***Transnational Networked Governance***

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1. **Suitability to lead a ‘scientific-breakthrough’ study**
2. **Research Program**
   1. ***Scientific Background***

The world is facing today a series of acute challenges in multiple areas, including climate change, infectious diseases, economic inequality, protection of labor rights across global supply and commodity chains, and global migration (Anner, 2020; L. Gostin & Katz, 2016; Nielsen, Hasselbalch, Holmberg, & Stripple, 2020; Sumner, 2019; UNEP, 2020). Coping with these challenges requires a strong system of global governance. The Covid 19 pandemic and the recent wave of extreme weather events have demonstrated the scale and gravity of these challenges (Fuentes, Galeotti, Lanza, & Manzano, 2020). The recent IPCC report, which noted that global warming of 1.5C and 2C will be exceeded during the 21st century unless global society succeeds in achieving deep reductions in CO2 and other greenhouse gas emissions in the near future, is a vivid illustration of the gravity of the risks facing the global society (IPCC, 2021: 17). The current international treaty system finds it increasingly difficult to address the mounting challenges the world faces today (Dauvergne, 2018; L. O. Gostin, Habibi, & Meier, 2020; Kreienkamp & Pegram, 2020). At the core of these difficulties is a mismatch between the global demand for governance and the regulatory capacity of the treaty system and its designated institutions (intergovernmental organizations (**IGOs**)) (Hale, Held, & Young, 2013; Kreienkamp & Pegram, 2020: 785). (Dauvergne, 2018; L. O. Gostin et al., 2020; UNEP, 2019)Two recent international reports illustrates the extent of this governance gap. The report of the Independent Panel for Pandemic Preparedness & Response: 'COVID-19: Make it the Last Pandemic’ provides a devastating critique of the way in which the global public health system, governed by the World Health Organization, has managed the crisis (Independent-Panel-of-Pandemic-Preparedness-and-Response, 2021). The United Nation Environment Programme (UNEP) ‘Emissions Gap Report 2020’ emphasizes how far we are from resolving the climate change crisis, noting that: “there is inconsistency between the emission levels implied by current policies and those projected under current NDCs by 2030, and, more importantly, those necessary for achieving net-zero emissions by 2050” (UNEP, 2020: XVII).

In parallel to these increasing socio-ecological pressures, the structure of the global governance system has been transformed. A new array of actors—from firms, cities and regions to informal inter-governmental organizations, transnational public–private partnerships and private transnational regulatory regimes—have entered the arena. The outcome is the establishment of a new type of political structure—the ***hybrid global governance system*** (Abbott & Faude, 2021; Lake, 2021:346). In this new hybrid regulatory universe, private transnational regulatory regimes (**PTRs**), which both produce and enforce norms at the global level, play a particularly important role (Hale, 2020; J. W. Kuyper, Linnér, & Schroeder, 2018; Pattberg, Widerberg, & Kok, 2019; Streck, 2020). These new PTRs operate in diverse areas, ranging from product standards to human and labor rights, environmental protection, global health governance and the ranking of academic institutions (Bartley, 2007; Perez, 2016).

This increasing hybridity and complexity of the global governance system (Abbott & Faude, 2021; J. W. Kuyper et al., 2018; Orsini et al., 2019; Zelli, Gerrits, & Möller, 2021) can be viewed from two perspectives (Orsini et al., 2019). The first focuses on the complexity of the global socio-ecological system, (Young, 2017a; 2017b: 1-22), while the second on the complexity of the global governance system itself. The latter aspect is directly related to the shift to a hybrid model of governance, which has multiplied the number of norms, institutions and communities that take part in global governance processes as well as their degree of interconnectedness(Biermann & Kim, 2020; Rakhyun E Kim, 2019).

Despite the wide-ranging literature on global governance, **we still lack a** **unified theoretical framework that captures the complexity and dynamics of the *hybrid global governance system***. Realizing such a framework requires further research on both the conceptual and empirical-methodological level. At the *conceptual level*, there is a need to construct a unifying theory that captures the shift to a hybrid governance structure. Constructing a unifying theory, however, cannot only be validated via *empirical-methodological* ‘big picture’ studies, which use large data sets to test alternative theories (Fuß, Kreuder-Sonnen, Saravia, & Zürn, 2021; Orsini et al., 2019). Only through the bi-directional flow of information between the conceptual and empirical levels can we reach a holistic understanding of this new permeating form of governance.

I consider first the shortcomings at the conceptual level. Examples include ‘regime complex’ (Keohane & Victor, 2011), ‘organizational ecology’ (Abbott, Green, & Keohane, 2016) ‘liquid authority’ (Krisch, 2017), ‘transnational business governance interactions’ (Wood, Eberlein, Meidinger, Schmidt, & Abbott, 2019), ‘governance spheres’ (Cashore, Knudsen, Moon, & van der Ven, 2021), ‘hybrid institutional complexes' (Abbott & Faude, 2021), ‘orchestration’ (Abbott & Snidal, 2010) and ‘pluralist jurisprudence’ (Roughan & Halpin, 2017). While these different concepts all provide valuable insights to the analysis of global governance, the ultimate result is a fragmented theoretical discourse, which makes it difficult to generate consistent predictions and sound policy recommendations (Coen & Pegram, 2018).

Two prominent research strands in the literature are organizational ecology and governance interactions. It is thus important to examine them in more detail. The notion of organizational ecology was developed by sociologists and management scholars in the 1980s (Michael T Hannan & Freeman, 1989; Michael T. Hannan, 2005). Organizational ecology theory is concerned with the evolutionary dynamics of populations of organizations —especially their rates of “birth” (founding or entry) and “death” (dissolution or exit), but also changes in the composition (the distribution of organizations over populations) and diversity (differentiation in organizational form) of the population (Michael T. Hannan, 2005). Organizational ecology seeks to study population dynamics both theoretically, by examining mechanisms that can explain longitudinal changes in organizational population such as competition over scarce resources and legitimation, and empirically through the systematic study of population-wide dynamics (Michael T Hannan & Carroll, 1992). Recently several authors have applied this concept to the study of global governance (Abbott et al., 2016; Eilstrup-Sangiovanni, 2021; Lake, 2021). Eilstrup-Sangiovanni uses the prism of organizational ecology to study IGO death during the period of 1815–2016 (Eilstrup-Sangiovanni, 2021). Abbott *et al* use insights from organizational ecology to explain the viability and rapid growth of PTRs, relative to the stagnant growth of IGOs and present evidence from climate governance to support their argument (Abbott et al., 2016). Lake argues that the rise of PTRs is both required and facilitated by disagreements between states that block the creation of what might be otherwise effective IGOs (Lake, 2021).

The application of the concept of organizational ecology to the field of global governance raises, however, several difficulties, which remain unresolved in the recent studies. Organizational ecology is driven by ‘population thinking’: the focus of the analysis are the changes that take place at that level of a population of organizations (Michael T Hannan & Carroll, 1992; Lake, 2021: 347). A population is defined as a set of organizations with a common form (Michael T. Hannan, 2005: 52). The first problem with this approach is that it disregards important elements in the ontology of global governance, especially the critical role of legal texts and the discursive dynamic they produce. Because of the centrality of legal-regulatory texts to global governance processes, a theory that ignores them misses critical aspects of the system’s dynamic. A second problem concerns the fact that organizational ecology disregards an important aspect of the dynamic of global governance processes: the interaction between the organizations that populate the system (Michael T Hannan & Carroll, 1992: 26-7). This disregard constitutes an explicit theoretical choice; organizational ecology adopts an asocial theoretical approach which assumes that that organizations may compete even though they lack awareness of one another. Competition is understood as an indirect and diffuse process that arise from organizations’ joint dependence on the same limited resource (Michael T Hannan & Carroll, 1992: 26-7). This approach, which may be appropriate for the study of business corporations, is not appropriate to the study of the global governance system, where the question of hybridity and the interaction between the PTRs and IGOs constitutes a core theoretical and policy challenge. As I will argue below network analysis provides the appropriate theoretical and empirical tools for such analysis. A third problem concerns the fact the theory has little to say about the jurisprudence of global governance and in particular about the emergence and exercise of authority. A strong reflection of this gap can be found in the idea of legitimation. An organizational form acquires legitimation according to Hannan and Carroll, when there is little question in the minds of actors that it serves as the natural way to effect some kind of collective action (Michael T Hannan & Carroll, 1992: 34). The idea of legitimation as ‘taken-for-grantedness’ is very different from the idea of legitimacy in law. Legitimacy questions whether the exercise of authority by an institution is rightful and deserves recognition based on its conformance to principles of democratic governance and universal morality (Tallberg & Zürn, 2019). This gap may reflect the intellectual roots of the theory which originated in management studies. Finally, the literature on organizational ecology is rooted in a positivist tradition and has relatively little to say about the normative and policy-design questions that underpin global governance debates (Ackroyd & Fleetwood, 2000). Jointly these blind spots makes the theory ill-suited to serve as an all-embracing theory of global governance.

Contrary to organizational ecology, the research line, spearheaded by Stepan Wood and Burkard Eberlein has focused on the role of *interactions* in transnational business governance. They defined interactions as “mutual actions and responses of individuals, groups, institutions or systems,” (Wood, Abbott, Black, Eberlein, & Meidinger, 2015: 339) and transnational governance as “governance in which non-state actors or institutions assert or exercise authority in the performance of one or more components of regulatory governance across national borders.” (Wood et al., 2019: 3). They then developed an analytical framework to study the nexus between dimensions of interaction (e.g., who interacts, and the pathways and character of the interaction) and components of regulatory governance (e.g., rule formation, monitoring, and compliance) (Eberlein, Abbott, Black, Meidinger, & Wood, 2013). The framework of transnational business governance interactions (**TBGI**) has many affinities with this project, but it leaves many questions open. First, although TBGI is interested in the exercise of authority, its theoretical apparatus does not explain how such authority arises through the interactive dynamics of transnational regulation and what are its jurisprudential qualities. Second, the way in which the TBGI project defines the concept of interaction is so broad that it limits its explanatory value. A similar focus on interactions can be found in the work of Anne-Marie Slaughter (Slaughter, 2017; Slaughter & Zaring, 2006) and Diane Stone (Stone, 2004, 2008). Slaughter and Stone have highlighted the important role of networks in the establishment of new governance mechanisms (e.g., the emergence of sub-governmental networks of bureaucrats (Abbott, Kauffmann, & Lee, 2018)) and in the diffusion of policy ideas (Stone, 2013). However, their work also fall short of providing a complete articulation of the current hybrid global governance system. First, both Slaughter and Stone make little use of the formal analytical and empirical tools of network analysis. Second, they do not attempt to link between the sociological insights of their arguments and the jurisprudential features of the transnational legal system.

A second problem in the current picture concerns the gap in ‘big picture’ empirical research (Jordana, Schmitt, & Holesch, 2020: 5). This gap constitutes a significant lacuna, whose persistence cannot be justified anymore given the development of sophisticated computational approaches for the social science research. This empirical gap has several roots: (1) the lack of integrated theoretical models bringing together ideas from complexity science with legal and political theory in a sufficiently rigorous manner; (2) the lack of appropriate interdisciplinary expertise to pursue a research that involves the legal and political knowledge and methodological training; (3) the lack of datasets, especially focusing on private (non-treaty based) regulatory instruments. This situation can be contrasted with the significant progress that has been made in the study of global risks that constitute the subject matter of global regulation. Thus, for example, both climate change and viral pandemics have developed extensive research programs using big data analytics (John-Hopkins-University-Coronavirus-Resource-Center, 2020; King, 2004; Pardi & Weissman, 2020; Pihl et al., 2021). I can make here a risky but not far-fetched analogy to physics. As we could not have imagined the development of theoretical particles physics without experiments such as those carried out in the Large Hadron Collider at CERN (Gagnon, 2016; Krause, 2014) so we cannot continue theorizing about global governance without engaging in wide-ranging empirical analysis. While global governance cannot be studied using the ‘experimental’ methods of the natural sciences, it can use a variety of empirical techniques such as social network analysis which will be primary mode of inquiry in this project (Carrington, Scott, & Wasserman, 2005; Froehlich, Rehm, & Rienties, 2019; Knoke, Diani, Hollway, & Christopoulos, 2021; Yousefi Nooraie, Sale, Marin, & Ross, 2020). While there has been some progress, especially in the past few years, in applying big data research methods to the study of global governance, it has been relatively sporadic and limited almost exclusively to the study of the international treaties and IGOs (Eilstrup-Sangiovanni, 2021; Fuß et al., 2021; Haftel & Lenz, 2021; Rakhyun E. Kim & Morin, 2021; Maoz, 2010; Mitchell et al., 2020; Pratt, 2018; Tallberg, Sommerer, & Squatrito, 2016) and to informal forms of inter-governmental collaboration (Charles B Roger, 2020; Charles B. Roger & Rowan, 2021; Vabulas & Snidal, 2021).[[1]](#footnote-1) Further, only few of these studies have taken a big picture view and these have focused exclusively on the treaty and IGOs universe. Notable exceptions include Zeev Maoz study of the evolution of international networks (Maoz, 2010), Jason Beckfield study of the structure of the world polity through a network analysis of the evolution of the population of IGOs since 1820 (Jason Beckfield, 2010), Kim and Morin study of super-cluster governance structures (Rakhyun E. Kim & Morin, 2021) Haftel and Lenz study of institutional overlap in global governance (Haftel & Lenz, 2021) and Eilstrup-Sangiovanni study of the ‘death’ of IGOs (Eilstrup-Sangiovanni, 2021). A recent review data sets with relevance to the study of global governance noted that “information on private actors in global governance features in very few datasets. This represents a severe gap of information, given the importance of private sector actors in global governance” (Jordana et al., 2020: 6).[[2]](#footnote-2) Of the 19 datasets on global governance agents identified by the Globe team only two focused on private governance (Jordana et al., 2020: 5). They note that what is missing in the current literature are “large-n studies or data sets with comparable relevant information on these [private] actors, networks and systems” and emphasize that “It would be a tragic fallacy to interpret this absence of research as an indication that private-sector actors are not engaging in global governance. By all means, existing work suggests a lot of currently understudied activities” (Jordana et al., 2020: 8). Most of the datasets pertaining to private global governance are maintained by private commercial entities, which provide limited access to researchers, thus creating further hurdles for thorough academic analysis.[[3]](#footnote-3) Existing empirical research of private global governance schemes has been limited, focusing primarily on single regimes or sectors. Examples include study of private standards that govern the measurement and management of greenhouse gases (Green, 2013), sustainability accounting (Thistlethwaite & Paterson, 2015), the global network of biofuel sustainability standard-setters (Henriksen, 2015), codes of conduct in the apparel industry (Paiement & Melchers, 2020), transnational municipal networks in global climate governance (Bansard, Pattberg, & Widerberg, 2017) or climate finance governance networks (Kawabata, 2021).

A final difficulty concerns the fact that most of the empirical research, and particularly the ‘big picture’ studies, were undertaken by political scientists (especially from the field of IR). The relative absence of legal scholars from the empirical had two undesired outcomes. First, significant legal questions related to global governance have not received empirical attention. A good example is the question of the links between private corporate codes and supply-chain contracts and PTR standards and international agreements (especially labour, environmental and human rights). While there has been significant progress in the legal analysis of this question (Snyder, Maslow, & Dadush, 2021), there is a significant shortage of empirical research. This lacuna has wide-ranging policy repercussions because these private-law instruments play a critical role in the implementation of public norms to transnational business practice. Second, the lack of legal involvement in empirical research also led, in some cases, to conceptual confusion in the use of legal terminology, which could consequently hamper the research design. A good example is Kuyper et al study of Institutional Accountability of Nonstate Actors in the UNFCCC (J. Kuyper, Bäckstrand, & Schroeder, 2017)

I argue that this empirical shortcoming also hampers the advancement of a sound theory of hybrid global governance.

* 1. **Research objectives & expected significance**

In this project I seek to develop an empirically driven theory of *hybrid global governance*, which brings together ideas from legal theory, international relations (IR), social science and network science. I argue that this integrated theoretical approach, which is encapsulated in the title of this proposal - ***Transnational Networked Governance (TNG) –*** is better suited to the study of the global hybrid governance system, than other approaches. The proposed framework responds to the above critique both by developing a new theoretical framework and by proposing a wide-scale empirical analysis. The theoretical challenge that a theory of *hybrid global governance* faces is multifaceted. First, such a theory must be able to explain the emergence of new types of global authorities which are not part of the common universe of public international law, such as PTRs and to offer a framework through which their regulatory output can be evaluated. Second, the theory must provide an account of the interaction between the private and public governance realms, which is one of the key puzzles underlying the study of hybrid governance systems. Such account should consider questions such as the synergy/antagonism between the two realms, the contribution of hybridity to the resilience of the global system and more. Third, a theory of hybrid global governance must be able to link between the system’s institutional features (e.g., its cartography) and its jurisprudential and doctrinal features (e.g., how it influences the liability of various actors). Finally, it requires the development, assembling and adaptation of new methodologies that fit its theoretical ambitions.

TNG seeks to overcome the shortcomings of the existing models of hybrid global governance by: (1) developing a more precise and theoretically robust articulation of the topology of the hybrid global governance system, drawing on the dual concepts of network of networks and multi-layered networks; using this dual framework allows TNG to capture the macro topology and dynamic of the field, while at the same time remaining sensitive to jurisprudential questions as well as to the need to cope with questions related to the hybrid nature of the current system. (2) developing a new model of transnational legal authority, which challenges the conventional hierarchical thinking that underpins traditional legal theory, and argues that transnational legal authority is an *emergent, network-based phenomenon*. This thesis brings together analysis of the network structure of PTR regimes and new philosophical and jurisprudential analysis of the idea of grounding. (3) developing a network-driven model of meta-governance as a way to model the self-organizing dynamics of transnational regulatory networks; (4) developing a framework to analyze the steering capacities of the PTR authorities based on a dual framework of network compliance (highlighting the compliance synergy between different PTRs) and corporate signaling (exposing the signaling dynamic underlying corporates certification decisions). (5) developing a new model of inter-face institutions and analyzing their role in the interaction between public and private regime-complexes; (6) developing a new theory of PTR responsibility, which will disentangle the private law and public law aspects of PTR responsibility and expose its influence on other players (e.g., firms and employees) in transnational production chains; (7) assessing the synergy and complementarity between the private and public domains of global governance, devising quantitative indicators to measure it and analyzing its contribution to the resilience of the system, developing policy design recommendations to improve it.

In the second tier of the project, I intend to test of my theory, drawing on a multi-method research strategy, which will bring together the tools of social network analysis (**SNA**), with additional quantitative and qualitative methods, including qualitative sociological inquiry, consumer-choice modelling, and legal-doctrinal research. To facilitate the analysis, I intend to build an original dataset which will capture key aspects of the evolution of the global hybrid governance system. As noted above, the lack of such datasets has been a major stumbling block in the effort to develop a theory of global governance that can cope with the myriad challenges facing the world (Jordana et al., 2020).

Abbott, Kenneth W, Green, Jessica F, & Keohane, Robert O. (2016). Organizational ecology and institutional change in global governance. *International Organization, 70*, 247-277.

Abbott, Kenneth W, & Snidal, Duncan. (2010). International regulation without international government: Improving io performance through orchestration. *The Review of International Organizations, 5*(3), 315-344.

Abbott, Kenneth W., & Faude, Benjamin. (2021). Hybrid institutional complexes in global governance. *The Review of International Organizations*. doi: 10.1007/s11558-021-09431-3

Abbott, Kenneth W., Kauffmann, Céline, & Lee, Jeong-Rim. (2018). The contribution of trans-governmental networks of regulators to international regulatory co-operation. *Regulatory Policy Working Papers No. 10*. doi: doi:<https://doi.org/10.1787/538ff99b-en>

Ackroyd, Stephen, & Fleetwood, Steve. (2000). *Realist perspectives on management and organisations*: Psychology Press.

Anner, Mark. (2020). Squeezing workers’ rights in global supply chains: Purchasing practices in the bangladesh garment export sector in comparative perspective. *Review of International Political Economy, 27*(2), 320-347. doi: 10.1080/09692290.2019.1625426

Bansard, Jennifer S., Pattberg, Philipp H., & Widerberg, Oscar. (2017). Cities to the rescue? Assessing the performance of transnational municipal networks in global climate governance. [journal article]. *International Environmental Agreements: Politics, Law and Economics, 17*(2), 229-246. doi: 10.1007/s10784-016-9318-9

Bartley, T. (2007). Institutional emergence in an era of globalization: The rise of transnational private regulation of labor and environmental conditions. *Am. J. Sociol., 113*, 297.

Biermann, Frank, & Kim, Rakhyun E. (2020). Architectures of earth system governance: Setting the stage. In F. Biermann & R. E. Kim (Eds.), *Architectures of earth system governance: Institutional complexity and structural transformation* (pp. 1-34). Cambridge: Cambridge University Press.

Carrington, Peter J, Scott, John, & Wasserman, Stanley. (2005). *Models and methods in social network analysis* (Vol. 28): Cambridge university press.

Cashore, Benjamin, Knudsen, Jette Steen, Moon, Jeremy, & van der Ven, Hamish. (2021). Private authority and public policy interactions in global context: Governance spheres for problem solving. *Regulation & Governance, n/a*(n/a). doi: <https://doi.org/10.1111/rego.12395>

Coen, David, & Pegram, Tom. (2018). Towards a third generation of global governance scholarship. *Global Policy, 9*(1), 107-113. doi: 10.1111/1758-5899.12527

Dauvergne, Peter. (2018). Why is the global governance of plastic failing the oceans? *Global Environmental Change, 51*, 22-31. doi: <https://doi.org/10.1016/j.gloenvcha.2018.05.002>

Eberlein, Burkard, Abbott, Kenneth W., Black, Julia, Meidinger, Errol, & Wood, Stepan. (2013). Transnational business governance interactions: Conceptualization and framework for analysis. *Regulation & Governance, 8*, 1-21. doi: 10.1111/rego.12030

Eilstrup-Sangiovanni, Mette. (2021). What kills international organisations? When and why international organisations terminate. *European Journal of International Relations, 27*(1), 281-310. doi: 10.1177/1354066120932976

Froehlich, Dominik E, Rehm, Martin, & Rienties, Bart C. (2019). *Mixed methods social network analysis: Theories and methodologies in learning and education*: Routledge.

Fuentes, Rolando, Galeotti, Marzio, Lanza, Alessandro, & Manzano, Baltasar. (2020). Covid-19 and climate change: A tale of two global problems. *Sustainability, 12*(20), 8560.

Fuß, Julia, Kreuder-Sonnen, Christian, Saravia, Andrés, & Zürn, Michael. (2021). Managing regime complexity: Introducing the interface conflicts 1.0 dataset: WZB Discussion Paper.

Gagnon, Pauline. (2016). *Who cares about particle physics?: Making sense of the higgs boson, the large hadron collider and cern*: Oxford University Press.

Gostin, Lawrence , & Katz, Rebecca. (2016). The international health regulations: The governing framework for global health security. *The Milbank Quarterly, 94*(2), 264-313. doi: 10.1111/1468-0009.12186

Gostin, Lawrence O, Habibi, Roojin, & Meier, Benjamin Mason. (2020). Has global health law risen to meet the covid-19 challenge? Revisiting the international health regulations to prepare for future threats. *Journal of Law, Medicine & Ethics (Forthcoming June 2020)*.

Green, Jessica F. (2013). Order out of chaos: Public and private rules for managing carbon. *Global Environmental Politics, 13*(2), 1-25. doi: 10.1162/GLEP\_a\_00164

Haftel, Yoram Z., & Lenz, Tobias. (2021). Measuring institutional overlap in global governance. *The Review of International Organizations*. doi: 10.1007/s11558-021-09415-3

Hale, Thomas. (2020). Transnational actors and transnational governance in global environmental politics. *Annual Review of Political Science, 23*(1), null. doi: 10.1146/annurev-polisci-050718-032644

Hale, Thomas, Held, David, & Young, Kevin. (2013). *Gridlock: Why global cooperation is failing when we need it most*: Polity.

Hannan, Michael T, & Carroll, Glenn R. (1992). *Dynamics of organizational populations: Density, legitimation, and competition*: Oxford University Press.

Hannan, Michael T, & Freeman, John. (1989). *Organizational ecology*: Harvard university press.

Hannan, Michael T. (2005). Ecologies of organizations: Diversity and identity. *Journal of Economic Perspectives, 19*(1), 51-70. doi: 10.1257/0895330053147985

Henriksen, Lasse Folke. (2015). The global network of biofuel sustainability standards-setters. *Environmental Politics, 24*(1), 115-137.

Hooghe, Liesbet, Marks, Gary, Lenz, Tobias, Bezuijen, Jeanine, Ceka, Besir, & Derderyan, Svet. (2017). Measuring international authority: A postfunctionalist theory of governance, vol. Iii: Oxford: OUP. Version of.

Independent-Panel-of-Pandemic-Preparedness-and-Response. (2021). Covid-19: Make it the last pandemic.

IPCC. (2021). Summary for policymakers *Climate change 2021: The physical science basis. Contribution of working group i to the sixth assessment report of the intergovernmental panel on climate change* Cambridge University Press.

Jason Beckfield. (2010). The social structure of the world polity. *American Journal of Sociology, 115*(4), 1018-1068. doi: 10.1086/649577

John-Hopkins-University-Coronavirus-Resource-Center. (2020). Coronavirus covid-19 global cases (<https://coronavirus.Jhu.Edu/map.Html>).

Jordana, Jacint, Schmitt, Lewin, & Holesch, Adam. (2020). Understanding global governance: The contribution of data sets.

Kawabata, Toyo. (2021). Climate finance governance through transnational networks. *Journal of Sustainable Finance & Investment*, 1-20. doi: 10.1080/20430795.2021.1925522

Keohane, Robert O., & Victor, David G. (2011). The regime complex for climate change. *Perspectives on Politics, 9*(01), 7-23. doi: doi:10.1017/S1537592710004068

Kim, Rakhyun E. (2019). Is global governance fragmented, polycentric, or complex? The state of the art of the network approach. *International Studies Review, 22*, 903. doi: 10.1093/isr/viz052

Kim, Rakhyun E., & Morin, Jean-Frédéric. (2021). Massive institutional structures in global governance. *Global Environmental Politics, 21*(3), 26-48. doi: 10.1162/glep\_a\_00604

King, David A. (2004). Climate change science: Adapt, mitigate, or ignore? : American Association for the Advancement of Science.

Knoke, David, Diani, Mario, Hollway, James, & Christopoulos, Dimitris. (2021). *Multimodal political networks* (Vol. 50): Cambridge University Press.

Krause, Michael Richard. (2014). *Cern: How we found the higgs boson*: World Scientific.

Kreienkamp, Julia, & Pegram, Tom. (2020). Governing complexity: Design principles for the governance of complex global catastrophic risks. *International Studies Review, 23*(3), 779-806. doi: 10.1093/isr/viaa074

Krisch, Nico. (2017). Liquid authority in global governance. *International Theory, 9*(2), 237-260. doi: 10.1017/S1752971916000269

Kuyper, Jonathan, Bäckstrand, Karin, & Schroeder, Heike. (2017). Institutional accountability of nonstate actors in the unfccc: Exit, voice, and loyalty. *Review of Policy Research, 34*(1), 88-109. doi: <https://doi.org/10.1111/ropr.12213>

Kuyper, Jonathan W., Linnér, Björn-Ola, & Schroeder, Heike. (2018). Non-state actors in hybrid global climate governance: Justice, legitimacy, and effectiveness in a post-paris era. *WIREs Climate Change, 9*(1), e497. doi: 10.1002/wcc.497

Lake, David A. (2021). The organizational ecology of global governance. *European Journal of International Relations, 27*(2), 345-368. doi: 10.1177/1354066120959407

Maoz, Zeev. (2010). *Networks of nations: The evolution, structure, and impact of international networks, 1816–2001* (Vol. 32): Cambridge University Press.

Mitchell, Ronald B, Andonova, Liliana B, Axelrod, Mark, Balsiger, Jörg, Bernauer, Thomas, Green, Jessica F, . . . Morin, Jean-Frédéric. (2020). What we know (and could know) about international environmental agreements. *Global Environmental Politics, 20*(1), 103-121.

Nielsen, Tobias D., Hasselbalch, Jacob, Holmberg, Karl, & Stripple, Johannes. (2020). Politics and the plastic crisis: A review throughout the plastic life cycle. *WIREs Energy and Environment, 9*(1), e360. doi: <https://doi.org/10.1002/wene.360>

Orsini, Amandine, Le Prestre, Philippe, Haas, Peter M, Brosig, Malte, Pattberg, Philipp, Widerberg, Oscar, . . . Geyer, Robert. (2019). Forum: Complex systems and international governance. *International Studies Review*.

Paiement, Phillip, & Melchers, Sophie. (2020). Finding international law in private governance: How codes of conduct in the apparel industry refer to international instruments. *Indiana Journal of Global Legal Studies, 27*(2), 303-345.

Pardi, Norbert, & Weissman, Drew. (2020). Development of vaccines and antivirals for combating viral pandemics. *Nature Biomedical Engineering, 4*(12), 1128-1133. doi: 10.1038/s41551-020-00658-w

Pattberg, Philipp, Widerberg, Oscar, & Kok, Marcel T. J. (2019). Towards a global biodiversity action agenda. *Global Policy, 10*(3), 385-390. doi: 10.1111/1758-5899.12669

Perez, Oren. (2016). The green economy paradox: A critical inquiry into sustainability indexes. *Minnesota Journal of Law, Science & Technology, 2016*(17 ), 153.

Pihl, Erik, Alfredsson, Eva, Bengtsson, Magnus, Bowen, Kathryn J, Broto, Vanesa Cástan, Chou, Kuei Tien, . . . Fisher, Eleanor. (2021). Ten new insights in climate science 2020–a horizon scan. *Global Sustainability, 4*.

Pratt, Tyler. (2018). Deference and hierarchy in international regime complexes. *International Organization, 72*(3), 561-590. doi: 10.1017/S0020818318000164

Roger, Charles B. (2020). *The origins of informality: Why the legal foundations of global governance are shifting, and why it matters*: Oxford University Press.

Roger, Charles B., & Rowan, Sam S. (2021). Analyzing international organizations: How the concepts we use affect the answers we get. *The Review of International Organizations*. doi: 10.1007/s11558-021-09432-2

Roughan, Nicole, & Halpin, Andrew. (2017). The promises and pursuits of pluralist jurisprudence. In A. Halpin & N. Roughan (Eds.), *In pursuit of pluralist jurisprudence* (pp. 326-366). Cambridge: Cambridge University Press.

Slaughter, Anne-Marie. (2017). *The chessboard and the web: Strategies of connection in a networked world*: Yale University Press.

Slaughter, Anne-Marie, & Zaring, David T. (2006). Networking goes international: An update. *Annual Review of Law & Social Science, 2*.

Snyder, David V, Maslow, Susan, & Dadush, Sarah. (2021). Balancing buyer and supplier responsibilities: Model contract clauses to protect workers in international supply chains, version 2.0. *Business Lawyer (ABA) 77*(77).

Stone, Diane. (2004). Transfer agents and global networks in the ‘transnationalization’ of policy. *Journal of European Public Policy, 11*(3), 545-566. doi: 10.1080/13501760410001694291

Stone, Diane. (2008). Global public policy, transnational policy communities, and their networks. *Policy Studies Journal, 36*(1), 19-38. doi: 10.1111/j.1541-0072.2007.00251.x

Stone, Diane. (2013). *Knowledge actors and transnational governance: The private-public policy nexus in the global agora*: Springer.

Streck, Charlotte. (2020). Filling in for governments? The role of the private actors in the international climate regime. *Journal for European Environmental & Planning Law, 17*(1), 5-28.

Sumner, Andy. (2019). Global poverty and inequality: Change and continuity in late development. *Development and Change, 50*(2), 410-425. doi: 10.1111/dech.12487

Tallberg, Jonas, Sommerer, Thomas, & Squatrito, Theresa. (2016). Democratic memberships in international organizations: Sources of institutional design. *The Review of International Organizations, 11*(1), 59-87.

Tallberg, Jonas, & Zürn, Michael. (2019). The legitimacy and legitimation of international organizations: Introduction and framework. [journal article]. *The Review of International Organizations*. doi: 10.1007/s11558-018-9330-7

Thistlethwaite, Jason, & Paterson, Matthew. (2015). Private governance and accounting for sustainability networks. *Environment and Planning C: Government and Policy*. doi: 10.1177/0263774x15604841

UNEP. (2019). Emissions gap report 2019.

UNEP. (2020). Emissions gap report 2020: UNEP.

Vabulas, Felicity, & Snidal, Duncan. (2021). Cooperation under autonomy: Building and analyzing the informal intergovernmental organizations 2.0 dataset. *Journal of Peace Research, 58*(4), 859-869. doi: 10.1177/0022343320943920

Wood, Stepan, Abbott, Ken, Black, Julia, Eberlein, Burkard, & Meidinger, Errol. (2015). The interactive dynamics of transnational business governance: A challenge for transnational legal theory. *Transnational Legal Theory, 6*, 333-369.

Wood, Stepan, Eberlein, Burkard, Meidinger, Errol, Schmidt, Rebecca, & Abbott, Kenneth W. (2019). Transnational business governance interactions, regulatory quality and marginalized actors: An introduction. In S. Wood, R. Schmidt, E. Meidinger, B. Eberlein & K. W. Abbott (Eds.), *Transnational business governance interactions* (pp. 1-27): Edward Elgar Publishing.

Young, Oran R. (2017a). Beyond regulation: Innovative strategies for governing large complex systems. *Sustainability, 9*(6), 938.

Young, Oran R. (2017b). *Governing complex systems: Social capital for the anthropocene*: MIT Press.

Yousefi Nooraie, Reza, Sale, Joanna E. M., Marin, Alexandra, & Ross, Lori E. (2020). Social network analysis: An example of fusion between quantitative and qualitative methods. *Journal of Mixed Methods Research, 14*(1), 110-124. doi: 10.1177/1558689818804060

Zelli, Fariborz, Gerrits, Lasse, & Möller, Ina. (2021). Global governance in complex times: Exploring new concepts and theories on institutional complexity. *Complexity, Governance & Networks, 6*(1), 1-13.

1. # In the field of international relations there has been a concerted effort to develop datasets focusing on inter-state militarized conflicts, international crisis behavior, treaty membership, and more. See, (Maoz, 2010) and (Hooghe et al., 2017). Prominent datasets include the **Measure of International Authority (MIA) data set developed by (Hooghe et al., 2017) (**<https://garymarks.web.unc.edu/data/international-authority/>**), various datasets developed by the world bank (global preferential trade agreements, at** <https://wits.worldbank.org/gptad/library.aspx>**), and the World Trade Organization (**Design of Preferential Trade Agreements, <https://www.wto.org/english/res_e/reser_e/ersd201110_e.htm>), the International Environmental Agreements Dataset (<https://iea.uoregon.edu/>) (Mitchell et al., 2020). For a recent survey see (Jordana et al., 2020).

   [↑](#footnote-ref-1)
2. See the list of datasets collected by the Globe project team, in <https://www.globe-project.eu/en/data-sets_11834>. [↑](#footnote-ref-2)
3. The rest focus on IGOs (14), transgovernmental networks (4) and public-private partnerships (3). [↑](#footnote-ref-3)