appear to be closer to a legal person when compared to regimes.

From this analysis it becomes clear that the notion of international *regime* complexity is broader than the notion of *institutional* complexity. By focusing on a subset of complex institutions, Sangiovanni and Westerwinter were able to advance a research agenda that departs from a common denominator: institutions have a concrete existence. Thus, the authors propose the novel concept of a Global Governance Complex, or

> "(...) a system of governance composed of at least three international or transnational institutions or actors whose mandates, functions and memberships overlap, and that jointly address a specific policy problem (Sangiovanni and Westerwinter 2022:238)."

By choosing to work with a subset of the broader phenomenon of complexity in international politics, Sangiovanni and Westerwinter are able to propose an ambitious research agenda. The authors suggest three dimensions to guide a more systematic analysis of global governance complexes: their scale, their diversity and their density (2022:238-242). Even though this research agenda is fundamentally interested in complexity as an international phenomenon, their contribution takes account of a particular form of complexity. It is important to understand this boundary and the scope limitations of some of the proposed analytical tools.

A closer look at the definitions of complexity mobilized by the scholarship revealed that: a)

international *regime* complexity is not the same as *institutional* complexity; b) the latter can be identified as a subset of the former; c) some of the analytical tools proposed by the scholarship on *institutional* complexity are not a good fit for all phenomena that qualifies as international r*egime* complexity. The next section chronicles what the scholarship has contributed to advance our understanding on the question of performance. In other words, how does complexity affect the performance of international regimes, international institutions? This section closes with an analysis of regime complexity vis-à-vis a few neighboring concepts and confounding phenomena, such as networks, transnational legal orders, and interdependence.

THE QUESTION OF PERFORMANCE AND NEIGHBORING CONCEPTS

This essay is in part motivated by the question of performance. Put simply, is complexity directly associated with compliance, effectiveness, and impact? The literature is ambivalent and has only entertained this question within the realm of specific issue areas. In other words, international regime complexity may be a positive outcome in climate change and not such a success story in the area of international human rights. These divergent outcomes result from the characteristics of each issue area, and even within a specific area, the particular nature of a sub-regime.[4] It is not clear, at this point, if the scholarship on regime design and regime complexity will be able to establish an overarching association between complexity and compliance – herein subsumed the questions of effectiveness and impact. There is indeed a wide research agenda to be explored, wherein the mechanisms that link complexity and compliance need to be unveiled (von Stein 2013). The question relates to a broader debate on the effectiveness of international law that can shed light on the underpinnings of regime complexity as well.[5]

Within the field of international human rights, scholars have analyzed a few mechanisms of

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[4]Downs and Jones (2002) analyze issue characteristics of the four main areas of international politics to explore the role of state reputation with respect to compliance. The same logic can be applied to study the impact of complexity on compliance.

[5]William Burke-White and Anne-Marie Slaughter have advocated on behalf of domestic politics and domestic law as the main engines of compliance (Burke-White and Slaughter 2006). More recently, Courtney Hillebrecht defends that the same "domestic" engines are key to enforcement of international human rights decisions and rulings (Hillebrecht 2014;2012). Karen Alter's 2014 book, *The New Terrain of International Law* is an important contribution to this debate (Alter 2014).

influence. When we focus on the consequences of overlapping institutions, the literature proposes the notion of "decision density," as an indicator of complexity. Decision density measures how many legal or quasi-adjudicatory decisions were issued against a state in a given year by international human rights institutions (Carneiro & Wegmann 2017). Departing from this indicator of regime complexity within the area of international human rights, the authors propose that higher levels of complexity might lead to greater compliance, because learning takes place. In other words, state representatives accumulate knowledge; high decision density may be a catalyst or focal point to mobilize state resources toward compliance. Conversely, higher levels of complexity might overwhelm state bureaucracies and lead to inaction (or delayed action); decision density can equally cause backlash that would ultimately delay or prevent compliance. These conjectures await a more conclusive response from the literature.

The three strands of scholarship that constitute the main pillars of this bibliographic essay do not converge on the question of complexity *versus* compliance (effectiveness and impact). However, this is not a central concern to these authors. Alter and Raustiala (2018) chronicle a debate in the literature, centered on the notion of state power – as an intervening variable. The question is to what extent international regime complexity favors the powerful, or conversely, if regime complexity empowers weak states. Their article raises the question, mobilizes the literature to showcase arguments in both directions, and remains inconclusive. Karen Alter revisits the same question with a concluding piece in the 2022 special issue. In this article, she dialogues with Daniel Drezner and his own assessment of the consequences of regime complexity, published with the 2009 special issue of *Perspective on Politics* (Drezner 2009). Here there is a renewed concern with theory building. Alter invites scholars interested in international regime complexity to engage with International Relations theory and advocates on behalf of a historical institutionalist approach, in order to better capture the dynamics at work (Alter 2022).

The balance with respect to compliance, effectiveness and impact remains an open question. Recent work has proposed that complexity, specifically the juxtaposition of mandates, may be associated with normative progress. Scholars that have focused on the dynamics within and amongst regime complexes propose that this ubiquitous contemporary form of global governance is associated with normative progress. Benjamin Faude and Felix Gröbe-Kreul argue that the elemental institutions within a regime complex are often invited to defend their "justificatory narratives," in face of conflicting narratives and negative spillovers. This dialogue is at the core of the mechanism linking complexity to normative progress. The authors propose that normative conflict as well as the contestation of negative spillovers generate a window of opportunity for "inter-institutional justificatory practices (Faude and Gröbe-Kreul 2020:432)." The dialogue between institutions whose mandates otherwise would share little in common invites those involved to reflect upon the sets of principles, norms and objectives that pertain to each institutional mandate individually. In turn, these actors assess normative conflict as well as negative spillovers (unintended consequences most of the times) and seek to reconcile institutional objectives by identifying common ground to interpret principles. Sometimes this conversation leads to normative reform, as the 2001 Doha Declaration exemplifies.[6] This process dilutes power disparities and promotes convergence of objectives within the regime complex (Faude and Gröbe-Kreul 2020:435).

Beyond the question of how institutional/regime complexity impacts the performance of global governance institutions, the literature strives for definitional clarity. To that end, each piece of scholarship being reviewed in this essay proposes a definition of complexity, emphasizing elements that will lead to comparison and measurement. In the case of Karen Alter and Kal Raustiala's 2018 article, they also differentiate complexity from other cognate phenomena. In particular, the authors discuss networks, transnational legal orders, and interdependence as ubiquitous phenomena in international politics that are not synonymous of regime complexity.

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[6]Benjamin Faude and Felix Gröbe-Kreul mobilize the conflict between the WTO and the WHO, during the HIV/AIDS epidemic in the late 1990s, to highlight the clash of norms and objectives with respect to the protection of pharmaceuticals contained in the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPs Agreement). The conflict led to a window of opportunity wherein both organizations engaged in a process of accommodation of each other's objectives. The outcome was the 2001 Doha Declaration, which created exceptions to the TRIPs-WTO regime in order to enable access to HIV-AIDS medication to developing and least developed countries. Ultimately this exception was written into an amendment to the WTO agreements, transforming the exception into a permanent provision, in 2017. The authors see this example as a poster child for the process of normative progress, a process that was triggered by overlap of institutional mandates.

CONCLUSION

Global governance nowadays is characterized by intertwined regulatory efforts that translate in a multitude of multilateral and bilateral treaties, side by side with soft legal instruments. There is an important measure of overlap, with respect to mandates as well as membership. The resulting phenomena has occupied thousands of pages of scholarship, mostly from the 1990s onward. More recently, a group of scholars sought to systematize and to advance our understanding of these phenomena.

This Review Article has engaged with the scholarship on international regime complexity and international institutional complexity that has been published between 2009 and 2022. The literature is heavily intertwined as contributing authors have reacted to each other pieces and some, as Karen Alter, have written articles for all three groups of scholarship reviewed here. The essay chronicles international regime complexity as a ubiquitous phenomenon, which has become a characteristic of global governance nowadays. Related to that is the unavoidable question pertaining to the consequences of complexity for the effectiveness of these regimes and associated institutions. The essay discusses some progress on this front and acknowledges that there exist important gaps in the literature.

Noteworthy, the recent article by Benjamin Faude and Felix Gröbe-Kreul launches a research agenda with the potential to inform empirical studies that can more closely investigate the mechanisms linking regime complexity with normative progress. Their research discusses avenues for influence that are subject to operationalization, observation and comparison. It is counter-intuitive that the interplay of regimes that regulate distinct areas of international politics may be associated with normative progress. The very analysis of "normative progress," for example, which norms, progress for whom? constitutes a natural next step.

One important contribution of this article is to address the terminology adopted within the scholarship by exploring the distinction between international regime complexity -- a much broader term -- in contrast to international institutional complexity. Clarifying the distinction is imperative because there are scholarly contributions that engage with one phenomenon and not the other. Along the way, efforts to measure institutional overlap in global governance take into consideration characteristics that may be present in sets of institutions but not necessarily within the corresponding umbrella regimes.

With these considerations in mind, the scholarship reviewed here constitutes essential reading for any researcher that is interested in global governance, international law, international regime complexity, and compliance. Scholars working with institutional architecture and choice architecture can also benefit from a closer dialogue with the accumulated knowledge on international regime complexity and international institutional complexity. After all, institutions constitute the building blocks of any architectural project.

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