Complexity and Compliance:
How do Complex International Regimes Perform?

Cristiane Lucena Carneiro
University of São Paulo

Prepared for the 2014 FLACSO/ISA Conference
Buenos Aires, 23-25 July

This paper investigates the link between compliance and complexity, with respect to international regimes. Common wisdom often associates high levels of regime complexity with protracted, delayed or short-of-full compliance. The multiple actors, institutions, and reflexivity that characterize complex regimes tend to compromise the efficient interpretation of commitments, which can lead to unintended and sometimes opportunistic behavior that does not conform to the regime. The paper relies on a group of articles that analyzes the consequences of regime complexity in specific issue areas (Perspective on Politics 2009) and furthers the research agenda by looking into whether regimes that display a higher level of complexity are associated with lower levels of compliance. Contrary to expectations based on the common wisdom, dense regimes do not lead to less compliance. Two explanations are offered to account for this unexpected outcome.
Preliminaries

The focus of this paper is on compliance with international regimes, using the level of regime complexity as a point of departure. Nowadays, compliance is a relatively well-understood and defined concept in International Relations. Academic interest for compliance originated in the early 1990s, and developed considerably during the first decade of the years 2000. The same is not true for the notion of complexity. Furthermore, to look at complexity as an independent variable presents several interfaces with other areas of study wherein the concept has developed and furthered an independent research agenda. I can think of Public Administration and Public Policy, Institutional Economics, for example. There, complexity has been approached as both an independent and dependent variable. More recently, a group of IR scholars has looked at institutional complexity and its consequences in several international regimes (Perspective on Politics 2009). There too, complexity appears as an independent variable, but the special issue’s main contribution is to map out the territory rather than to unveil causality. Given the multiple meanings and research designs that envelop the concept of complexity, I will proceed with caution with respect to definitions and expectations. This section continues with a discussion of definitions; section two reviews issues associated with the measurement of complexity; section three presents the argument with respect to the role of reputation; section four elaborates on complexity as an important intervening variable, and a final section concludes.

In a recent article, Scott Page identifies no less than 20 definitions of complexity. Rather than proposing a working definition, he follows Holland (1995; 1998) and proceeds to discuss attributes of a complex system, which include “diverse agents, that are connected either virtually or geographically, who follow adaptive, rule-based behaviors, and whose choices are interdependent in meaningful and often non-linear ways (Page 2012; 7).” Alter and Meunier refer to international regime complexity as “the presence of nested, partially overlapping, and parallel international regimes that are not

---

1 For comprehensive reviews and several articles that guided the theoretical and empirical investigation see Underdal 1992; Mitchell 1994; Chayes and Chayes 1993; Downs 1998; Downs, Rocke, and Barsoom 1996; Simmons 2000; Raustalia and Victor 2004; Von Stein 2005; Mitchell and Hensel 2007.
hierarchically ordered” (2009; 13). They also define a complex system as “a system with a large number of elements, building blocks or agents capable of interacting with each other and with their environment” (2009; 14). The attributes identified by Page clearly speak to some of the elements present in Alter and Meunier’s definition. In particular, the multiplicity of interconnected agents, making choices in interdependent ways, fairly summarizes the overlap between both approaches.

**Indicators of complexity**

A closer look at the individual contributions to the 2009 special issue of *Perspectives on Politics* reveals a set of indicators of international regime complexity that are summarized in Table 1. Aside from the multiplicity of institutions, which at times overlap, coexist or are nested, the analysis of regime complexity in specific areas calls attention to two other indicators of complexity: multiple actors and parallel governance arrangements.

**Table 1 – Indicators of International Regime Complexity**

<table>
<thead>
<tr>
<th>Indicators of complexity</th>
<th>Regime</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Institutional proliferation</td>
<td>Refugees (Betts)</td>
<td>Positive</td>
</tr>
<tr>
<td>• Parallel governance</td>
<td>European int’l trade regime (Hafner-Burton)</td>
<td>Positive</td>
</tr>
<tr>
<td>• Institutional overlap</td>
<td>WTO and PTAs (Davis)</td>
<td>Larger role for reputation effects</td>
</tr>
</tbody>
</table>

“LESSON 4. Regime complexity complicates the implementation of the rules but it does not necessarily make enforcement unlikely; it could make enforcement more likely” (Hafner-Burton 36).
<table>
<thead>
<tr>
<th>Multiplicity of institutions</th>
<th>Election monitoring</th>
<th>Positive, with restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denser policy spaces</td>
<td>Intellectual property</td>
<td>“Muddied” implementation scenario</td>
</tr>
<tr>
<td>More convoluted</td>
<td>(Helfer)</td>
<td>Empowered developing countries in the WTO</td>
</tr>
<tr>
<td>and conflicting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>legal rules</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relocation of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>rulemaking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overlapping</td>
<td>Int’l security,</td>
<td>Negative (inertia)</td>
</tr>
<tr>
<td>mandates with</td>
<td>NATO and ESDP</td>
<td></td>
</tr>
<tr>
<td>non-overlapping</td>
<td>(Hoffmann)</td>
<td></td>
</tr>
<tr>
<td>membership</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Perspectives on Politics, vol. 7(1)

Relevant actors within a regime may have distinct and at times conflicting interests, whereas the "de facto" existence of parallel governance arrangements can jeopardize formal institutional structures. Despite this grim “first look” at the consequences of complexity for international regimes, the overall assessment of individual contributors appears to be positive. The optimism amongst contributors stems more from their concern with regime relevance and longevity, than from a clearly stated preoccupation with compliance. In fact, the term compliance does not appear as a major concern to the editors of the special issue. The questions that guide the group effort are enunciated as follows (Alter and Meunier 2009; 13):

1. How is the sheer complexity of international governance today (...) affecting international politics?
2. Does international regime complexity impact decision-making and political strategies, as well as empower some actors and interest groups?
3. How does complexity enhance or undermine the effectiveness of international regimes?
4. What analytical insights can be gained?
In what follows I depart from the diagnosis offered by individual contributors to the 2009 special issue, with respect to specific issue areas, in order to contextualize these “single case” findings within the broader literature on compliance. I suggest that there are other factors, or intervening variables, that work hand-in-hand with institutional complexity, to promote or to hinder compliance. Instead of thinking of these factors as “variables,” I prefer to label these “characteristics” of a particular issue area. These characteristics may lead to particular reputational consequences, which in turn may or may not be conducive to greater compliance. I analyze the interaction between complexity and issue specificity with a view to unfolding the consequences for states’ reputation; three regimes are the subject of the analysis: international trade, international human rights, and international environmental protection. The first two themes are well illustrated in the special issue; I rely on the work of Ronald Mitchell (2006; 1994) to offer insights in the field of environmental protection. A recent review by Breimeier, Underdal, and Young (2011) update the findings.

Reputation

The remaining of this section draws from Downs and Jones (2002) and from Tomz (2008) to elaborate on the notion of reputation. Given the absence of effective enforcement mechanisms in the current state of international legal institutions, the quest for compliance is grounded on an understanding of international politics as a repeated game, wherein players tame their propensity to free ride. These players subordinate this dominant pattern of behavior to strategies such as tit-for-tat, which in the long run tend to produce cooperation and trust.

Central to this way of thinking is the notion of reputation. Downs and Jones first introduced the notion of “segmented” reputations to refer to the idea that failure to comply in one issue area does not carry consequences for states’ reputation in different areas. According to this logic, states are free to select the regimes they will comply with, based on available resources and interest group politics. Failure to fully comply with a single international regime – say, the
international human rights regime, shall not carry reputation consequences for unrelated regimes, for example the trade regime.

Issue specificity also plays a role. Regimes that permit exclusion of regime-related benefits are more likely to generate compliance, as opposed to regimes where regime-related benefits display characteristic of a public good, wherein benefits once offered cannot be easily withdrawn – and it is almost impossible to insulate consumption for possible retaliation. The international human rights regime is a good example of the latter.

Michael Tomz proposes a dynamic theory of reputation, wherein states’ reputations are assessed in a given context; here, compliance with international obligations shall be understood in context, and the consequences of compliance (or the lack of it thereof) to states’ reputation will be sensitive to this set of circumstances. A central point in the argument is that compliance that takes place in an adverse set of circumstances should be rewarded – in comparison to compliance in easier contexts. According to this logic, and given scarce resources, states will favor compliance within “harder” contexts over compliance that does not require much effort. I will come back to this point below.

The discussion of compliance when obstacles are virtually non-existent dates back to the debate between Chayes and Chayes (1993; 1995) and Downs, Rocke and Barsoon (1996). Here it is not the place to revisit this literature in great detail, but in a nutshell, for Downs and his co-authors compliance should be rewarded when it involves some measure of behavior modification by states. Compliance that reflects attitudes and policies that are already prevalent in domestic or regional regimes should not be rewarded in the same manner as compliance with norms that need to be internalized or entail significant implementation measures. It is the challenge that a measure of compliance requires that should be the gauge for states’ level of commitment toward that regime.

Aside from the role of reputation, focusing on the context within which compliance takes place and issue specificity, scholars have also pointed to the role of managerial and enforcement capabilities. In their contribution to this workshop on compliance, Simon Hug and Simone Wegmann call attention to the role of these two variables for compliance with human rights obligations at the
regional level, as well as for compliance in the United Nations system. Their empirical findings suggest that differences in enforcement mechanisms across regional regimes impacts the effect of ratification of the Convention Against Torture on the level of protection (Hug and Wegmann 2013; 22). There are clear implications for ratification of human rights treaties more broadly, as well an interesting assessment of the underexplored role of managerial capabilities on the level of protection.

This section analyzed the role of issue specificity and its impact on states’ reputation as an important underexplored aspect of compliance. The preoccupation with omitted of understudied variables remains an important research agenda in the field of compliance studies, as Hug and Wegmann (2013) argue. The discussion of reputation and compliance offered here dovetail to introduce complexity as yet another important intervening variable, in its compounded effect through the notion of state reputation.

Complexity as an important intervening variable

Complexity impacts state reputation in two important ways: first, it generates “small group environments” which magnify reputation effects; second, it “toughens” the policy space, thus increasing reputation rewards. The first effect is grounded on empirical observations by contributors to the special issue (Alter and Meunier 2009; 18. Davis 2009; 29). The second effect is derived from Michael Tomz’s theory of reputation. If it is true that complex regimes “magnify” the role of reputation and that complexity raises the value of reputation, we should observe higher levels of compliance to be associated with complex international regimes.

Given this set of theoretical expectations with respect to international regime complexity, how do single international regimes perform? What is their level of complexity and how complexity affects compliance? I focus on the international trade regime, the international environmental protection regime, and the international human rights regime. In light of the definitions discussed in section one, I depart from the assumption that all three international regimes display elements of complexity. Nevertheless, I propose that the level of compliance reaches the highest threshold in the trade regime, followed by the
regime on environmental protection, and the human rights regime. This statement demands some elaboration. There are aspects of the definition of complexity offered above that will come in handy to reinforce this statement. According to Alter and Meunier, regime complexity entails “the presence of nested, partially overlapping, and parallel international regimes that are not hierarchically ordered” (2009; 13). In particular, absence of a hierarchical order helps distinguish between the trade regime, on one hand, and the environmental and human rights regimes.

By the same token, Scott Page asserts that complexity is characterized by the presence of “diverse agents, that are connected either virtually or geographically, who follow adaptive, rule-based behaviors, and whose choices are interdependent in meaningful and often non-linear ways (2012; 7).” From this excerpt, the notion of non-linear interdependent choices is useful in establishing distinct levels of complexity amongst the three regimes. I argue that the relationship between the international trade regime and other international trade policy instruments is non-hierarchical and often non-linear – thus rendering the GATT-WTO regime highly complex.

In contrast, the environmental protection regime is compartmentalized, wherein the institutionalization process is circumscribed by the boundaries of a particular issue. I illustrate the point with a set of treaty regimes: The Convention on the International Trade in Endangered Species and the Montreal Protocol on Substances that Deplete the Ozone Layer both focus on two different and well-defined issues, thus delimiting their scope and reach. Regardless of their distinct problem characteristics, i.e. the number of actors (Mitchell 2006; 76), the degree of overlap and nesting between them is minimal, and I argue that the choices actors make within the two treaty regimes to be relatively independent from each other and fairly linear. I do not claim that this absence of overlap and interdependence holds true for all treaty regimes that comprise the international environmental regime as it is known today, but I argue that it is possible to use these criteria to contrast this regime with the international trade regime, embedded in the GATT/WTO institutions.

In the same venue, the international human rights regime displays even less overlap and interdependence, in as much as the six treaties referred to in the
literature as the key institutional regime components are also segmented in their treatment of rights and protection instruments (Landman 2005; Simmons 2009). The absence of enforcement mechanisms limits the reach of actors’ choices, thus rendering the discussion on the degree of interdependence and linearity of these choices a moot question.

In contrast, the choices actors make in the GATT/WTO regime have profound consequences when it comes to the measures of enforcement that they may be able to tap into. For example, if states opt for negotiating particular terms of trade in a preferential trade agreement, they wave their rights under the WTO dispute settlement mechanism and its associated enforcement measures. Christina Davis and Emilie Hafner-Burton contributions to the 2009 special issue strengthen this point; Davis in particular, comments on how “actors develop trade strategies to use a particular venue for a trade problem according to their expectation of which will deliver a better outcome (2009; 27).” She continues with examples: “the main venue to address trade problems among the U.S., the E.U., and Japan is the WTO, while they each pursue PTAs with smaller states (2009; 27).”

The international trade regime is also very comprehensive, in as much as a single international institution – the WTO – holds a vast mandate to regulate, interpret, help settle, and adjudicate issues arising from the regime. The WTO institutional umbrella was designed as a one-stop-shop for all trade related questions, including public health, environmental protection, and scientific uncertainty. This institutional design impacts complexity directly, because the links between some of these issues muddy the interpretation of commitments and risk creating obligations that are not always compatible with each other.

In this section I made the case for the distinct levels of complexity that the trade, environment, and human rights regimes display. This is an important aspect of the analysis, because in the next section I will observe the impact of distinct levels of complexity on state compliance, through the notion of reputation. As said before, complexity interacts with reputation to influence compliance with international commitments states make.

The argument
Having analyzed the elements of complexity that one can observe in the three international regimes discussed here, and given the contribution of the related literature, the level of compliance across these regimes is not uniform. Clearly, compliance with trade rules is greater than compliance with human rights norms. The international environmental regime lies in between, with levels of compliance varying dramatically among sub-regimes.

The common sense answer would direct us to some institutional features that may foster compliance, given equivalent levels of complexity. The existence of enforcement mechanisms is one such feature. Issue specificity, when it comes to the possibility of exclusion of benefits is another feature. For Beitmeier, Underdal, and Young, “compliance (…) is a product of complex causality in which the most significant factors are incentives, institutional design, the rule of law, and the power of legitimacy (2011; 584).” I argue that the interaction between complexity and reputation is an important factor, which has been neglected by the literature so far.

Complexity influences compliance, through its impact on reputation, on two fronts: first, it creates small group environments that unintentionally magnify the role of reputation. The observation that international regime complexity leads to the creation of small group environments is grounded on the fact that increasingly individuals that operate within these regimes become experts on a set of issues that dominate the debate amongst regime members, in any given time. These individuals often spend their careers working with a single issue, as government representatives, NGO operators, or advisors from the private sector. Career bureaucrats working for international organizations tend

---


3 Ronald Mitchell notes how the number of actors often hinders compliance. He refers to the central elements of problem structure, drawing from Koremenos et al (2004), as distribution, enforcement, the number of actors and asymmetries among them, and uncertainty. The number of actors – as well as eventual asymmetries amongst those – will vary from one environmental regime to the other. Two examples that illustrate distinct outcomes with respect to compliance are CITES and the Montreal Protocol (Mitchell 2006; 78).

4 Downs and Jones suggest that trade agreements, as well as security agreements, generate higher levels of compliance because benefits associated with these agreements can be withdrawn. In contrast, international human rights and environmental agreements suffer from the pathologies of public goods. Once benefits associated with the latter are offered, there is no effective way to demand the counterpart, because exclusion is not possible (Downs and Jones 2002).
to diversify their expertise and rotate assignments more often, but they too join ad hoc networks from time to time. The level of interaction amongst these individuals influences the flow of information and, according to Christina Davis, “helps to uphold a common reputation for a state within the trade regime (2009; 29).” She proposes that complexity *magnifies* the role of reputation.

Complexity also impacts compliance when it toughens the context within which states operate. Following Tomz (2008), I argue that states’ reputation are sensitive to the context within which compliance takes place and that reputation is not static, but rather evolves according to the history of play and to a new context. Tomz considers three types of players: the “stalwart,” who complies in favorable as well as in adverse circumstances, the “fair-weather,” who complies when conditions are favorable but fails to comply otherwise, and the “lemon,” who never complies. A type of player can become another type, or change its reputation, if the type behaves in a manner that does meet the model’s initial expectations. Thus, if a “stalwart” fails to comply (ever!), it becomes a “fair-weather,” and so on.

Michael Tomz’s model can be used to account for the second consequence of complexity for reputation. I propose that we think of complexity as a set of adverse circumstances, with respect to compliance – understood as the level of behavior modification required of states with respect to a given regime. In this sense, complex regimes are the equivalent of a tougher context wherein compliance shall take place, therefore these regimes can be seen as stages for reputation gains. When states comply, in light of adverse circumstances, they will increase their reputation in the system. Two aspects of this logic require explaining: first, why do complex regimes present greater challenges for compliance? Second, why states would insist on compliance, anyway? To answer the first question one needs only to look at some of the indicators of complexity. The presence of overlapping, nested, or parallel institutions demands a greater effort from regime operators with respect to interpretation, implementation, and adjudication. If one looks at some of the elements in Scott Page’s definition of complexity, there too, the diversity among agents “whose choices are interdependent in (...) often non-linear ways (2012; 7)” makes it hard to predict behavior, when looking for Pareto optimal outcomes. In these circumstances,
compliance shall at least take more time, if not greater expertise and managerial capabilities. Thus, timely compliance when it occurs demands a reputation premium.

The question as to why states pursue compliance when facing complex regimes can be broken into two answers: initially, states themselves often have a vested interest in complexity. Several empirical observations in the 2009 issue of Perspectives on Politics point to the fact that states create complexity because they want to forum shop for better and more favorable decision-making venues. With respect to adjudication itself, forum shopping allows states to bring a dispute to an international body that is more likely to decide in their favor. In this case, complexity is a way to maximize gains. The absence of compliance when complexity is in the state’s self-interested course of action would be illogical. The second part of the answer refers back to the notion of reputation. States choose to comply because one of the benefits associated with compliance in adverse circumstances is reputational gains.

Final remarks

This paper began with the goal of analyzing the impact of international regime complexity on compliance. The paper is motivated by the common belief that complex regimes lead to less compliance. I relied on current definitions of complexity identified in the international relations literature and on others that draw from political philosophers. An effort was made to present a list of indicators and elements of complexity that one should rely on, for the purposes of carrying sound comparative studies.

I advance a theoretical argument, whereby the effect of complexity on compliance is mediated by its impact on state reputation. States comply, in part, because they know that compliance with complex regimes improves their reputation. This argument is based on the more broad literature on compliance, which includes authors like Downs (1998), Downs, Rocke, and Barsoom (1996), as well as on recent studies on reputation (Downs and Jones 2002; Tomz 2008).

A first attempt to look at how the theoretical argument performs empirically was made. To that end, I argued that the level of complexity in the international trade regime, the international environmental protection regime,
and the international human rights regime vary. In particular, I propose that the trade regime is more complex, when compared to the environmental protection and the human rights regime, in this order. With those premises established, I proceeded to investigate whether the greater levels of compliance with the trade regime could be attributed, in part, to its level of complexity. Conversely, one of the reasons why there is on average low respect for the international human rights legal system is a consequence – though unintended – of its low level of complexity.

The paper opens an avenue of research, when it calls attention to complexity as an important and often neglected explanatory variable in the international regime literature. It also carries concrete policy implications for operators in the international human rights regime. It may be the case that by increasing the level of complexity, for example through links to regional regimes and issue linkage across regimes, policymakers may be able to influence the overall level of compliance with international human rights norms.
References:


