INTERNATIONAL INSTITUTIONS AND SOCIAL EMERGENCE

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To My Family

ABSTRACT

Contemporary empirical research on the importance of international institutions in areas ranging from economic integration to multilateral governance has made many advances. It founders, however, on the key question of establishing defensible theoretical grounds for relative institutional autonomy, without which the empirical accounting of purported institutional effects cannot, on its own, be the arbiter of disputes about the causal influence of institutions.

This dissertation develops and defends a theory of international institutions on the basis of their emergence from, and irreducibility to, the conditions of their crafting, contracting, and functionality. It argues that the analytical implications of institutions are derived from the conceptions of their nature, i.e., their ontological underpinnings. If international institutions are to be accorded a proper, non-epiphenomenal place in analysis, their causal efficacy must somehow be reconciled with state power and interests in institutional design, with their contractual entanglements with delegating principals, and with their compositional origins. This dissertation argues that the problem of institutional ontology and its analytical consequences can be mapped onto the general problem of *emergence*, a converging area of research across a number of disciplines concerning the ways in which certain properties at the constituted level in natural and social systems are different from, and not explicable in terms of, the constituent levels in isolation.

As this study demonstrates, the turn to social emergence is well suited to making sense of the tension between institutional autonomy and factors inimical to it, thereby providing firmer grounds for institutional analysis. The complexity inherent in institutional arrangements through the configuration and re-configuration of constituent elements and social tempos at multiple levels over time is such that it becomes difficult to countenance any direct correspondence between the initial conditions of design, delegation, and composition on the one hand, and international institutions and their effects on the other hand. By articulating an alternative account of the nature of international institutions, this work both challenges existing institutional explanations and complements their quest to resolve a problem of longstanding in international relations.

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AUTHOR'S NOTE

I, Pak Yue Leon, the author of this doctoral dissertation entitled *International Institutions and Social Emergence*, hereby affirm that I have also been known for many years by my family, my friends and my colleagues as David Pak Yue Leon and as David Leon, and that I have published portions of this dissertation under that name: Leon, David. "Reductionism, Emergence, and Explanation in International Relations Theory." In *Scientific Realism and International Relations*, edited by Jonathan Joseph and Colin Wight, 31-50. New York & Basingstoke, UK: Palgrave Macmillan, 2010. Previously published materials from the aforementioned work, having since been updated, revised, and expanded, are used in the present dissertation with the written permission of the publisher, Palgrave Macmillan.

Pak Yue Leon
(also known as David Leon)
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CHAPTER ONE

INTERNATIONAL INSTITUTIONS AND SOCIAL EMERGENCE

1.1 SITUATING THE PROJECT, CONTEXTUALIZING THE RESEARCH

In recent years most international relations scholars have moved beyond the debate about whether international institutions matter and turned their attention towards how and when they matter.[1] Many of them now argue that institutions can exert varying degrees of independent influence in such areas as economic integration, security cooperation, domestic politics, and multilateral global governance.[2] There is, however, a catch: explanations of institutions' independent effects rest on the key assumption that institutions are useful instruments for addressing political market failures, as well as coordination, cooperation, and collective action problems under

[1] See, e.g., James G. March and Johan P. Olsen, "Elaborating the 'New Institutionalism'," in *The Oxford Handbook of Political Science*, ed. R. Goodwin (Oxford: Oxford University Press, 2009), 163; Beth A. Simmons and Lisa L. Martin, "International Organizations and Institutions," in *Handbook of International Relations*, ed. W. Carlsnaes, T. Risse, and B. Simmons (London: Sage, 2002), 193. *More extensive references will be provided in subsequent chapters for this and other points*.

[2] See, e.g., Songying Fang, "The Informational Role of International Institutions and Domestic Politics," *American Journal of Political Science* 52 (2008); Helga Haftendorn, Robert O. Keohane, and Celeste Wallander, eds., *Imperfect Unions: Security Institutions over Time and Space* (Oxford: Oxford University Press, 1999); Darren Hawkins, David Lake, Daniel Nielson and Michael Tierney, eds., *Delegation and Agency in International Organizations* (Cambridge: Cambridge University Press, 2006); Robert O. Keohane, Stephen Macedo, and Andrew Moravcsik, "Democracy-Enhancing Multilateralism," *International Organization* 63 (2009).

anarchy. This line of argumentation, which conceives of international institutions as functional tools of other consequential actors, especially states, merely begs the original question about whether institutions can have independent causal effects. More recently, some key scholars of international institutions, such as Robert Keohane, Lisa Martin, and Ronald Mitchell,[3] have basically acknowledged that scholars have rushed headlong into testing and assessing the empirical dimensions of institutional effects without taking seriously enough the challenges to the theoretical logics underpinning those effects. If international institutions are not capable of independent causal effects *even in theory*, then observed empirical instances of, say, supposedly institutions-induced cooperation may well be due to some other underlying factors rather than to the institutions themselves. This is the problem of *institutional endogeneity*.

This issue is crucial because determining whether and how institutions matter empirically depends on whether their purported causal influence can be well accommodated within a corresponding, defensible, theoretical framework. In other words, claims about the explanatory power of institutions cannot outgrow the theoretical basis that warrants them. Despite their differences, realism and institutionalism both share a functionalist theory of institutions: institutions are

[3] Robert O. Keohane and Lisa L. Martin, "Institutional Theory as a Research Program," in *Progress in International Relations Theory: Appraising the Field*, ed. C. Elman and F.M. Elman (Cambridge, Mass.: MIT Press, 2003); Ronald B. Mitchell, "The Influence of International Institutions: Institutional Design, Compliance, Effectiveness, and Endogeneity," in *Power, Interdependence and Non-State Actors in World Politics: Research Frontiers*, ed. H. Milner (Princeton, NJ: Princeton University Press, 2009).

posited to be tools that political actors (especially states) use instrumentally to exert power and influence over others, or to resolve problems of asymmetric information and other barriers to cooperation and coordination. Constructivist studies of institutions that focus on strategic aspects of social construction also partake of this functionalist view inasmuch as institutions become the sites and tools through which global interest groups and epistemic communities act to socialize states and to alter state identities and interests.[4]

This dissertation suggests that, within a functional interpretation of institutions, empirical evidence cannot by itself be the arbiter of theoretical and substantive disputes because confirmatory instances of institutional effects can reasonably be reinterpreted to mean that state considerations remain paramount. If institutions are useful in doing what they are designed to do—providing information, increasing transparency, allowing for reiterated interaction, lowering transaction costs and so on—then it also means that it is the rational *designers* who account for institutional effects and outcomes. Institutions on this view would become epiphenomenal as they merely reflect the interests and expectations of their designers. In short, existing assumptions regarding institutions have come to compromise the explanatory role that institutions are said to have.

[4] See, e.g., Martha Finnemore and Kathryn Sikkink, "International Norm Dynamics and Political Change," *International Organization* 52 (1998); Peter M. Haas, "Epistemic Communities and International Policy Coordination," *International Organization* 46 (1992).

All of this presents the puzzling quandary of a thriving empirical literature on international institutions built on uncertain theoretical foundations. This mismatch between theory and empirics is in need of critical engagement, as denying causal efficacy to institutions is a consequence that few contemporary international relations scholars, irrespective of theoretical orientation, are willing to countenance.[5] Some scholars have already been hard at work in trying to address this bedrock problem so that there can be defensible grounds for relatively autonomous institutions and for meaningful institutional effects in international relations theory. The stakes are high, as failure to find such grounds would mean that many of the linkages made by empirical studies between international institutions and international outcomes may be chimerical. If the functional interpretation sees international institutions as *instruments*, then two of the other potential theoretical solutions, termed contractual and corporate in this work, may be said to consider institutions as *subcontractors* and *corporate actors*, respectively. The contractual approach is an adaptation of existing principal-agent models to the realm of international institutions,[6] while the corporate approach, committed to a corporeal understanding of states and institutions as actors or people, can claim a long lineage in social, political, and legal thought.[7]

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[5] This is true even for many realists who traditionally are skeptical of institutional effects. See Chapter Four.

[6] See, e.g., contributions in Hawkins, Lake, Nielson, and Tierney, ed., *Delegation and Agency in International Organizations*.

[7] There are different strands within this broad approach. See, e.g., Thomas Hobbes, *Leviathan* (London: Penguin Books, 1968 [1651]); Ernst H. Kantorowicz, *The King's Two Bodies: A Study in Mediaeval Political Theology* (Princeton, NJ: Princeton University Press, 1997 [1957]); Alexander Wendt, "The State as Person in International Theory," *Review of International Studies* 30 (2004). See

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In addressing the problem of institutional endogeneity, the dissertation will turn its attention to the issue of how to theorize institutions and institutional effects in world politics. Put very simply: are international institutions merely functional tools of states that create them or can they be autonomous causal entities in their own right? And on what basis can international relations scholars ascribe causal significance to them, rather than to their constituent parts and member states, or to the ways in which they have been constituted? This dissertation holds that the first question has to do with conceptions of institutional design, structure, and functioning. That is to say, it is about the nature, or ontology, of international institutions. The second question is about the extent to which institutions can be capable of relatively independent causal influence, in view of power politics and the role of state interests and strategies, as well as that of global interest groups, in institutional design.

These two questions, the ontological and the analytical, are interrelated. While not new—after all, they are fundamental questions with which many scholars have wrestled—they have acquired new relevance and taken new turns in recent years. There is already a considerable body of contemporary work on not only the theory of the state, but also on the ontology of the state.[8] The same, however, cannot

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also a landmark case establishing the foundations for legal persons: *Trustees of Dartmouth College v. Woodward*, 17 U.S. 518 (1819).

[8] As this literature is vast and as I will not, with important exceptions, deal with much of it directly in this study, only a few works will be noted. Anthony Giddens, *The Nation-State and Violence* (Berkeley and Los Angeles: University of California Press, 1987); Otto Hintze, "Military Organization and the Organization of the State," in *The Historical Essays of Otto Hintze*, ed. Felix Gilbert (New York: Oxford University Press, 1975); Bob Jessop, *State Theory: Putting the Capitalist State in Its Place* (Cambridge: Polity Press, 1990); Marjo Koivisto, "State Theory in International Relations: Why

be said of the situation regarding the ontology of international institutions. Even with a critical mass of scholarly attention on the state, it is not an exaggeration to say that work remains to be done. If it is true that the ontology of the state and its implications for analysis deserve scholarly attention and elaboration, then *a fortiori* it is true with respect to institutional ontology and its implications on account of their relative underdevelopment. With scholarly focus turning increasingly to the rise of formal international organizations, intergovernmental bodies, and non-governmental organizations, and to less formalized international institutions, the theoretical lacuna has become all the more curious, and the task of giving due weight to the ontological status of international institutions all the more pressing.

Not only will this dissertation delineate the explanatory implications of different institutional ontologies implicit in existing accounts, it will also advance an alternative that seeks to address the problem of institutional endogeneity. While there have been recent, sustained efforts in turning to principal-agent and other models to provide justificatory grounds for institutional autonomy, this study argues that these

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Realism Matters," in *Scientific Realism and International Relations*, ed. J. Joseph and C. Wight (New York and Basingstoke, UK: Palgrave Macmillan, 2010); Michael Mann, *States, War and Capitalism* (Cambridge, Mass.: Blackwell, 1988); Erik Ringmar, "On the Ontological Status of the State," *European Journal of International Relations* 2 (1996); Charles Tilly, *Coercion, Capital, and European States, AD 990-1992* (Cambridge, Mass.: Blackwell, 1992); Charles Tilly, "War Making and State Making as Organized Crime," in *Bringing the State Back In*, ed. P. Evans, D. Rueschemeyer, T. Skocpol (Cambridge: Cambridge University Press, 1985); Kenneth Waltz, *Man, the State, and War: A Theoretical Analysis* (New York: Columbia University Press, 2001 [1959]); Kenneth Waltz, *Theory of International Politics* (Boston: Addison-Wesley, 1979); Max Weber, "Politics as a Vocation," in *From Max Weber: Essays in Sociology*, ed. H. Gerth and C. Mills (New York: Oxford University Press, 1946 [1918]); Alexander Wendt, *Social Theory of International Politics* (Cambridge: Cambridge University Press, 1999); Arnold Wolfers, *Discord and Collaboration: Essays on International Politics* (Baltimore: Johns Hopkins University Press, 1962). See also a special forum in *Review of International Studies* 30 (2004).

efforts fall short theoretically, and offers a different account in their place. The key lies in mounting a reasoned defense of a theory of relative institutional autonomy. In other words, without establishing that institutions are not merely expressions of state interests and strategies, while recognizing states' powerful role in institutional design, the case that institutions are causally consequential is in doubt. In this connection, the question of institutional ontology must be tackled before the explanatory role of institutions can be clarified.

In reappraising the role of international institutions in social explanation, this dissertation both challenges and complements existing research on different counts. On the one hand, it shows why both the functional and the contractual models of state-institutions relations entail the reduction of institutional effects to conditions of institutional crafting and contracting, respectively, while corporate approaches make a superfluous equation of causal influence and personhood. The turn to principal-agent models fails to provide, even in theory, a satisfactory basis for institutional autonomy and hence institutional effects. This is due to the fact that principal-agent theory subscribes to a localized model of bilateral interaction whereby state tasks are hierarchically delegated, or subcontracted, to international institutions. This in essence concedes the theoretical ground for institutional autonomy even when a modicum of agent autonomy—agency slack—is taken into account. Corporate approaches allow for causal efficacy and institutional autonomy, but the arguments for these properties are rooted in anthropomorphism, and do not sufficiently

recognize that some of the reasons that make institutions causally efficacious are precisely because institutions are unlike, rather than like, human actors.

On the other hand, it echoes calls to reformulate the theoretical basis for institutional effects as a necessary task, and in that spirit it develops an emergent alternative to functional, contractual, and corporate conceptions of institutions. If institutions are to have a proper explanatory role, they should not be conceptualized simply as instruments, subcontractors, or human-like actors, but rather as complex social environments or configurations that are admittedly dependent on, but nonetheless emergent from and irreducible to, the ways in which they have been designed, contracted, or composed. This calls for less analytical focus on specific actors, institutions and organizations, and more on institutional complexes.[9] By leveraging recent developments in the interdisciplinary research on the emergent nature of social organization, this study provides a defensible framework for treating institutions as capable of independent causal influence in world politics, even while being crafted by state interests and strategies, and entangled in a complex web of contractual and other relations.

The emergent approach rests on some key properties of international institution that render them resistant to reduction to design and contracting conditions, while eschewing an anthropocentric equation of causal efficacy with being human that the corporate approach presumes. These properties include (1) *organizational*

[9] See Michael Barnett and Kathryn Sikkink, "From International Relations to Global Society," in *The Oxford Handbook of Political Science*, ed. R. Goodwin (Oxford: Oxford University Press, 2009), 764.

emergence and complexity, (2) *emergence through time*, and (3) *non-local distribution of causal powers*. In virtue of their organizational emergence and complexity, relatively enduring nature, and capability for non-local causal influence, international institutions can be entities and configurations in their own right, often in ways not readily ascertainable by reference to their compositional and contractual origins. By way of illustration, the dissertation will seek to contribute to recent debates on institutional multilateralism from an emergent standpoint. The debates revolve around the extent to which multilateral institutions or organizations can reshape system-wide rules and relations as well as steer domestic politics in the direction of better rights protection, enhanced political deliberation, and the curtailment of special interests.[10] Some of these issues are highly relevant because an emergent approach to institutions can help clarify related issues such as the organizational complexity of multilateralism, the contested issue of unaccountability arising from the social distance between international institutions and domestic publics, and the question of how to take into consideration the notion of time when assessing the effects of complex multilateralism in contemporary world politics.

The upshot of the dissertation is that it reaffirms the view that institutions matter. It does so, however, by reconfiguring the basis for relative institutional

[10] Keohane, Macedo, and Moravcsik, "Democracy-Enhancing Multilateralism." See also the ensuing exchange in Erik Gartzke and Megumi Naoi, "Multilateralism and Democracy: A Dissent Regarding Keohane, Macedo, and Moravcsik," *International Organization* 65 (2011); Robert O. Keohane, Stephen Macedo, and Andrew Moravcsik, "Constitutional Democracy and World Politics: A Response to Gartzke and Naoi," *International Organization* 65 (2011).. I shall return to some of the issues raised, explicitly or implicitly, in connection with institutional multilateralism.

autonomy, and by presenting a viable, emergent, alternative to existing accounts. This research project thus gives due consideration to the role of state power and interests in institutional design, while defending the view that institutions are causally consequential in world politics.

In order to set up the intellectual scaffolding for addressing the crucial issues regarding international institutions, the dissertation first places the study of international relations, and more specifically, the study of international institutions, within broader debates about complex systems and organizations in the relevant scientific, social-scientific and philosophical literatures. It lays out the central issue of theorizing institutions and institutional effects as a problem that calls for accommodating states' power and interests in institutional design within a framework that nevertheless retains the causal powers and relative autonomy of institutions. This problem, as will be shown, can be profitably mapped onto larger debates about reductionism vs. emergence. In this connection, this project is informed by an abiding interest in the concept of *emergence*, a converging area of research across complexity science, systems biology, and segments of political science, social theory, and philosophy. In brief, emergence is concerned with the non-reductive nature of organization—broadly construed as the structure or arrangement of connected items[11]—in natural and social systems, and has been developed by researchers to analyze entities ranging from ant colonies to cities, stock markets to traffic patterns,

[11] Cf. the *Oxford English Dictionary*.

and from minds to, this dissertation argues, international institutions.[12] While its immediate motivating puzzles are issues related to international institutions and institutional explanation,[13] this dissertation also seeks to engage more squarely with the implications of reductionism and emergence for the field of international relations as its organizing units and levels of analysis share many parallels—in kind and in spirit, though not necessarily in content—with other fields, and are eminently amenable to this burgeoning research's framing of problems and potential resolutions.

By tracing some of the contemporary developments in international relations theory to the notion of intertheoretic reduction and its social science cognates, methodological and ontological forms of individualism, the dissertation seeks to highlight the theoretical and empirical problems engendered by the misfit between international relations as a "higher-level" social science and the reductionist tendencies of microfoundational research. It also attempts to address this problematic

[12] This is a vast and growing multidisciplinary literature that I shall draw on in subsequent chapters. I will explore the reductionism vs. emergence debate and its implications for international relations and political science in detail in Chapters Two and Three. See references contained throughout the text, and also footnotes 1-5 in Chapter Three. For now, see, e.g., Mark A. Bedau and Paul Humphreys, eds., *Emergence: Contemporary Readings in Philosophy and Science* (Cambridge, Mass.: MIT Press, 2008); John H. Holland, *Emergence: From Chaos to Order* (Reading, Mass.: Addison Wesley, 1998); Grégoire Nicolis and Ilya Prigogine, *Exploring Complexity* (New York: W.H. Freeman, 1989); John F. Padgett and Walter W. Powell, eds., *The Emergence of Organizations and Markets* (Princeton, NJ: Princeton University Press, 2012); R. Keith Sawyer, *Social Emergence: Societies as Complex Systems* (Cambridge: Cambridge University Press, 2005). For more popular and accessible introductions, see also Neil Johnson, *Simply Complexity: A Clear Guide to Complexity Theory* (Oxford, UK: Oneworld Publications, 2009); Steven Johnson, *Emergence: The Connected Lives of Ants, Brains, Cities, and Software* (New York: Scribner, 2002).

[13] In this work I use "institutional explanation" broadly to refer to work that invokes institutions as causally efficacious, and "institutionalist theory" to refer to institutionalism, otherwise known as neoliberal institutionalism.

disjuncture in the contemporary IR agenda by investigating the role social emergence can play in the realm of institutional theory and analysis.

1.2 The Organization of the Dissertation

Chapter Two examines contemporary forms of reductionism, both methodological and ontological, in the social sciences and in international relations theory. It argues that recent developments in the field of international relations assign an increasingly important role to the specification of theoretical microfoundations, and that these developments are in turn embedded within complexes of background knowledge claims that are dependent on reductive ontological presuppositions. This is argued to be contrary to the nature of international relations as a "higher-level" social science insofar as the objects of its analysis, such as states and international institutions, are several layers removed from the supposed ontological building blocks of individuals. This presents theoretical and inferential problems for social explanation in international relations, also discussed in this chapter.

Chapter Three addresses the ways in which international relations theory can improve its explanatory range by taking into account the concept of emergence as developed in complex system studies, philosophy, and social theory. It develops a typology organized along the axes of analysis and ontology in order to delineate the logics and scopes of different possible philosophical positions in international

relations theory, which are microfoundationalism, macroreductionism, non-reductive individualism, and synthetic emergentism. Drawing on scientific or critical realism and the theory of emergence, this chapter argues that there are good grounds for rejecting empiricist and reductionist arguments in favor of those which take account of emergent properties in the international system. Chapters Two and Three lay the theoretical groundwork for subsequent chapters.

Chapter Four returns to the central issue of theorizing institutions and institutional effects in world politics. It first examines in detail the problem of institutional endogeneity, where the explanatory power of institutions is strongest when explained by underlying state interests and strategies. This is a paradoxical outcome that vitiates the explanatory power of institutionalist explanation and indeed, of those accounts which treat institutions as causally influential in their own right. Using problems associated with functional approaches to institutions as an organizing template, this chapter examines proposed solutions to these problems based on principal-agent theory. This chapter provides reasons as to why principal-agent theory is innovative as applied to international institutions, but also flawed to the extent that it partakes of a localized model of bilateral, hierarchical contracting. This chapter argues that institutions, in order to have an explanatory role in theory and empirics, are more profitably conceived as complex social environments or configurations that are emergent from, but irreducible to, the conditions of their crafting and contracting.

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Chapter Five begins with an examination of works that theorize international institutions within corporate-actor frameworks. The first section provides a critical appraisal of accounts of corporate agency as the key corporeal solutions to the problem of theorizing non-individual entities such as states and institutions, and traces these approaches to their earlier expressions in political thought. Specifically, the identification of agency and autonomy with having humanlike qualities is examined.

The main task of Chapter Five, however, is the development of a theory of international institutions as emergent entities or configurations. To arrive at this point, the chapter builds on a modified theory of social emergence that can be adapted for the analysis of institutional institutions, based on a sustained engagement with advances made at the confluence of interdisciplinary research on social organizations and systems already examined in part in earlier chapters. It also combines earlier examinations of organizational emergence and complexity with an articulation of several other spatial-temporal properties and characteristics that make it possible to theorize international institutions as emergent causal entities or configurations. The main argument of the chapter is that conceptualizing institutions as emergent can accommodate state interests and strategies in institutional design, while defending relative institutional autonomy, in ways that functional, contractual, and corporate approaches—at least as they are currently formulated—cannot easily do. The emergent approach does not negate some of the insights of existing approaches, and it

shares with them the goal of finding theoretical solutions to the problem of institutional endogeneity, but it shows both why functional, contractual, and corporate approaches are inadequate even as it provides a positive, defensible alternative. The last part of this chapter is devoted to highlighting some of the ways in which an emergent approach to international institutions can help to identify some of the implications of emergence and complexity for analyzing the downward causal effects of multilateral institutions, especially with respect to the prospects of reordering domestic political dynamics.

Chapter Six serves as the conclusion. It summarizes the major arguments of the dissertation and indicates the broader implications that this project holds for international relations in particular, and for the social sciences in general. There is, in short, value in some form of academic cross pollination between political science and other fields engaged in the interdisciplinary research on emergence, complexity, and organization.

CHAPTER TWO

VARIETIES OF REDUCTIONISM IN SOCIAL-SCIENTIFIC INQUIRY

2.1 INTRODUCTION

In contemporary international relations research there is a growing interest in anchoring explanations to microfoundations, often cast in terms of opening up "black boxes" of states and disaggregating larger social actors and processes. The return to prominence of micro-level explanation can be contextualized by situating it within broader debates in various disciplines that are grappling with the central issue of reductionism vs. emergence. Emergent properties—i.e., causally efficacious properties that are neither ontologically reducible to, nor analytically exhausted by, their constituent parts—have a long history in the social and biological sciences. Increasingly there is a recognition at the intersection of complex systems research, philosophy, theoretical biology, and the social sciences that emergence can offer a strong rebuttal to reductionism, the idea that explanation ought to aim for progressive analytical disaggregation. After discussing the allure as well as pitfalls of different

forms of reductionism, this chapter will be followed by the next, where a typology organized along the axes of analytical explainability and ontological reducibility is presented, in order to delineate the logics and scopes of different philosophical positions in international relations theory. Together these two chapters frame the issue of theorizing international institutions in terms of reductionism vs. emergence, and lay the groundwork for subsequent chapters. Building on the theory of emergence and combining it with a scientific realist stance on the ontological status of causal entities, this chapter argues that there are good grounds for rejecting empiricist and reductionist arguments in favor of those which take account of emergent properties in the international system, while discussing why taking emergence seriously has consequences for substantive social research.

This chapter is divided into three main sections. Section 2.2 discusses the focus on specifying micro-level factors and mechanisms in contemporary international studies. It also provides a critical appraisal of various forms of reductionism, their common philosophical lineage, and some of the key problems and implications associated with them. Section 2.3 examines the ontological underpinnings of methodological individualism and suggests that an analytically and methodologically individualist approach carries with it an often implicit, but sometimes explicit, thesis with respect to the fundamental building blocks of analysis. Disentangling the analytical consequences from an ontological stance can only be achieved at the peril of courting incoherence. Section 2.4 argues that reductionism is

premised, among other things, on the notion that social and international phenomena can be disaggregated and reaggregated without distortion in analytical focus. It further argues that the complexity of international politics makes aggregativity very difficult. There is, in short, a failure of aggregativity. These discussions open up conceptual space for bringing the science and philosophy of emergence to the study of international relations, and to international institutions in particular, threads that will be taken up in subsequent chapters.

2.2 Intertheoretic Reduction, Philosophy of Social Science, and International Relations[1]

Irrespective of their theoretical orientations, many contemporary international relations scholars are putting more emphasis on explanations that are grounded in *microfoundations*. There are at least two senses in which this term has been used: the first is about the basic-level building blocks of a theory; the second has to do with how theoretical assumptions are causally linked to outcomes.[2] Liberal, neoclassical-

[1] This chapter draws on works in philosophy of science (among other fields) in examining currents in IR theory. Certainly, social scientists are not obligated to look to philosophers for inspiration. The relationship between philosophy and (social) science, however, can be productive, as Grafstein has noted, following Nelson Goodman: "'The practical scientist does the business but the philosopher keeps the books.' Sometimes, only a careful audit will reveal that business is not as good as it seemed to be." See Robert Grafstein, *Institutional Realism: Social and Political Constraints on Rational Actors* (New Haven, NJ: Yale University Press, 1992), 9.

[2] See, e.g., David A. Lake and Robert Powell, "International Relations: A Strategic Choice Approach," in *Strategic Choice and International Relations*, ed. D. Lake and R. Powell (Princeton: Princeton University Press, 1999), 21-25.

realist, coalitional, as well as strategic-choice approaches have made common cause in analyzing domestic institutions, organized interests, veto-players, and the "transmission belt" that translates individual preferences into collective political phenomena.[3] Even among institutionalists—who once shared key structuralist assumptions with neorealists—and constructivists, increasingly qualified in their commitment to methodological holism, an overriding concern now is "how to get from microfoundations to outcomes."[4] In short, microfoundations are sought after; structural theories appear outmoded, and calls for "reintegrating" international relations and domestic politics ring louder than ever.[5] Werner, Davis, and Bueno de Mesquita express the sentiment for this movement succinctly, arguing that international relations and domestic politics "can be unified under a single theoretical framework that focuses attention on political leaders as actors interested in attaining

[3] E.g., Andrew Moravcsik, "Taking Preferences Seriously: A Liberal Theory of International Politics," *International Organization* 51 (1997). See also Randall L. Schweller, "The Progressiveness of Neoclassical Realism," in *Progress in International Relations Theory*, ed. C. Elman and F.M. Elman (Cambridge, Mass.: MIT Press, 2003); Randall L. Schweller, *Unanswered Threats: Political Constraints on the Balance of Power* (Princeton: Princeton University Press, 2006); Jack Snyder, *Myths of Empire: Domestic Politics and International Ambition* (Ithaca, NY: Cornell University Press, 1991); Etel Solingen, *Regional Orders at Century's Dawn: Global and Domestic Influences on Grand Strategy* (Princeton: Princeton University Press, 1998); Fareed Zakaria, *From Wealth to Power: The Unusual Origins of America's World Role* (Princeton: Princeton University Press, 1998).

[4] Jeffrey T. Checkel, "The Constructivist Turn in International Relations Theory," *World Politics* 50 (1998): 242. See also Martha Finnemore and Kathryn Sikkink, "Taking Stock: The Constructivist Research Program in International Relations and Comparative Politics," *Annual Review of Political Science* 4, no. 391-416 (2001); Robert O. Keohane and Lisa L. Martin, "Institutional Theory as a Research Program," in *Progress in International Relations Theory: Appraising the Field*, ed. C. Elman and F.M. Elman (Cambridge, Mass.: MIT Press, 2003); Beth A. Simmons and Lisa L. Martin, "International Organizations and Institutions," in *Handbook of International Relations*, ed. W. Carlsnaes, T. Risse, and B. Simmons (London: Sage, 2002). The bulk of the constructivist work reviewed in Finnemore and Sikkink's broad survey is "agentic" in orientation.

[5] James A. Caporaso, "Across the Great Divide: Integrating Comparative Politics and International Politics," *International Studies Quarterly* 41 (1997); Bruce Russett, "Reintegrating the Subdisciplines of International and Comparative Politics," *International Studies Review* 5 (2003).

and maintaining themselves in power while subject to institutional and other political constraints."[6] While recognizing that this line of inquiry may be "reductionist," Fearon observes that many of the "domestic-political explanations" are "essentially case studies plus the argument that a particular foreign policy choice or international outcome can be explained only by invoking some facet of a state's domestic politics. Other work…essentially takes this as a given…"[7] All of this has led to what some have called a "systemic-theoretic deficit."[8] With the growth in influence of the domestic-political approach, the time seems ripe to revisit the problematic of reductionism vs. anti-reductionism, and to assess the implications of this key issue for IR research and theory.

Analytical reductionism of the type that is being advocated in earnest in international relations theory today comes under different labels and appears in various disciplines.[9] A key, albeit often implicit, assumption that unites these microfoundational, individualist, or broadly reductive approaches in both natural and social sciences is that higher-level predicates such as "minds," "structures,"

[6] Suzanne Werner, David Davis, and Bruce Bueno de Mesquita, "Dissolving Boundaries: Introduction," *International Studies Review* 5 (2003): 1-2.

[7] James D. Fearon, "Domestic Politics, Foreign Policy, and Theories of International Relations," *Annual Review of Political Science* 1 (1998): 290.

[8] Lars-Erik Cederman, "Complexity and Change in World Politics: Resurrecting Systems Theory," in *New Systems Theories of World Politics*, ed. M. Albert, L.-E. Cederman, A. Wendt (New York and Basingstoke, UK: Palgrave Macmillan, 2010), 129. For example, Kalyvas and Balcells argue that the international system itself has been neglected in the study of internal conflict. Stathis N. Kalyvas and Laia Balcells, "International System and Technologies of Rebellion: How the End of the Cold War Shaped Internal Conflict," *American Political Science Review* 104 (2010).

[9] This chapter mainly examines various forms of reductionism but it is not exhaustive in that it does not explicitly deal with some other forms of reductionism, e.g., ideational and material. In general, ideational reductionism would focus exclusively on the realm of ideas, while material reductionism would acknowledge only material forces.

"institutions," and "states," are only constructs that stand in for their lower-level building blocks. The physicist Robert Laughlin has defined *reductionism* as the idea that "things will necessarily be clarified when they are divided into smaller and smaller component parts,"[10] which can be called analytical disaggregation.[11] Stuart Kauffman observes that "reductionism in its strongest form holds that [phenomena natural or social are] ultimately nothing but particles or strings in motion. It also holds that, in the end, when the science is done, the explanations for higher-order entities are to be found in lower-order entities."[12] To give an often-cited example in the natural sciences provided by Nagel,[13] what we in ordinary language call "temperature" has been shown to be reductively identifiable with "mean molecular kinetic energy." For many, the attractiveness and persistence of reductive research lie in the fact that knowledge gained through the disaggregation of entities or properties into their components seems to promise a more informative or even more complete understanding than that which could be offered by the deliberate bracketing of the lower level.

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[10] Robert B. Laughlin, *A Different Universe: Reinventing Physics from the Bottom Down* (New York: Basic Books, 2005), xv. It should be noted, however, that he is not in favor of it.

[11] For a discussion of different types of reductionism, see John R. Searle, "Reductionism and the Irreducibility of Consciousness," in *Emergence: Contemporary Readings in Philosophy and Science*, ed. M. Bedau and P. Humphreys (Cambridge, Mass.: MIT Press, 2008).

[12] Stuart A. Kauffman, *Reinventing the Sacred: A New View of Science, Reason, and Religion* (New York: Basic Books, 2008), 3, 10-11. Kauffman is a major figure in complexity science and argues against the reductionist view.

[13] Ernest Nagel, *The Structure of Science: Problems in the Logic of Scientific Explanations* (Indianapolis, IN: Hackett, 1961).

The closest parallel to Nagel's classic example in IR and comparative politics is probably the proverbial "black box": the state,[14] which is increasingly seen as reducible—and epiphenomenal—to preferences held by political entrepreneurs and coalitions, who logroll, bargain, or otherwise act through various political channels; epiphenomenal because the "state" is seen as causally inert in a way that individual or group preferences are not. This ontological stance impinges on causality and explanation. Mahoney, for example, argues that "[t]he population level does not exhibit any 'emergent properties' that cannot be reduced to (i.e., explained in terms of) processes that occur in the individual cases. Causation at the population level is thus epiphenomenal; case-level causation is ontologically prior to population-level causation."[15] On this view, the theoretical progress hinges on its ability to explicate the microprocesses of international outcomes. As Keohane and Martin put it in a programmatic statement, "[f]or international relations theory to make really significant progress, it will need to…explain variations in state preferences…to develop theories with microfoundations, that is, theories that begin with individuals and groups."[16] If the case for reductionism (under whatever name) is that corporate entities in international politics are only more or less useful fictions, and that international outcomes ought to be progressively explicated in terms of

[14] It need not be "the state." It could be the international system, a social structure or, in fact, any social entity or configuration that is "black-boxed," i.e., not analytically disaggregated.
[15] James Mahoney, "Toward a Unified Theory of Causality," *Comparative Political Studies* 41 (2008): 414.
[16] Keohane and Martin, "Institutional Theory as a Research Program," 96.

microfoundations, then it also implies that individual human beings are the (only) rock-bottom causes.

Yet if causal powers are said to rest with individuals, it seems that there is no reason to stop reducing *them* further to, say, their psychological states and thence to neural networks and biochemical processes, if those are the "real" causes.[17] In philosophy of science this is called *intertheoretic reduction*, the notion that theories containing higher-level predicates or terms ought in principle to be reducible to those stated in terms of lower-level ones, i.e., the reduction of supposedly less fundamental theories to more fundamental theories.[18] Intertheoretic reduction was a main tenet of mid-century positivism and its *locus classicus* can be found in Oppenheim and Putnam's "Unity of Science as a Working Hypothesis."[19] To be able to make a reductive explanation that subsumes theories involving higher-level abstractions or "black boxes" is seen as a step forward and a hallmark of systematic scientific

[17] Cf. Patrick Thaddeus Jackson and Daniel H. Nexon, "Relations before States: Substance, Process, and the Study of World Politics," *European Journal of International Relations* 5 (1999): 322.

[18] Francis Crick, *Of Molecules and Men* (Seattle: University of Washington Press, 1966); Nagel, *The Structure of Science: Problems in the Logic of Scientific Explanations*; Karl R. Popper, *Popper Selections*, ed. David Miller (Princeton: Princeton University Press, 1986), 345-56; Lawrence Sklar, "Types of Inter-Theoretic Reduction," *British Journal for the Philosophy of Science* 18 (1967). Cf. Paul Humphreys, "How Properties Emerge," *Philosophy of Science* 64 (1997); Harold Kincaid, "Reduction, Explanation, and Individualism," *Philosophy of Science* 53 (1986); Harold Kincaid, "Supervenience and Explanation," *Synthese* 77 (1988); Thomas Nickles, "Two Concepts of Intertheoretic Reduction," *Journal of Philosophy* 70 (1973): 182. In this literature, a "higher-level" theory, typical of the social sciences, is often considered to be "less fundamental" than a "lower-level" but "more fundamental" theory found in the physical sciences. I agree that IR is a higher-level inquiry, but argue—below—that it is no less fundamental than lower-level inquiries because of emergence and downward causation.

[19] Paul Oppenheim and Hilary Putnam, "Unity of Science as a Working Hypothesis," in *Minnesota Studies in the Philosophy of Science*, ed. H. Feigl and G. Maxwell (Minneapolis: University of Minnesota Press, 1958). See also a discussion in Leszek Kolakowski, *The Alienation of Reason: A History of Positivist Thought* (New York: Doubleday Anchor Books, 1969), 8-10.

inquiry. A key implication of intertheoretic reduction is that higher-level (or "special") sciences such as politics, sociology, and psychology are reducible to lower-level (physical) ones—physiology, neuroscience, and ultimately microphysics.[20] On this positivist view, the social sciences are simply pragmatic analytical measures or even confessions of temporary ignorance, awaiting the gradual discovery of underlying physical laws that can truly explain the micro-level causes of aggregate behaviors, effects, and phenomena.

While intertheoretic reduction may seem absurd for most IR scholars and other social scientists, those same scholars often partake of some circumscribed versions (e.g., methodological individualism) of this more general philosophical view. This notion of science, while providing fuel for scientific research, has already been rejected as untenable by most philosophers of science since the 1970s,[21] and the

[20] Cf. Wesley C. Salmon, *Causality and Explanation* (New York: Oxford University Press, 1998), 69. The following works discuss issues concerning intertheoretic reduction or the ordering of the sciences, but note that there is a difference between subscribing to a hierarchy of the sciences and the reducibility of the sciences. See P. W. Anderson, "More Is Different: Broken Symmetry and the Nature of the Hierarchical Structure of Science," *Science* 177 (1972). See also Jerry Fodor, "Special Sciences (Or: The Disunity of Science as a Working Hypothesis)," in *Readings in the Philosophy of Social Science*, ed. Michael Martin and Lee C. McIntyre (Cambridge, Mass.: MIT Press, 1994 [1974]); Alexander Reutlinger and Heiner Koch, "Methodological Individualism and the Epistemic Value of Macro-Explanations," *Percipi* 2 (2008); Michael Strevens, *Bigger Than Chaos: Understanding Complexity through Probability* (Cambridge, Mass.: Harvard University Press, 2003), Ch.5; Julie Zahle, "The Individualism-Holism Debate on Intertheoretic Reduction and the Argument from Multiple Realization," *Philosophy of the Social Sciences* 33 (2003).

[21] Cf. Jaegwon Kim, "Making Sense of Emergence," *Philosophical Studies*, no. 95 (1999): 3-4. See also Jaegwon Kim, "The Myth of Nonreductive Materialism," in *Supervenience and Mind: Selected Philosophical Essays* (1993). Also, some engineers and computer scientists "can identify behaviors that cannot be understood in terms of the individual observations of underlying physical phenomena. They can only be considered in terms of their collective actions at the higher systems level." Christopher W. Johnson, "What Are Emergent Properties and How Do They Affect the Engineering of Complex Systems?" *Realiability Engineering and System Safety* 91, no. 12 (2006).

limits of reductionism in scientific research are increasingly recognized, as emergence has returned to scientific and philosophical debates.[22] Reductive research has, however, been localized and transplanted to various social science disciplines. In fact, there is a growing interest among some scholars in using cognitive or biological independent variables to explain political crises, attitude formation, identity, and culture at the level of genes and testosterone.[23] Within political science, this sentiment is captured in quite colorful language by a scholar who argues that "sociogenomics" should "replace the shopworn conceptions of yesterday's political science."[24] Some other political and social scientists similarly believe that neuroeconomics allows us to cut the "middle man" loose from analyzing social phenomena and effects. By "middle man" they mean concepts and causal mechanisms that do not correspond to some supposedly fundamental, quantifiable,

[22] Cf. Mark A. Bedau and Paul Humphreys, eds., *Emergence: Contemporary Readings in Philosophy and Science* (Cambridge, Mass.: MIT Press, 2008).

[23] John R. Alford, Carolyn L. Funk, and John R. Hibbing, "Are Political Orientations Genetically Transmitted?" *American Political Science Review* 99 (2005); Ira H. Carmen, "Genetic Configurations of Political Phenomena: New Theories, New Methods," *The Annals of the American Academy of Political and Social Science* 614 (2007); John R. Hibbing and Kevin B. Smith, "The Biology of Political Behavior," *The Annals of the American Academy of Political and Social Science* 614 (2007); Rose McDermott et al., "Testosterone and Aggression in a Simulated Crisis Game," *The Annals of the American Academy of Political and Social Science* 614 (2007); Mark Turner, *Cognitive Dimensions of Social Science: The Way We Think About Politics, Economics, Law, and Society* (Oxford: Oxford University Press, 2001).

[24] Carmen, "Genetic Configurations of Political Phenomena: New Theories, New Methods," 34, 40. For an interesting debate in theoretical biology between reductionism and anti-reductionism, see Martin Carrier and Patrick Finzer, "Explanatory Loops and the Limits of Genetic Reductionism," *International Studies in the Philosophy of Science* 20, no. 3 (2006); Alex Rosenberg and D.M. Kaplan, "How to Reconcile Physicalism and Antireductionism About Biology," *Philosophy of Science* 72 (2005).

micro-level building blocks.[25] In *Explaining Social Behavior*, Elster, apparently still very smitten with the reductive scientific model, proclaims that "reductionism is the engine of progress in science" and that "reductionism is a progressive and antireductionism an obstructionist force in science."[26] Though skeptical of a "nuts-and-bolts view of social action" where knowledge of "inside-the-box relationships" is favored, Gerring has nonetheless observed that "[m]acro is out, micro is in"—research has shifted to causes that are close to outcomes, or proximate causes.[27]

The search for explanatory microfoundations has become a major preoccupation for many IR scholars as well. The reductive research program manifests itself in IR as research strategies that are reductionist *to the level of individuals and groups*, often driven by the belief that increasingly sophisticated models of domestic processes and/or individual preferences can at last banish the indeterminacy of systemic phenomena or structural logics.[28]

Two highly visible developments are the strategic-choice literature and Moravcsik's attempt to systematize the argument for microfoundationalism on behalf

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[25] Paul J. Zak and Jacek Kugler, "Neuroeconomics and International Studies: A New Understanding of Trust," *International Studies Perspectives* 12 (2011). Enthusiasm about genes and the "real" micro-level determinants of politics is largely misplaced. Section 2.4, below, will take up this issue again.
[26] Jon Elster, *Explaining Social Behavior: More Nuts and Bolts for the Social Sciences* (Cambridge: Cambridge University Press, 2007), 258-59. These views are problematic, see a rebuttal from physicists, discussed below.
[27] John Gerring, "The Mechanistic Worldview: Thinking inside the Box," *British Journal of Political Science* 38 (2007): 175-76.
[28] See, e.g., Stephan M. Haggard, "Structuralism and Its Critics: Recent Progress in International Relations Theory," in *Progress in Postwar International Relations*, ed. E. Adler and B. Crawford (New York: Columbia University Press, 1991).

of liberal IR theory.[29] For strategic-choice theorists, "the processes of socialization remain constant over a single 'round' of interaction" so that preferences can be assumed to be fixed for analytical purposes.[30] Recognizing the limits of such an assumption, Lake and Powell fall back to the position whereby preference formation can be analyzed through disaggregation, where problems of fixed preferences are viewed as "boxes within boxes," and can be tackled by breaking an "actor down into a more basic set of actors…[and] by looking to the behavior and interaction of substate actors."[31]

From a different theoretical perspective, and drawing on the Lakatosian model of scientific progress,[32] Moravcsik argues likewise. He states that a "core" assumption of liberal IR theory is that "the fundamental actors in international politics are individuals and private groups...[whose demands] are treated" as "analytically prior to politics"[33] and as "exogenous causes of the interests underlying state behavior."[34] The "state" in this attempted synthesis of major IR theories, is not a unitary actor, but a representative institution that translates individual and societal

[29] Andrew Moravcsik, "Liberal International Relations Theory: A Scientific Assessment," in *Progress in International Relations Theory*, ed. C. Elman and F.M. Elman (Cambridge, Mass.: MIT Press, 2003); Andrew Moravcsik, "The New Liberalism," in *The Oxford Handbook of Political Science*, ed. R. Goodwin (Oxford: Oxford University Press, 2009); Moravcsik, "Taking Preferences Seriously: A Liberal Theory of International Politics."
[30] Lake and Powell, "International Relations: A Strategic Choice Approach," 33.
[31] Lake and Powell, "International Relations: A Strategic Choice Approach," 33.
[32] Imre Lakatos, "Falsification and the Methodology of Scientific Research Programmes," in *Criticism and the Growth of Knowledge*, ed. I. Lakatos and A. Musgrave (Cambridge: Cambridge University Press, 1970).
[33] Moravcsik, "Taking Preferences Seriously: A Liberal Theory of International Politics," 516-17. See also Moravcsik, "The New Liberalism," 711.
[34] Moravcsik, "Liberal International Relations Theory: A Scientific Assessment," 161.

preferences into policies to be executed by political leaders operating under constraints. One such constraint is the distribution of capabilities and information, the main analytical foci of neorealism and institutionalism, respectively. Moravcsik claims that liberalism is a systemic theory "in the strict Waltzian sense."[35] His emphasis on policy interdependence notwithstanding, it is difficult to see how a theory which treats individuals as analytically and ontologically prior to larger social collectives and which insists on the disaggregation of the state can be non-reductive. One possible solution is to understand strategic behavior not psychologically, but "externally,"[36] or to theorize microfoundations not as rock-bottom causes but rather as consistency tests, i.e., macro-level theories should not contradict what is known about micro-level behavior.[37]

In broad agreement with Moravcsik's individualist critique of the earlier, more structuralist institutionalism, Keohane and Martin argue that institutionalists and IR scholars more generally need to do more research on domestic institutions and to develop theories with microfoundations.[38] At least two assumptions underwrite this view on the nature of IR theory: one is that analytical reduction provides better specifications of the actual causal mechanisms (individuals and groups) responsible

[35] Moravcsik, "Liberal International Relations Theory: A Scientific Assessment," 166.
[36] Debra Satz and John Ferejohn, "Rational Choice and Social Theory," *Journal of Philosophy* 91 (1994). See also Frank Lovett, "Rational Choice Theory and Explanation," *Rationality and Society* 18 (2006).
[37] For an argument for this position, see Alexander L. George and Andrew Bennett, *Case Studies and Theory Development in the Social Sciences* (Cambridge, Mass.: MIT Press, 2004), 140-42. Also, while Lake and Powell would agree with Moravcsik about the importance of microfoundations, they do seem to acknowledge that disaggregation would not be the task of "systemic theory."
[38] Keohane and Martin, "Institutional Theory as a Research Program," 96.

for producing observable effects and outcomes. The other is that international relations theory has reached a point where the (more or less) useful categories of systems and even states ought to be jettisoned in favor of concrete micro-level interactions and processes. As Keohane and Martin put it, "Institutionalist theory…[is moving] farther from its neorealist roots, putting more emphasis on agency, less on structure" because structures are now considered instances of "analytical convenience" used to create a "rhetorical effect."[39] In short, this conception of scientific progress in IR is a call for a more rigorous form of methodological individualism.

2.3 Methodological Individualism and Its Ontological Underpinnings

Methodological individualism (MI) refers to the view that explanations of outcomes and behaviors, including international ones, ought in principle to be articulated in terms of individual groups or actors. The renewed focus on explicating individual and group preferences and dynamics as the foundation of IR theory closely echoes Karl Popper's and J. W. N. Watkins's view that "the ultimate constituents of the social world are individual people…[and] every complex social situation, institution, or event is the result of a particular configuration of individuals, their dispositions,

[39] Keohane and Martin, "Institutional Theory as a Research Program," 103, 81.

situations, beliefs, and physical resources and environment."[40] In an influential articulation of MI, for example, James Coleman argues that individualist theories of macro-social phenomena involve what he calls Type I, Type II, and Type III relations, namely: a macro-to-micro transition, the explanation of individual actions, and a micro-to-macro transition. MI proceeds by first disaggregating social phenomena into explainable micro-level actions and then by re-aggregating these micro-level actions at the macro-level.[41]

Methodological individualism is often taken as an *epistemological* claim about how world politics should be *analyzed.* A number of scholars have pointed out, however, that MI not only recognizes "the theoretical primacy of the individual actors rather than of social collectives […but it also stipulates that they are ontologically] prior to and independent of larger social institutions."[42] That is to say, methodological individualism is not only an epistemological thesis; it necessarily implies *ontological* assumptions regarding the nature of social and political life, namely (*a*) that individuals are designated as ontological building blocks from which social entities or relations are derived, and (*b*) that higher-level social entities are only

[40] The quote is from J.W.N. Watkins, "Historical Explanation in the Social Sciences," *British Journal for the Philosophy of Science* 8 (1957): 105-06. See also Karl R. Popper, *The Open Society and Its Enemies, Vol. II* (Princeton, NJ: Princeton University Press, 1962), 98.
[41] James S. Coleman, *Foundations of Social Theory* (Cambridge, Mass.: Harvard University Press, 1990), 19-20.
[42] Richard Ashley, "The Poverty of Neorealism," *International Organization* 38 (1984): 243. See also Alexander Wendt, "The Agent-Structure Problem in International Relations Theory," *International Organization* 41 (1987); Colin Wight, *Agents, Structures, and International Relations: Politics as Ontology* (Cambridge: Cambridge University Press, 2006), Chs.2-3; William C. Wimsatt, "Emergence as Non-Aggregativity and the Biases of Reductionisms," *Foundations of Science* 5 (2000): 283-87.

different scalar representations of people and could therefore be reduced to, "conflated with," and analyzed ultimately in terms of, them.[43] Methodological individualism, then, makes sense only in terms of its commitment to ontological individualism.[44] Within a microfoundationalist framework, structures and corporate actors have to be shown to correspond to (aggregates of) individuals, or properties of structure have to be exhausted by individual components, otherwise the case for ontological and, in turn, methodological individualism fails.[45]

Microfoundationalism, which is used here to designate positions that are committed to both the methodological *and* ontological strands of reductionism, stems from an empiricist notion of science that has been rejected by many philosophers of science, particularly though not exclusively the scientific realists.[46] Epstein has

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[43] Cf. Margaret S. Archer, *Realist Social Theory: The Morphogenetic Approach* (Cambridge: Cambridge University Press, 1995); Rajeev Bhargava, *Individualism in Social Science* (Oxford: Clarendon Press, 1992); Searle, "Reductionism and the Irreducibility of Consciousness."

[44] MI is thus a form of ontological individualism (OI), but OI could, if awkwardly, commit itself to holism, resulting in non-reductive individualism (see more below).

[45] Even some of the scholars championing the turn to neuroeconomics and neuropolitics and so on caution, to their credit, that "there is not always a one-to-one mapping from a neurologic mechanism to its behavioral component." See Zak and Kugler, "Neuroeconomics and International Studies," 146.

[46] Scientific realism (of various kinds) is a vast literature, so much so that in philosophy of science relevant debates are often rendered simply as "realism vs. anti-realism." It is impossible (and in some sense unnecessary) to go into all the intricate debates between scientific realists and non/anti-scientific realists here. Still, in the following this chapter tries to show briefly why it would make sense to adopt certain scientific realist propositions. For scientific realism, see, e.g., Roy Bhaskar, *The Possibility of Naturalism: A Philosophical Critique of the Contemporary Human Sciences*, 3rd ed. (London: Routledge, 1998 [1979]); Roy Bhaskar, *A Realist Theory of Science* (Brighton, UK: Harvester, 1975); Richard N. Boyd, "Realism, Underdetermination, and a Causal Theory of Evidence," *Noûs* 7 (1973); André Kukla, *Studies in Scientific Realism* (New York: Oxford University Press, 1998); Jarrett Leplin, *A Novel Defense of Scientific Realism* (Oxford: Oxford University Press, 1997); Grover Maxwell, "The Ontological Status of Theoretical Entities," in *Minnesota Studies in the Philosophy of Science*, ed. H. Feigl and G. Maxwell (Minneapolis: University of Minnesota Press, 1962); Alan Musgrave, "Noa's Ark—Fine for Realism," in *The Philosophy of Science*, ed. D. Papineau (New York: Oxford University Press, 1996); Ilkka Niiniluoto, *Critical Scientific Realism* (Oxford: Oxford University Press, 1999).)

shown that the apparently reasonable ontological individualist thesis is flawed because it assumes that our psychological or cognitive capacity exhausts social or systemic properties, when such properties "often depend…on features of the world, whether or not these features are ascribable to individuals."[47] Stated differently, social properties are not confined—or confinable—to individuals who are directly involved. To appreciate this argument, take art as an example: what makes a piece of art beautiful? This is perhaps not as simple a question as it appears. If the aesthetics of an artwork could be reduced to its components, then there ought not be any

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See contributions in Margaret S. Archer et al., eds., *Critical Realism: Essential Readings* (London: Routledge, 1998). For related scholarship as it pertains to international relations, see contributions in Jonathan Joseph and Colin Wight, eds., *Scientific Realism and International Relations* (New York and Basingstoke, UK: Palgrave Macmillan, 2010). See also Jonathan Joseph, "Philosophy in International Relations: A Scientific Realist Approach," *Millennium* 35 (2007); Jorge Rivas, "Realism. *For Real This Time*: Scientific Realism Is Not a Compromise between Positivism and Interpretivism," in *Scientific Realism and International Relations*, ed. J. Joseph and C. Wight (New York and Basingstoke, UK: Palgrave Macmillan, 2010); Alexander Wendt, *Social Theory of International Politics* (Cambridge: Cambridge University Press, 1999); Wight, *Agents, Structures, and International Relations: Politics as Ontology*. David Dessler, "What's at Stake in the Agent-Structure Debate?" *International Organization* 43 (1989). For non-scientific realist and anti-scientific realist views, see, e.g., Arthur Fine, "The Natural Ontological Attitude," in *The Philosophy of Science*, ed. D. Papineau (New York: Oxford University Press, 1996); Larry Laudan, *Progress and Its Problems: Toward a Theory of Scientific Growth* (Berkeley, CA: University of California Press, 1977); Bas van Fraassen, *The Scientific Image* (New York: Oxford University Press, 1980). In IR, see Fred Chernoff, *The Power of International Theory: Reforging the Link to Foreign Policy-Making through Scientific Enquiry* (London: Routledge, 2005), Ch.2; Fred Chernoff, "Scientific Realism as a Meta-Theory of International Politics," *International Studies Quarterly* 46 (2002); Fred Chernoff, "Scientific Realism, Critical Realism, and International Relations Theory," *Millennium* 35 (2007); Patrick Thaddeus Jackson, *The Conduct of Inquiry in International Relations: Philosophy of Science and Its Implications for the Study of World Politics* (London and New York: Routledge, 2011); Patrick Thaddeus Jackson, "Foregrounding Ontology: Dualism, Monism, and IR Theory," *Review of International Studies* 34 (2008); Friedrich Kratochwil, "Constructing a New Orthodoxy? Wendt's 'Social Theory of International Politics' and the Constructivist Challenge," *Millennium* 29 (2000).

[47] Brian Epstein, "Ontological Individualism Reconsidered," *Synthese* 166 (2009): 208. See also Ch.3 in Paul Sheehy, *The Reality of Social Groups* (Aldershot, England: Ashgate, 2006).

difference in treatment between an original and a known, expertly forged copy.[48] But the fact is that their treatment *is* different, and the ontological differences between them cannot be exhausted by physical appearance or material. People intuitively value beauty as an emergent property and do not appreciate art strictly in terms of its intrinsic, physical, attributes alone (e.g., colors and shapes). Rather, beauty, just as meaning,[49] lies somewhere in between these and other "non-local" factors that are external to the artwork itself, factors such as originality, provenance, performativity, and the artistic, social, political, economic, and historical milieux of the artist and of the art perceiver.[50] The key is that intangible space between the art perceiver, and the art so perceived. If we were reductionists when it came to art, we would not in any way discriminate between an original and a faithful reproduction.

There are also other reasons to call into question microfoundationalism and so lay the groundwork for social emergence. One of the core scientific realist arguments

[48] For an influential formulation of this issue in aesthetics, see Nelson Goodman, *Languages of Art*, 2nd ed. (Indianapolis, IN: Hackett, 1976 [1968]), Part 3.

[49] On the "location of meaning" (also a chapter title), see Douglas R. Hofstadter, *Gödel, Escher, Bach: An Eternal Golden Braid* (New York: Basic Books, 1999 [1979]), Ch.6. His argument is that meaning cannot be localized in the text.

[50] See Sherri Irvin, "Artworks, Objects and Structures," in *Continuum Companion to Aesthetics*, ed. A. Ribeiro (London: Continuum, 2012); Sherri Irvin, "Forgery and the Corruption of Aesthetic Understanding," *Canadian Journal of Philosophy* 37 (2007); Jennifer Jenkins, "Where Beauty Lies: Fakes and Forgeries," *The Philosopher* 83, no. 2 (1995); Joseph Margolis, "Works of Art as Physically Embodied and Culturally Emergent Entities," *British Journal of Aesthetics* 14 (1974). Cf. Denis Dutton, "Artistic Crimes," *The British Journal of Aesthetics* 19 (1979); Alfred Lessing, "What Is Wrong with Forgery?" in *The Forger's Art: Forgery and the Philosophy of Art*, ed. D. Dutton (Berkeley, CA: University of California Press, 1983); Christa Sommerer and Laurent Mignonneau, "Modeling the Emergence of Complexity: Complex Systems, the Origin of Life and Interactive On-Line Art," *Leonardo* 35 (2002).

is that causally efficacious entities or properties are real, even if unobservable.[51] As Grover Maxwell puts it in his classic piece, "The Ontological Status of Theoretical Entities," unobservables such as "electrons, photons, and even electromagnetic fields are just as real, and exist in the same full-blooded sense, as chairs, tables, or sense impressions."[52] This is the case despite their being observable only through their effects. In other words, both observables and unobservables are capable of producing observable consequences, so the latter cannot be rejected a priori as legitimate referents or objects of study. In short, empiricism's disparaging views of theories with unobservables unwarrantably restrict the universe of valid causal claims and foreclose arguments about the relational and structural dimensions of social systems.[53] Thus, while it may be that the state, for instance, is invisible,[54] it would be erroneous to jump to the conclusion (tacitly if not explicitly) that all causal powers reside with microfoundations; the same holds for the causes and effects of macrosocial processes[55] that are below the radar screens of empiricists and

[51] Bhaskar, *The Possibility of Naturalism: A Philosophical Critique of the Contemporary Human Sciences*; Boyd, "Realism, Underdetermination, and a Causal Theory of Evidence."; William Outhwaite, *New Philosophies of Social Science: Realism, Hermeneutics and Critical Theory* (New York: St. Martin's Press, 1987).
[52] Maxwell, "The Ontological Status of Theoretical Entities," vii.
[53] Ian Shapiro and Alexander Wendt, "The Difference That Realism Makes: Social Science and the Politics of Consent," *Politics and Society* 20 (1992): 204. Cf. Chernoff, "Scientific Realism as a Meta-Theory of International Politics."; Wendt, *Social Theory of International Politics*.
[54] Michael Walzer, "On the Role of Symbolism in Political Thought," *Political Science Quarterly* 82 (1967): 194. Also see Randall Collins, "On the Microfoundations of Macrosociology," *American Journal of Sociology* 86 (1981).
[55] See Paul Pierson, "Big, Slow-Moving, and Invisible: Macrosocial Processes in the Study of Comparative Politics," in *Comparative Historical Analysis in the Social Sciences*, ed. J. Mahoney and D. Rueschemeyer (Cambridge: Cambridge University Press, 2003).

individualists.[56] One further reason for rejecting the empiricist criteria for determining the ontological status of social objects and hence whether such objects can be included in theoretical explanations is that while observability-unobservability constitutes a continuum, existence-nonexistence is a dichotomy.[57] Thus, the existence or non-existence of an entity or property cannot be determined by its observational status. So while the state is invisible, that is not to say that it is no more than the sum total of societal interests. Society, in a meaningful sense, is not simply an aggregation of people, or of individual practices, any more than international anarchy is simply the sum total of national foreign policies. For another example, in IR, a largely unappreciated insight from recent work in the bargaining theory of war is that private information is key to understanding war, even if that means war is, at the point of outbreak, very difficult to predict.[58] The empiricist fallacy is to assume that sense-data—observable properties, powers, and parts at various levels[59]—have a privileged role in explanation.[60]

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[56] This is a form of the fallacy of nominalism, which issues from phenomenalism. See Kolakowski, *The Alienation of Reason: A History of Positivist Thought*, Ch.1; Douglas V. Porpora, "Four Concepts of Social Structure," in *Critical Realism: Essential Readings*, ed. M. Archer, R. Bhaskar, A. Collier, T. Lawson, and A. Norrie (London: Routledge, 1998), 350; Wight, *Agents, Structures, and International Relations: Politics as Ontology*, 21-22.

[57] Kukla, *Studies in Scientific Realism*, 130, 9. Also see Maxwell, "The Ontological Status of Theoretical Entities," 7-9, 14.

[58] David H. Clark and William Reed, "The Strategic Sources of Foreign Policy Substitution," *American Journal of Political Science* 49 (2005): 611; Jeffry A. Frieden and David A. Lake, "International Relations as a Social Science: Rigor and Relevance," *The Annals of the American Academy of Political and Social Science* 600 (2005): 148; Erik Gartzke, "War Is in the Error Term," *International Organization* 53 (1999).

[59] Neil E. Harrison, with J. David Singer, "Complexity Is More Than Systems Theory," in *Complexity in World Politics: Concepts and Methods of a New Paradigm*, ed. N. Harrison (Albany, NY: SUNY

2.4 Reductionism, Complexity, and Aggregativity

The ontological-individualist view of the world takes entities or properties to be summative, resolutive-compositive, additive, or aggregative.[61] Even when intertheoretic reduction was in its heyday, Nagel and Quine—two representatives of that view—argued that intertheoretic reduction would be possible only if certain demands are met, namely: that the synthetic identity of all entities of the reduced theory with the entities of the reducing theory be specified, and that a one-to-one correspondence (type identity) between the predicates or type descriptions of the reduced theory and the reducing theory be established through a series of "bridge laws."[62] It has become clear, however, that the required bridge laws, which express *identity relations* and are supposed to provide the grounds for reduction likely do not exist for many complex social phenomena. Elster's claim that "the reduction of biology to chemistry" has *already* "worked" and that reductionism is the engine of

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Press, 2006), 26; J. David Singer, *A General Systems Taxonomy for Political Science* (New York: General Learning, 1971), 17.

[60] It can be argued that reductionism can theorize unobservables such as preferences and utility functions. However, there appears to be an instrumentalist stance towards these unobservables in practice: people are assumed to act *as if* they do complex calculations in their minds, have stable, transitive preferences, etc.

[61] Hobbes propounded an early resolutive-compositive view of politics in *Leviathan*. See Thomas Hobbes, *Leviathan* (London: Penguin Books, 1968 [1651]).

[62] Zahle, "The Individualism-Holism Debate on Intertheoretic Reduction and the Argument from Multiple Realization," 80.. See also Nagel, *The Structure of Science: Problems in the Logic of Scientific Explanations*.

scientific progress is dubious at best.[63] This conclusion is suspect, given that he does not seem to have taken into account the recent advances in studying emergent phenomena in systems biology and in the social sciences.[64] Even physicists themselves are much more modest and realistic about the prospects of reductionism. As P. W. Anderson has shown, even given a hierarchical ordering of the sciences, it does not mean that a higher-level science is reducible to a lower-level science: "Psychology is not applied biology, nor is biology applied chemistry."[65] Nor, one might add, is international politics simply applied or aggregated domestic political processes. "In fact, the more the elementary particle physicists tell us about the nature of the fundamental laws, the less relevance they seem to have to the very real problems of the rest of science, *much less to those of society*."[66] Schwegler, likewise, has argued that "present-day physics is by no means an example which demonstrates that the program of micro-reduction has already been successfully executed," and importantly, reductionism should not be built on the "hope" that it can occur in the

[63] Elster, *Explaining Social Behavior: More Nuts and Bolts for the Social Sciences*, 257-58. At most, reduction *in principle* might be accepted, though see below. Mark A. Bedau and Paul Humphreys, "Introduction to Scientific Perspectives on Emergence," in *Emergence: Contemporary Readings in Philosophy and Science*, ed. M. Bedau and P. Humphreys (Cambridge, MA: MIT Press, 2008), 213.
[64] See, e.g., Sarkar as quoted in Michael A. Goldman, "Genomic Meanings," *Science* 310 (2005): 1121. Laughlin and Pines have noted that "for the biologist, evolution and emergence are part of daily life." Robert B. Laughlin and David Pines, "The Theory of Everything," in *Emergence: Contemporary Readings in Philosophy and Science*, ed. M. Bedau and P. Humphreys (Cambridge, MA: MIT Press, 2008), 264.
[65] Anderson, "More Is Different: Broken Symmetry and the Nature of the Hierarchical Structure of Science," 393.
[66] Anderson, "More Is Different," 393. Emphasis added.

future.[67] Laughlin and Pines go further and argue that scientists should "face the truth that in most respects the reductionist ideal has reached its limits as a guiding principle…The end of reductionism is, however, not the end of science."[68] Equating science with reductionism, based on its promise of explanatory successes by opening up black boxes and by digging ever deeper, is therefore unwarrantable. In fact, macrophenomena can be realized in multiple and complex ways by different micro properties, that is to say, there is a failure of correspondence, an issue that will be examined at length in the next chapter.[69]

As far as the presumably aggregative nature of things is concerned, William Wimsatt has devised a set of instructive criteria for determining the conditions under which entities or properties can indeed be said to be aggregative and thus amenable to reduction. Only when a system-parts relationship is *not* affected by the following four conditions can reduction obtain: (1) the intersubstitution of parts, (2) the addition or subtraction of parts, i.e., size scaling, (3) the decomposition and re-aggregation of parts, and (4) linearity. For a system to be truly aggregative and therefore reducible,

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[67] Helmut Schwegler, "The Plurality of Systems, and the Unity of the World," in *Systems: New Paradigms for the Human Sciences*, ed. G. Altmann and W. Koch (Berlin: Walter de Gruyter, 1998), 174. This substantial volume is a collaborative work involving physicists, biologists, and social scientists. Schwegler is a physicist. See also Johnson, "What Are Emergent Properties and How Do They Affect the Engineering of Complex Systems?"; Laughlin, *A Different Universe: Reinventing Physics from the Bottom Down*.

[68] Laughlin and Pines, "The Theory of Everything," 265.

[69] For now, see, e.g., Wendt, *Social Theory of International Politics*, 153. His views might have changed on this, though that does not affect the argument made here as there are other important sources of support. See Chapter Five. See also Richard J. Campbell and Mark H. Bickhard, "Physicalism, Emergence and Downward Causation," (n.d.); Fodor, "Special Sciences (Or: The Disunity of Science as a Working Hypothesis)."; R. Keith Sawyer, "Nonreductive Individualism: Part I—Supervenience and Wild Disjunction," *Philosophy of the Social Sciences* 32 (2002): 548-49.

it must remain invariant or qualitatively similar "*for all possible decompositions of the system into parts*."[70] While reduction vs. emergence continues to be a vibrant debate with adherents on both sides, a growing number of philosophers of science and biologists have come to agree that reductionism's applications are more circumscribed than had been supposed. As a prominent case in point, the Human Genome Project's promise to provide a complete account of human life (and to devise remedies of diseases accordingly) turned out to be overstated, and has been described by some scientists as "facile genetic reductionism."[71] As has been pointed out by Gould, even "genes interact in a nonlinear way…As soon as you have emergent characteristics due to nonaddictive [i.e., nonaggregative] interaction among lower-level entities, then you can't reduce to the lower-level entities…These features don't exist until you get into the higher level."[72] If organic matter is already so complex that reductive research strategies often falter, then one can only imagine how much more difficult it would be to use them to analyze international politics and higher-level events and entities like wars, states, and international institutions.

Significantly, the notion that social and political behavior is reducible to groups, individuals, or even genes stems from the fallacy of what Wimsatt calls *"nothing but"-ism*. "Nothing-but" claims are ontologically "false" and

[70] William C. Wimsatt, "Aggregativity: Reductive Heuristic for Finding Emergence," *Philosophy of Science* 64 (1997): S376. See also Wimsatt, "Emergence as Non-Aggregativity and the Biases of Reductionisms," 275-76.
[71] See Sarkar as quoted in Goldman, "Genomic Meanings," 1121.
[72] Stephen Jay Gould, "The Patterns of Life's History," in *The Third Culture: Beyond the Scientific Revolution*, ed. J. Brockman (New York: Touchstone, 1996), 62.

"methodologically misleading" to the extent that they discourage scholars from constructing "models or theories of the system at levels or with methods other than those keyed to the parts in question, or that these are the only 'real' ones."[73] Yet if, as a thought experiment, we subject the category "structure," and "state" to the Wimsattian criteria, we can find that many of the most important empirical referents of IR theory are hardly aggregative or reducible. At a minimum, anyone interested in the causes of the First World War, for example, must ask the question of whether a *complete* command of microphysics would yield a more penetrating understanding of the war and its causes and effects than the perhaps inconclusive or even conflicting accounts based on studies of alliance formation, polarity, imperialism, nationalism, personalities, the organization of war economies, or even chance events.[74] Our analytical tools for studying world politics cannot be disentangled from the ontological question about the (ir)reducibility of our subject matter. However

[73] Wimsatt, "Aggregativity: Reductive Heuristic for Finding Emergence," S383. Cf. Searle, "Reductionism and the Irreducibility of Consciousness," 70-71.

[74] I think my answer to this question regarding the social world should be pretty clear to the reader. There are even doubts that microphysics can be the master science even in the natural world. It is instructive to quote those who know these matters at length here: "The emergent physical phenomena regulated by higher organizing principles have a property, namely their insensitivity to microscopics, that is directly relevant to the broad question of what is knowable in the deepest sense of the term. The low-energy excitation spectrum of a conventional superconductor, for example, is completely generic and is characterized by a handful of parameters that may be determined experimentally but cannot, in general, be computed from first principles…The crystalline state is the simplest known example of a quantum protectorate, a stable state of matter whose generic low-energy properties are determined by a higher organizing principle and nothing else. There are many of these [examples.]" Laughlin and Pines, "The Theory of Everything," 261. From the vantage point of microphysics, all of these factors would be "macro," including personalities. Most social scientists and historians rightly do not need to worry about reduction to physics. However, I would argue that a *principled defense* of our work against reductionism lies in social emergence, without which an agnostic stance or a reductionist stance that stops at the level of individuals would amount to what I called "confessions of temporary ignorance" earlier in the chapter.

intuitive ontological individualism and its methodological corollary may be, they are deeply flawed approaches to the study of much of world politics. Enthusiasm about finding bedrock biological or genetic variables of politics, already referenced earlier, or identifying determinative distributions of individual preferences, should be tempered accordingly.

In the natural sciences, things like mass, energy, momentum, and net charge are truly aggregative under all four conditions outlined above, but it is generally hard to find entities or properties that satisfy the conditions for aggregativity or decomposability, especially when it comes to complex social systems.[75] In the social sciences, "balance of power," "a monopoly over the legitimate use of organized violence," and "anarchy" are approximations of, or candidates for, emergent properties or configurations. Scholars such as Beyerchen and Jervis have argued that aggregativity and proportionality—changes in the outputs of a system being proportional to changes in the inputs—constitute linearity.[76] Nonlinear systems, on the other hand, exhibit apparently "erratic behavior" through the mismatch between inputs and outputs, with small changes leading to disproportionately large effects. This is in agreement with the notion of emergence as failure of aggregativity.[77] This

[75] Niiniluoto, *Critical Scientific Realism*, 22.
[76] Alan Beyerchen, "Clausewitz, Nonlinearity, and the Importance of Imagery," in *Complexity, Global Politics, and National Security*, ed. D. Alberts, and T. Czerwinski (Washington, D.C.: National Defense University Press, 1997); Alan Beyerchen, "Clausewitz, Nonlinearity, and the Unpredictability of War," *International Security* 17 (1992); Robert Jervis, *System Effects: Complexity in Political and Social Life* (Princeton: Princeton University Press, 1997), 12-13.
[77] See Wimsatt, "Aggregativity: Reductive Heuristic for Finding Emergence." Also see Jervis, *System Effects: Complexity in Political and Social Life*, 6; B.-O. Küppers, "Understanding Complexity," in

can also be framed as the underdetermination of social or emergent properties by individual properties.[78] Indeed, this recognition is traceable at least to Clausewitz, the eminent strategist who understood well the meanings of friction and of the fog of war.[79] Stated quite differently in the words of Lake and Powell, analytical failures of this kind show that "[w]hile 'local'-level interactions may be well-behaved…the system as a whole is so complex that 'aggregate' outcomes are indeterminate or essentially unpredictable."[80]

In view of this, G. L. Sewell has argued for an ontologically non-reductive view that takes into account systems properties:

> Macroscopic systems enjoy properties that are qualitatively different from those of atoms and molecules…they exhibit phenomena such as phase transitions, dissipative processes…that do not occur in the

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Emergence or Reduction? Essays on the Prospects of Nonreductive Physicalism, ed. A. Beckermann, H. Flohr, and J. Kim (Berlin: Walter de Gruyter, 1992). Financial derivatives such as options—in addition to strategy, as we shall see—exhibit some VUCA properties as well, such as their sometimes great sensitivity to small changes in volatility, in the underlying asset, and in time, especially as contract expiration draws near. Options complexity is a result of at least several things: (1) the relationship of the price of the option to the movement of the price of the underlying asset, represented by Δ, or *delta*, (2) the sensitivity of the option to the volatility of the underlying asset, represented by ν, or *vega*, (3) the relationship of the option to the passage of time, represented by Θ, or *theta*, and (4) the sensitivity of the option to changes in applicable interest rates, represented by ρ, or *rho*. These complex relationships make options price movements much more complicated than stock price movements. These relationships have been described by the Black-Scholes, binomial, and other models, but LTCM and other derivative disasters suggest that coming to terms with complexity and uncertainty can be a humbling endeavor. For the Black-Scholes model, see, e.g., Fischer Black and Myron Schloes, "The Pricing of Options and Corporate Liabilities," *Journal of Political Economy* 81 (1973). See also an interesting account of technical maneuvers behind some disastrous moments in high finance in Laurent L. Jacque, *Global Derivative Debacles: From Theory to Malpractice* (Singapore: World Scientific, 2010).

[78] See Epstein, "Ontological Individualism Reconsidered." On emergence, see Chapter Three and relevant references therein.

[79] Carl von Clausewitz, *On War*, ed. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976 [1832]), Books I and II. On friction and how it increases the complexity of war and the conduct of war, see Book I, Ch.7.

[80] Lake and Powell, "International Relations: A Strategic Choice Approach," 17.

> atomic world. Evidently, such phenomena must be, in some sense, *collective*…for otherwise the properties of macroscopic systems would essentially reduce to those of independent atoms and molecules…[Thus a non-reductive theory of macroscopic systems] must contain concepts that are *qualitatively* different from those of atomic physics.[81]

Systems of this kind—nonlinear social systems with *sui generis* properties—exhibit behavioral patterns that are indicative of the disjuncture between inputs and outputs (i.e., minor changes leading to disproportionately large or consequential effects), at times involving interactions in which the whole has become *different* from the sum of the parts,[82] a transformation that can be seen as the social analog of phase transitions in nature. In strategic theory, attempts to grapple with this problematic result in a succinct formulation used by the U.S. military to describe the strategic environment: VUCA, i.e., *volatility*, *uncertainty*, *complexity*, and *ambiguity*.[83] The works of Sumida and Beyerchen, among others, have shown how Clausewitz's nonlinear, nonreductionist strategic thinking in *Vom Kriege* (*On War*) is often lost on even his admirers, and why coming to terms with its rich complexity is not simply an issue of

[81] Sewell as quoted in Humphreys. See Paul Humphreys, "Emergence, Not Supervenience," *Philosophy of Science* 64 (1997): S343; G.L. Sewell, *Quantum Theory of Collective Phenomena* (Oxford: Clarendon Press, 1986), 3.
[82] See Anderson, "More Is Different: Broken Symmetry and the Nature of the Hierarchical Structure of Science."
[83] On VUCA and related topics, see *Air Force Manual 1-1. Basic Aerospace Doctrine of the United States Air Force*, ed. Department of the Air Force (Washington, DC: 1992); Roderick R. Magee, *Strategic Leadership Primer* (Carlisle Barracks, PA: U.S. Army War College, 1998), 1; Harry Yarger, "Strategic Theory for the 21st Century: The Little Book on Big Strategy," (Strategic Studies Institute, U.S. Army War College, 2006), 17-18.

abstract theorizing, but a matter of great import in sharpening analytical focus and defining strategic choice.[84]

At a more general level, international anarchy—whether it be theorized in materialist terms, as the absence of a powerful state capable of imposing a "domestic" hierarchy on a world scale,[85] or in ideational terms, as Hobbesian, Lockean, or Kantian culture[86]—makes sense only as a structural, environmental causal force in relation to the components of the international system. It is no coincidence, then, that Waltz and Wendt, two of the most influential IR theorists in the past thirty years, have both devoted much effort to building a *philosophical* basis for accounting for structure, before turning to defending a *theoretical* position, be it realist or constructivist, that carries import for *substantive* research. That order of development is not coincidental.

2.5 Conclusion

[84] Indications that strategic environments confronted by states, institutions, leaders, and other international actors resemble complex systems call out for an adequate theoretical basis for forming analysis and for making policy and strategic decisions alike. The intersection of emergence, complexity, and strategy is an interesting and important area that I can only allude to in the present research project. I plan on exploring these topics in more depth in a different work. Interested readers should consult works by Clausewitz, Beyerchen, Sumida and others. See Beyerchen, "Clausewitz, Nonlinearity, and the Importance of Imagery."; Beyerchen, "Clausewitz, Nonlinearity, and the Unpredictability of War."; Clausewitz, *On War*; Frederick L. III Shepherd, "The Fog of War: Effects of Uncertainty on Airpower Employment" (Air Command and Staff College, 1997); Jon Tetsuro Sumida, *Decoding Clausewitz: A New Approach to On War* (Lawrence, KS: University Press of Kansas, 2008); Jon Tetsuro Sumida, "The Relationship between History and Theory in *On War*: The Clausewitzian Ideal and Its Implications," *Journal of Military History* 65 (2001).

[85] John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: Norton, 2001); Kenneth Waltz, *Theory of International Politics* (Boston: Addison-Wesley, 1979).

[86] Wendt, *Social Theory of International Politics*.

This chapter has argued that some of the assumptions underlying contemporary international relations research are reductionist in nature. These assumptions constitute an important *background*,[87] understood loosely in Searle's sense as those often unexamined presuppositions in terms of which theoretical propositions about international institutions and international politics more generally are made intelligible. These assumptions, driven in part by the promise held out by the supposed explanatory successes of reductive research strategies, have made the elucidation of microfoundations a key part of research.

As this chapter has argued, the turn to the "micro," though growing in sophistication, is purchased at the price of understanding underlying and overarching structural dynamics. By bringing the philosophical *background* of reductionism into sharper relief, this chapter has shown that this mode of inquiry overlooks the organization and arrangement of entities and relations within social systems, and that it rests on flawed ontological premises that have serious analytical implications for research, particularly in view of the subject matter of international relations, namely, entities and relations that are often several layers removed from individual human beings. This chapter, while offering an examination of the lingering allures as well as serious flaws of ontological and analytical forms of reductionism, has only begun to

[87] John R. Searle, *The Construction of Social Reality* (New York: Free Press, 1995).

proffer a positive argument in favor of social emergence in international relations. It is to this task that the next chapter shall turn.

CHAPTER THREE

EMERGENCE, EXPLANATION, AND INTERNATIONAL RELATIONS

3.1 INTRODUCTION

If ontological and analytical forms of reductionism are often ill-suited to the analysis of the entities, relations, and phenomena regularly dealt with by higher-level systematic inquiries,[1] then it becomes necessary to articulate and defend appropriate alternatives. In a multitude of disciplines, one alternative that has come to the forefront of research in recent years is *emergence* in natural and social systems. In science,[2] philosophy,[3] social theory,[4] and a still small but growing segment of

[1] See the definition of "higher-level sciences" in Chapter Two. See also, e.g., P. W. Anderson, "More Is Different: Broken Symmetry and the Nature of the Hierarchical Structure of Science," *Science* 177 (1972); Jerry Fodor, "Special Sciences (Or: The Disunity of Science as a Working Hypothesis)," in *Readings in the Philosophy of Social Science*, ed. Michael Martin and Lee C. McIntyre (Cambridge, Mass.: MIT Press, 1994 [1974]); Wesley C. Salmon, *Causality and Explanation* (New York: Oxford University Press, 1998), 69; Michael Strevens, *Bigger Than Chaos: Understanding Complexity through Probability* (Cambridge, Mass.: Harvard University Press, 2003), Ch.5. See below for a discussion as well.

[2] See, e.g., Gabriel Altmann and Walter A. Koch, eds., *Systems: New Paradigms for the Human Sciences* (Berlin: Walter de Gruyter, 1998); Mark A. Bedau and Paul Humphreys, eds., *Emergence: Contemporary Readings in Philosophy and Science* (Cambridge, Mass.: MIT Press, 2008); Stuart A.

political science,[5] the focus on emergence, complexity, and systems is producing an increasingly substantial body of work that takes into account how the structural

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Kauffman, *At Home in the Universe: The Search for the Laws of Self-Organization and Complexity* (Oxford: Oxford University Press, 1995); Stuart A. Kauffman, *Reinventing the Sacred: A New View of Science, Reason, and Religion* (New York: Basic Books, 2008); Stuart A. Kauffman, and Philip Clayton, "On Emergence, Agency, and Organization," *Biology and Philosophy* 21 (2006); Robert W. Korn, "The Emergence Principle in Biological Hierarchies," *Biology and Philosophy* 20 (2005); Robert B. Laughlin, *A Different Universe: Reinventing Physics from the Bottom Down* (New York: Basic Books, 2005); Roberto A. Monetti and Ezequiel V. Albano, "On the Emergence of Large-Scale Complex Behavior in the Dynamics of a Society of Living Individuals: The Stochastic Game of Life," *Journal of Theoretical Biology* 187 (1997); Alex Rosenberg and D.M. Kaplan, "How to Reconcile Physicalism and Antireductionism About Biology," *Philosophy of Science* 72 (2005); William C. Wimsatt, "Aggregativity: Reductive Heuristic for Finding Emergence," *Philosophy of Science* 64 (1997); William C. Wimsatt, "Emergence as Non-Aggregativity and the Biases of Reductionisms," *Foundations of Science* 5 (2000). This is a partial list, like what follows. Some of these works overlap in the sense that they are by nature interdisciplinary (e.g., the Bedau and Humphreys volume and the Altmann and Koch volume).

[3] In addition to the Bedau and Humphreys volume above, see, e.g., Bryon Cunningham, "The Reemergence of 'Emergence'," *Philosophy of Science* 68 (2001); Jaegwon Kim, "Making Sense of Emergence," *Philosophical Studies*, no. 95 (1999); Achim Stephan, "Emergentism, Irreducibility, and Downward Causation," *Grazer Philosophische Studien* 65 (2002); Achim Stephan, "Varieties of Emergentism," *Evolution and Cognition* 5 (1999); Jeroen van Bouwel, "Individualism and Holism, Reduction and Pluralism: A Comment on Keith Sawyer and Julie Zahle," *Philosophy of the Social Sciences* 34 (2004); Julie Zahle, "The Individualism-Holism Debate on Intertheoretic Reduction and the Argument from Multiple Realization," *Philosophy of the Social Sciences* 33 (2003).

[4] See, e.g., Margaret S. Archer, *Realist Social Theory: The Morphogenetic Approach* (Cambridge: Cambridge University Press, 1995); Dave Elder-Vass, "Integrating Institutional, Relational and Embodied Structure: An Emergentist Perspective," *The British Journal of Sociology* 59 (2008); Dave Elder-Vass, "Luhmann and Emergentism: Competing Paradigms for Social Systems Theory," *Philosophy of the Social Sciences* 37 (2007); R. Keith Sawyer, "The Mechanisms of Emergence," *Philosophy of the Social Sciences* 34 (2004); R. Keith Sawyer, "Nonreductive Individualism: Part II—Social Causation," *Philosophy of the Social Sciences* 33 (2003); R. Keith Sawyer, "Nonreductive Individualism: Part I—Supervenience and Wild Disjunction," *Philosophy of the Social Sciences* 32 (2002); R. Keith Sawyer, *Social Emergence: Societies as Complex Systems* (Cambridge: Cambridge University Press, 2005); Poe Yu-ze Wan, "Emergence à la Systems Theory: Epistemological *Totalausschluss* or Ontological Novelty?" *Philosophy of the Social Sciences* 41 (2011); Poe Yu-ze Wan, *Reframing the Social: Emergentist Systemism and Social Theory* (Surrey, UK: Ashgate, 2011). Durkheim was an early proponent of the concept of emergence, see below.

[5] See, e.g., Lars-Erik Cederman, "Complexity and Change in World Politics: Resurrecting Systems Theory," in *New Systems Theories of World Politics*, ed. M. Albert, L.-E. Cederman, A. Wendt (New York and Basingstoke, UK: Palgrave Macmillan, 2010); Robert Jervis, *System Effects: Complexity in Political and Social Life* (Princeton: Princeton University Press, 1997); Jonathan Joseph, "The International as Emergent: Challenging Old and New Orthodoxies in International Relations Theory," in *Scientific Realism and International Relations*, ed. J. Joseph and C. Wight (New York and Basingstoke, UK: Palgrave Macmillan, 2010); David Pak Yue Leon, "Reductionism, Emergence, and Explanation in International Relations Theory," in *Scientific Realism and International Relations*, ed.

organization and arrangement of lower-level entities or matter can produce effects that cannot be adequately analyzed by recourse to the lower-level.[6] Some of this interdisciplinary work involves the reconceptualization of insights from emergence at the dawn of modern biology, philosophy, and sociology, but the potentially cross-pollinating research has certainly gone beyond the frontiers originally set by the likes of Mill, Durkheim, and the British Emergentists.[7] These recent developments have important implications for international relations and for the study of international institutions, as the rest of this dissertation will show. In Section 3.2, the chapter argues that international relations, as a social science, is a higher-level inquiry whose subject matter has peculiarities and properties that make it a productive ground for judiciously adopting some insights from the research program organized around emergence and social systems. This turn would require the breaking down of academic provincialism, and the linking up of international relations as a field to the wider social sciences and beyond. Section 3.3 sketches a working baseline of emergence, while examining some of its earlier articulations in philosophy and social theory. Due to the interdisciplinary nature of research on emergence and its

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J. Joseph and C. Wight (New York & Basingstoke, UK: Palgrave Macmillan, 2010); John F. Padgett and Walter W. Powell, eds., *The Emergence of Organizations and Markets* (Princeton, NJ: Princeton University Press, 2012); Alexander Wendt, *Social Theory of International Politics* (Cambridge: Cambridge University Press, 1999).

[6] It should be noted that these are not the only disciplines that are taking emergence, complexity, and systems seriously.

[7] See below for a brief discussion of some of these earlier works. This chapter will not provide an intellectual history of these interesting traditions, however. For an overview of the historical roots of emergence in various disciplines, see Jaegwon Kim, *Physicalism, or Something near Enough* (Princeton University Press: 2005), Ch.1; Sawyer, *Social Emergence: Societies as Complex Systems*, Chs.2-3.

associated concepts, emergence can take various forms, but some of its key features can and will be underscored.

In Section 3.4, a typology organized along the axes of analytical explainability and ontological reducibility is introduced, which shows that IR theory may be mapped onto four main positions—microfoundationalism, macroreductionism, nonreductive individualism, and what may be called synthetic emergentism. Finally, in Section 3.5, this paper examines the analytical implications of adopting a philosophically realist and emergentist stance by foregrounding the connections between background ontological and epistemological assumptions and the kinds of causal explanations deemed admissible within these frameworks. This section also defends the transition from the inherently unstable forms of anti-reductionism to synthetic emergence, and indicates some of the consequences that this holds for social explanation.

The concept of emergence is central to this chapter because it both undermines the reductive position and articulates a philosophically principled position that is non-Waltzian while anti-reductionist. As a working definition, an entity or property is said to be *emergent* if it organizationally arises out of, but is analytically irreducible to, its constituents.[8] Increasingly, philosophers, sociologists and biologists are exploring the implications of "emergence" in natural and social

[8] As I argue below, this useful baseline does not explicitly include the crucial part, *ontological* emergence, which combines the ontological autonomy of emergent entities and configurations with the rejection of analytical reduction. This basic concept will be elaborated upon in the course of this chapter.

systems. While this concept is not entirely new[9]—indeed a *renewed* interest in emergence has been noted[10]—its potential significance could be obscured by the vagueness of its definition and its seeming association with intractable metaphysics. This need not be so. This chapter examines extensions of the baseline definition, specifies its scope conditions, and indicates some of the potential contributions of emergence theory to the study of world politics. In the context of IR, the implications of emergence are that certain phenomena may be characterized as "emergent" in so far as lower-level interactions and processes may result in a new structural configuration that cannot analytically be exhausted by (even complete) information about such interactions and processes. Emergent properties or entities must be dealt with on their own terms rather than be analyzed in terms of their component parts. If emergence is taken seriously, IR scholars will have to rethink the microfoundationalist research strategy for analyzing not just international institutions, but also international politics more generally.

3.2 Matching Modes of Analysis with Entities and Phenomena

In philosophy of science, International Relations—not unlike the other social sciences—is considered a *high-level* or *special* science vis-à-vis those at the lower,

[9] See Émile Durkheim, *The Rules of Sociological Method*, ed. S. Lukes, trans. W. Halls (New York: Free Press, 1982 [1895]). Also see Reuben Ablowitz, "The Theory of Emergence," *Philosophy of Science* 6 (1939).
[10] Cunningham, "The Reemergence of 'Emergence'."

especially physical, levels.[11] Designations like "high-level" or "special" do not confer any privileged status for international relations as a field. Rather, it highlights the fact that the objects of inquiry in IR are several layers removed from what ontological individualists consider to be constitutive of the *social* world. From the standpoint of emergence theory, that poses no problem, since it is readily accepted that social systems are entities with emergent causal powers—entities which are composed of, but not reducible to, other entities, such as social groups, parties, coalitions, and human beings, which in turn have their own emergent properties in relation to still lower levels. While the agent-structure problem in social theory is concerned mainly with the society-individual relationship,[12] international relations theory often has to account for entities and properties such as the international system, regional/transnational political configurations, international institutions, states, and so on. Following Buzan and Albert,[13] this work refers to these as *second-*

[11] See Chapter Two. In particular, see discussions in Anderson, "More Is Different: Broken Symmetry and the Nature of the Hierarchical Structure of Science."; Fodor, "Special Sciences (Or: The Disunity of Science as a Working Hypothesis)."; Strevens, *Bigger Than Chaos: Understanding Complexity through Probability*.

[12] E.g., Jeffrey Alexander, *Action and Its Environment* (New York: Columbia University Press, 1988); James S. Coleman, *Foundations of Social Theory* (Cambridge, Mass.: Harvard University Press, 1990); Anthony Giddens, *Central Problems in Social Theory: Action, Structure, and Contradiction in Social Analysis* (Berkeley: University of California Press, 1979); Anthony Giddens, *The Constitution of Society: Outline of the Theory of Structuration* (Berkeley & Los Angeles: University of California Press, 1984). See also Parts I-III and V in Craig Calhoun, Joseph Gerteis, James Moody, Steven Pfaff and Indermohan Virk, eds., *Contemporary Sociological Theory*, 2nd ed. (Malden, Mass.: Blackwell Publishing, 2007).

[13] Barry Buzan, *From International to World Society? English School Theory and the Social Structure of Globalisation* (Cambridge: Cambridge University Press, 2004), xviii; Barry Buzan and Mathias Albert, "Differentiation: A Sociological Approach to International Relations Theory," *European Journal of International Relations* 16 (2010): 317. For related issues, see also David Dessler, "What's at Stake in the Agent-Structure Debate?" *International Organization* 43 (1989); Alexander Wendt,

order entities or systems, which are irreducible social systems that are composed of still other collectivities with individuals as members. Lest it be misconstrued that the onus on the anti-reductionist is greater than that on the individualist, it should be made plain at once that individualism in IR also has to make a correspondingly strong case *for* reduction, typically one for the system-state relationship, one for the state-society relationship, and one for the society-individual relationship. Obviously, this is only a simplified example of how a vertical reduction might proceed; emergent properties exist at all levels of organization, so it should be clear that the argument in defense of emergence should not be construed to mean that reductive research can *never* be useful to social (or natural) scientists. "Micro" and "macro" are relative terms that can denote individuals, organizations, states, and systems, depending on the question at hand, and so it is consistent with the present argument to describe a bureaucratic organization, for example, as having emergent causal powers and corporate status in relation to its components, cognizant of its embedment in larger social and political structures.[14]

If, as argued in the previous section, presuming micro-macro correspondences is problematic, then there is no reason, philosophical or pragmatic, for adapting IR as a higher-level science to the reductionist model of science. This section explores the

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"The Agent-Structure Problem in International Relations Theory," *International Organization* 41 (1987); Colin Wight, *Agents, Structures, and International Relations: Politics as Ontology* (Cambridge: Cambridge University Press, 2006).

[14] Cf. Hendrik Spruyt, *The Sovereign State and Its Competitors: An Analysis of Systems Change* (Princeton: Princeton University Press, 1994), 14.

possibility of reconceptualizing world politics in terms of "emergence" and how such a reconceptualization of some of the basic assumptions underpinning IR can address the mismatch between social-scientific inquiry and its irreducibly social objects.

3.3 Emergence: A Working Baseline

While different conceptions of emergence exist, there is broad agreement regarding its main features: a complex system, be it natural or social, can exhibit properties that are neither reducible to nor explainable in terms of its component parts, even if it is composed of them. Such properties, including causal powers, are often considered *novel* or *systemic* in the sense that they belong to the emergent level of organization (the higher or macro level) and not to the constituent parts (the lower or micro level).[15] In other words, to say that an entity is emergent is to say that it is non-

[15] There exists a vast, multi-disciplinary, literature on emergence, to which I shall refer throughout this chapter. For now, see Jervis, *System Effects: Complexity in Political and Social Life*, 74; Kim, "Making Sense of Emergence."; Stephan, "Emergentism, Irreducibility, and Downward Causation."; Stephan, "Varieties of Emergentism," 50. See also Bedau and Humphreys, eds., *Emergence: Contemporary Readings in Philosophy and Science*; Cunningham, "The Reemergence of 'Emergence'."; Manuel DeLanda, *Philosophy and Simulation: The Emergence of Synthetic Reason* (New York: Continuum, 2011); Robert Deuchars, "Deleuze, Delanda and Social Complexity: Implications for the 'International'," *Journal of International Political Theory* 6 (2010); Elder-Vass, "Luhmann and Emergentism: Competing Paradigms for Social Systems Theory," 413-16; Joseph, "The International as Emergent: Challenging Old and New Orthodoxies in International Relations Theory."; Kauffman, *At Home in the Universe: The Search for the Laws of Self-Organization and Complexity*; Niklas Luhmann, *Soziale Systeme: Grundriß einer Allgemeinen Theorie* (Berlin: Suhrkamp, 1988 [1984]), 49-50; Ilkka Niiniluoto, *Critical Scientific Realism* (Oxford: Oxford University Press, 1999), 22. I have also drawn on my earlier works on emergence, see David Pak Yue Leon, "Reduction, Emergence, and Downward Causation in International Relations Theory" (paper presented at the American Political Science Association Annual Meeting, Washington, D.C., 2005); Leon, "Reductionism, Emergence, and Explanation in International Relations Theory." For a recent

aggregative, and that it occupies a higher level in relation to the level(s) from which it has emerged and on which its organization depends, having causal powers that are derived from the nature of this organization and irreducible to its components. The question here is not so much whether the world is composed of levels as social scientists and philosophers of science describe it, but whether and if so why the social sciences and especially IR as a higher-level scientific inquiry can be relatively autonomous even if we accept this layered view of social reality.[16] If the reductive strategy fails, then there are irreducible phenomena that cannot be captured by microfoundations, and a theory of emergence of some kind has to be the basis for the discipline of International Relations. The previous section has established that ontological (and thus, methodological) individualism has logical flaws and limited applicability and so the search for microfoundations in IR is either incomplete—forcing reductionists to take on the full weight of finding the elusive bridge laws—or mostly beside the point due to social emergence. I argue that it is the latter, and

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work that discusses the diverse nature of emergence, see Wan, "Emergence à la Systems Theory: Epistemological *Totalausschluss* or Ontological Novelty?"

[16] Some non-reductive social scientists adopt a relational or network framework where the analytical foci include relations, processes, and network density. See, e.g., Mustafa Emirbayer, "Manifesto for a Relational Sociology," *American Journal of Sociology* 103 (1997); Emilie M. Hafner-Burton, Miles Kahler, and Alexander H. Montgomery, "Network Analysis for International Relations," *International Organization* 63 (2009); Patrick Thaddeus Jackson and Daniel H. Nexon, "Relations before States: Substance, Process, and the Study of World Politics," *European Journal of International Relations* 5 (1999); John Levi Martin, "Is Power Sexy?" *American Journal of Sociology* 111 (2005); Daniel Nexon, "Relationalism and New Systems Theory," in *New Systems Theories of World Politics*, ed. M. Albert, L.-E. Cederman, A. Wendt (New York and Basingstoke, UK: Palgrave Macmillan, 2010); Daniel Nexon and Thomas Wight, "What's at Stake in the American Empire Debate," *American Political Science Review* 101 (2007). Emergence can also be conceptualized in relational terms. See, e.g., Elder-Vass, "Integrating Institutional, Relational and Embodied Structure: An Emergentist Perspective."

below I critically analyze three versions of emergence that address this broader question (see figure 1, below) and their relationships to IR approaches. The first two kinds are shown to be compatible with some (weaker) form of reductionism (relative to microfoundationalism), while the last kind is truly nonreductive ontologically and analytically.

An early articulation of the concept of emergence (or rather a forerunner of it) can be found in John Stuart Mill's *A System of Logic*, where he argues that no mere summing up of parts would amount to an organized whole. Unlike the laws of vector addition of forces, certain chemical compounds have properties and dispositions that are non-aggregative.[17] Durkheim noted that the hardness of bronze could not be found in copper, tin, or lead—all malleable metals—but rather in their combination.[18] Other early theorists of emergence included G. H. Lewes, Samuel Alexander, C. Lloyd Morgan, and C. D. Broad, often referred to as "the British Emergentists."[19] A distinction can be made between *emergents* and *resultants*. An emergent is non-

[17] See John Stuart Mill, *A System of Logic: Ratiocinative and Inductive* (London: Longmans, Green, and Co., 1906 [1843]), Book III, Ch.6; Timothy O'Connor, "Emergent Properties," *American Philosophical Quarterly* 31 (1994): 91. See also Achim Stephan, "John Stuart Mills Doppelte Vaterschaft für den Britischen Emergentismus," *Archiv für Geschichte der Philosophie* 78 (1996). Mill is otherwise known as a defender of individualism. It is an interesting question as to why Mill seemed to defend emergent properties in natural systems, but apparently not in social ones. For a discussion of Mill's individualist views, see Martin Hollis, *The Philosophy of Social Science* (Cambridge: Cambridge University Press, 1994), 10.

[18] Durkheim, *The Rules of Sociological Method*, 39-40.

[19] A heuristic example of an emergent property in the early years was "water." As Ablowitz wrote in an early account: "[I]f I place two atoms of hydrogen and one atom of oxygen in chemical juxtaposition, I get one molecule of water. Now both hydrogen and oxygen are gases, and water is a liquid; and the wetness of water is a characteristic that could not possibly have been deduced from the nature of its components; it is a *new* characteristic that is attributable only to the structural organization of the molecular level of existence." Ablowitz, "The Theory of Emergence," 2.

aggregative and is not reductively explainable—its properties are novel, whereas a resultant exhibits linearity and is aggregative, predictable, and thus analytically reducible to its constituents.[20]

Since the early research on emergence, consciousness, solidity, liquidity, cohesiveness of water, the rigidity of steel, and phase transitions (*e.g.* from water to ice) have been found to exhibit emergent properties, suggesting, as the physicist Laughlin has pointed out, that "microscopic rules can be perfectly true and yet quite irrelevant to macroscopic phenomena."[21] Furthermore, the "essential role played by higher organizing principles in determining emergent behavior…is so obvious that it is a cliché not discussed in polite company. However, to other kinds of scientist the idea is considered dangerous and ludicrous, for it is fundamentally at odds with the reductionist beliefs central to much of physics…[But sooner or later this view] must be swept away by the forces of history."[22] It is a well-established fact in solid state chemistry that the electronic structure and the long-range atomic order, and not just

[20] Kim, "Making Sense of Emergence."; John Tienson, "Higher-Order Causation," *Grazer Philosophische Studien* 63 (2002): 94-96.
[21] Laughlin, *A Different Universe: Reinventing Physics from the Bottom Down*, 7, 34-35. See also Morton A. Kaplan, *System and Process in International Politics* (New York: John Wiley & Sons, 1957), 97; John R. Searle, "Reductionism and the Irreducibility of Consciousness," in *Emergence: Contemporary Readings in Philosophy and Science*, ed. M. Bedau and P. Humphreys (Cambridge, Mass.: MIT Press, 2008).
[22] Robert B. Laughlin and David Pines, "The Theory of Everything," in *Emergence: Contemporary Readings in Philosophy and Science*, ed. M. Bedau and P. Humphreys (Cambridge, MA: MIT Press, 2008), 264. They point to unpredictable electronic phenomena such as organogels as examples.

the chemical bonding, of the elements are central to understanding the properties of an object.[23]

In IR, Cederman has argued that under conditions where "complex networks exhibit general patterns and regularities," "macrolevel effects occur irrespectively of the particular microlevel mechanisms involved."[24] Other scholars, ranging from philosophers to social and natural scientists, have contended that emergent properties exhibit causal powers which are peculiar to the emergent level of organization.[25] Emergent causal powers are sometimes downplayed in various ("thinner") forms of emergence but are central to what this chapter calls the synthetic emergence position, as examined below.

The implications of emergence for social inquiry were becoming clear even in Durkheim's time when he argued that the combination of individuals would give rise to a novel emergent entity called "society," situated "outside the consciousness of

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[23] See, for example, the engaging lectures given by Professor Sadoway of MIT. Donald R. Sadoway, "Introduction to Solid State Chemistry," (Cambridge, Mass.: 2010). Available online at: http://ocw.mit.edu/courses/materials-science-and-engineering/3-091sc-introduction-to-solid-state-chemistry-fall-2010/1-introduction-to-solid-state-chemistry/.

[24] Lars-Erik Cederman, "Computational Models of Social Forms: Advancing Generative Process Theory," *American Journal of Sociology* 110 (2005): 882.

[25] See, e.g., Archer, *Realist Social Theory: The Morphogenetic Approach*; Robert W. Batterman, "Multiple Realisability and Universality," *British Journal for the Philosophy of Science* 51 (2000); Elder-Vass, "Luhmann and Emergentism: Competing Paradigms for Social Systems Theory."; Stephen Jay Gould, "The Patterns of Life's History," in *The Third Culture: Beyond the Scientific Revolution*, ed. J. Brockman (New York: Touchstone, 1996); Jonathan Joseph, "Philosophy in International Relations: A Scientific Realist Approach," *Millennium* 35 (2007); Wight, *Agents, Structures, and International Relations: Politics as Ontology*. In a society, the crime *rate* can be considered an emergent property because it is usually defined as the ratio of crimes to the population over a certain period of time and in a certain area. See Nigel Gilbert, "Varieties of Emergence," in *Computational Social Science* (Los Angeles, CA: SAGE, 2010). On emergent patterns of segregation, see Thomas C. Schelling, "Dynamic Models of Segregation," *Journal of Mathematical Sociology* 1 (1971).

individuals as such, in the same way as the distinctive features of life lie outside the chemical substances that make up a living organism."[26] The contemporary philosophical literature on emergence often notes that its implications can, *mutatis mutandis*, be generalized to any whole-parts relations, including social and political ones.[27] The following section analyzes some of the key philosophical issues surrounding emergence—focusing on nonreductive individualism and synthetic emergence. It tries to show that these often abstract issues impinge on, and have important implications for, international relations theory.

3.4 A Conceptual Map of Emergence

A conceptual map of emergence, organized along the axes of ontological reducibility and analytical explainability, can illustrate how different versions of emergence stand in relation to ontological and epistemological premises. Despite its potential contribution to IR theory and political inquiry more generally, emergence can be a

[26] Durkheim, *The Rules of Sociological Method*, 39-45. See also Mario Bunge, "The Power and Limits of Reduction," in *Scientific Realism: Selected Essays of Mario Bunge*, ed. M. Mahner (Amherst, NY: Prometheus, 2001), 180.

[27] Cf. Roy Bhaskar, *The Possibility of Naturalism: A Philosophical Critique of the Contemporary Human Sciences*, 3rd ed. (London: Routledge, 1998 [1979]); Paul Humphreys, "Emergence, Not Supervenience," *Philosophy of Science* 64 (1997): S337; Jervis, *System Effects: Complexity in Political and Social Life*, 15-17; Sawyer, "Nonreductive Individualism: Part II—Social Causation."; Sawyer, "Nonreductive Individualism: Part I—Supervenience and Wild Disjunction."; van Bouwel, "Individualism and Holism, Reduction and Pluralism: A Comment on Keith Sawyer and Julie Zahle."; Zahle, "The Individualism-Holism Debate on Intertheoretic Reduction and the Argument from Multiple Realization." The treatment of emergence here is largely philosophical in nature. For formalizations of (different conceptions of) emergence, see, e.g., Aleš Kubik, "Toward a Formalization of Emergence," *Artificial Life* 9 (2003); Strevens, *Bigger Than Chaos: Understanding Complexity through Probability*, Ch.2-4.

slippery concept. Philosophers and sociologists, among others, have sought, in various ways, to grapple with its many implications. For our purposes here, one of the most important differences among scholars has to do with whether or not they view emergence as compatible with ontological individualism. At least four implicit philosophies of international relations theory are possible on this two-dimensional conceptual map, each of which corresponds to a set of ontological and epistemological assumptions about the nature and study of international politics. They are: (A) Microfoundationalism, (B) Macroreductionism, (C) Nonreductive Individualism (NRI), and (D) Synthetic Emergentism.[28] Additionally, segments of complexity theory, as variants of emergence, will also be examined.

As examined in Chapter Two, (A) tacitly denies the reality of structures and corporate actors and is a "thick" individualist position entailing ontological *and* analytical reduction. By contrast, (B) tends to argue for the causal efficacy of the whole in relation to the parts, and (C) and (D) represent two different ways in which emergence theory may be articulated.

At the level of ontology, (A) and (C) are committed to ontological individualism, a form of philosophical anti-realism, which holds that emergent social

[28] To avoid unnecessary neologisms, and to underscore the interdisciplinary nature of the relevant debates, I borrow the terms "macroreductionism" and "NRI" from Goddard and Nexon, and Sawyer, respectively. See Stacie E. Goddard and Daniel H. Nexon, "Paradigm Lost? Reassessing *Theory of International Politics*," *European Journal of International Relations* 11 (2005); Sawyer, "Nonreductive Individualism: Part II—Social Causation."; Sawyer, "Nonreductive Individualism: Part I—Supervenience and Wild Disjunction." With respect to these scholars, I intend to use these terms a bit more broadly to include approaches that have an affinity to these terms.

properties or configurations have no ontological status and only serve as shorthand analytical categories, whereas (B) accepts the (thin) ontological non-reductive thesis that such entities are capable of producing observable effects (as opposed to being causally inert), and (D) goes further and argues that emergent properties are not useful fictions and have downward causal powers in their own right. At the level of epistemology, (A) and (B) accept (the former explicitly and the latter only implicitly) a form of methodological individualism which holds that emergent properties, whatever their ontological status, ought to be explained by reference to their microfoundations (e.g., through analytical disaggregation or unit-level filters), whereas (C) and (D) hold that emergent properties require some form of higher-level causation, but they differ on the form that it should take.

As we shall see, some IR scholars have already implicitly incorporated elements of emergence theory into their accounts. The question is whether all accounts of emergence can equally sustain a nonreductive philosophy of science for IR theory, which is necessary for it to counter the claims of intertheoretic reduction. After laying out the scope conditions for, and logics of, various positions on emergence, including complexity theory, I specify some of the conditions under which synthetic emergentism is best suited for the development of theories that are capable of capturing the irreducible properties of international politics as a complex social system. In other words, this chapter defends a form of structuralism, albeit one which has to be re-specified and reformulated.

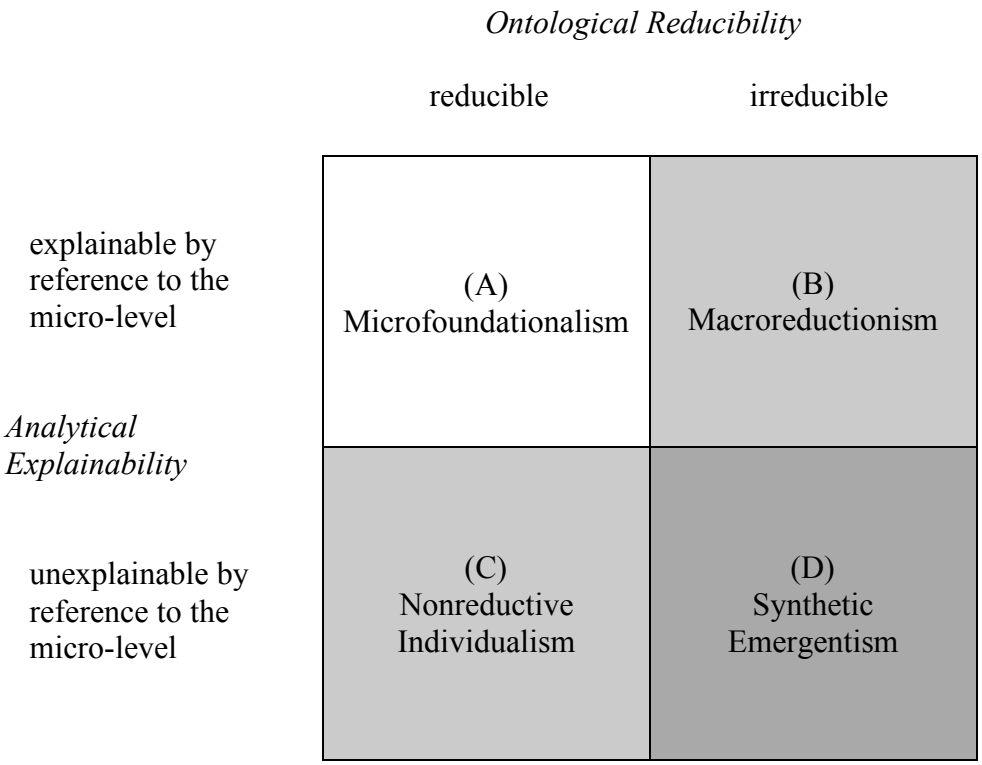

Figure 3.1 Philosophical Positions on Social Emergence in International Relations Theory

3.4.1 Macroreductionism

Macroreductionism, or cell (B), is a somewhat unusual position and accordingly there are relatively few IR theories that occupy this conceptual space, although as Goddard and Nexon have pointed out, Mearsheimer's "offensive" realism and Wallerstein's world systems theory approximate this philosophical outlook.[29] Such theories argue

[29] Goddard and Nexon, "Paradigm Lost? Reassessing *Theory of International Politics*," 12-13. See also John J. Mearsheimer, "The False Promise of International Institutions," *International Security* 19 (1994); John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: Norton, 2001); Immanuel Wallerstein, *The Capitalist World-Economy* (New York: Cambridge University Press, 1974).

that states are motivated by the political or economic structure of the international system.[30] Macroreductionist accounts tend to discount human agency; as such these accounts only make sense if "social systems exhibit total structural closure," meaning that systems are given a static character. This makes it difficult to theorize about evolution, change, and transformation.[31] Alternatively, theories of this kind can be said to accept systemic and environmental conditions as emergent but still account for international outcomes or effects in terms of local decisions or "filters" after the relevant structural determinants and constraints have been specified.

3.4.2 A Nonreductive Individualism?

An important variant of emergence theory which has been advanced in recent years in the philosophical and sociological literature is nonreductive individualism (NRI), or cell (C) in the figure.[32] It is important to analyze it because the theory of synthetic emergence, to be defended below, is formulated at least partially in reaction to this innovative but ultimately flawed contribution. Building on nonreductive physicalism in the philosophy of mind, Sawyer has argued that NRI can have potentially useful implications for the social sciences. Nonreductive physicalism is an attempt to come

[30] Thomas Friedman's concept of the "golden straitjacket" can also be said to be an instance of macroreductionist analysis. Thomas L. Friedman, *The Lexus and the Olive Tree: Understanding Globalization* (New York: Anchor Books, 2000).
[31] Nexon, "Relationalism and New Systems Theory," 109.
[32] Sawyer, "The Mechanisms of Emergence."; Sawyer, "Nonreductive Individualism: Part II—Social Causation."; Sawyer, "Nonreductive Individualism: Part I—Supervenience and Wild Disjunction."; Sawyer, *Social Emergence: Societies as Complex Systems*.

to terms with the mind-brain problem, where antireductionist philosophers of mind argue that mental states are (1) irreducible to and relatively autonomous from (physical) brain states, even if they rely on physical instantiations; and (2) they have *sui generis* higher-level causes *not* derived from lower-level brain states.[33]

Just as anti-reductionist emergentists in the philosophy of mind argue that the mental has causal powers which are not reducible to the physical (i.e., the mind-to-brain reduction) while subscribing to physicalism, so, some scholars argue, social scientists can deny that corporate actors or emergent phenomena have ontological status and still approach them non-reductively.[34] As a philosophy of *social* science, NRI advances an argument *against* methodological individualism, while accepting the idea that *only* individuals exist in the social world, i.e., ontological individualism, or what Patomäki and Wight—in philosophical usage—call *anti-realism*.[35] To achieve these aims, Sawyer, draws on both the supervenience thesis and the multiple realizability argument first advanced by Fodor and Putnam,[36] but he arrives at a

[33] There are so-called eliminative physicalists who want to do away with mental categories and terms entirely and refer only to physical terms. But as a scholar (a physicist) has put it quite succinctly, "[n]eurons do not 'think' nor can they 'perceive' objects. In neurophysiology there is no 'meaning,' no 'expectation,' no 'emotion.'" Helmut Schwegler, "The Plurality of Systems, and the Unity of the World," in *Systems: New Paradigms for the Human Sciences*, ed. G. Altmann and W. Koch (Berlin: Walter de Gruyter, 1998), 177.

[34] See Lars Udehn, "The Changing Face of Methodological Individualism," *Annual Review of Sociology* 28 (2002). For parallel debates in biology, see Korn, "The Emergence Principle in Biological Hierarchies."; Monetti and Albano, "On the Emergence of Large-Scale Complex Behavior in the Dynamics of a Society of Living Individuals: The Stochastic Game of Life."

[35] Heikki Patomäki and Colin Wight, "After Postpositivism? The Promises of Critical Realism," *International Studies Quarterly* 44 (2000).

[36] Fodor, "Special Sciences (Or: The Disunity of Science as a Working Hypothesis)."; Hilary Putnam, *Mind, Language, and Reality* (Cambridge: Cambridge University Press, 1975).

different position (NRI).[37] The supervenience thesis holds that if two entities or properties are identical at the lower-level, they cannot differ at the higher-level. If, for example, a set of lower-level properties causes a higher-level property to emerge, then the *same* set of lower-level properties will again cause the *same* higher-level property to emerge in every other occasion.[38] In other words, the higher-level property has neither causal nor ontological autonomy from its lower-level "supervenience base." This is similar to the claim that higher-order causation is epiphenomenal because all changes are initiated by the lower-level and thus that is where the causal powers lie.[39]

On the other hand, the *multiple realizability* argument holds that a higher-level predicate can be realized in multiple and radically heterogeneous ways by lower-level properties. A reductionist theory may, for example, describe the movement of an arm in purely physical terms, as an aggregate of quantum-mechanical events at the lower level(s), but because slightly different quantum-mechanical events could still result

[37] See also Rajeev Bhargava, *Individualism in Social Science* (Oxford: Clarendon Press, 1992), 62-63; Jaegwon Kim, "The Mind-Body Problem: Taking Stock after Forty Years," *Philosophical Perspectives* 11 (1997); Strevens, *Bigger Than Chaos: Understanding Complexity through Probability*, 334.

[38] Bhargava, *Individualism in Social Science*, 63-64; Donald Davidson, "Mental Events," in *Experience and Theory*, ed. L. Foster and J.W. Swanson (Amherst, Mass.: University of Massachusetts, 1970); Kim, *Physicalism, or Something near Enough*, Ch.1; Sawyer, "Nonreductive Individualism: Part I—Supervenience and Wild Disjunction," 543; Wendt, *Social Theory of International Politics*, 155-56. Cf. Strevens, *Bigger Than Chaos: Understanding Complexity through Probability*, 334.

[39] See a further discussion in, e.g., Tienson, "Higher-Order Causation."

in, or *realize*, a recognizable movement of an arm, no aggregation could strictly correspond to or be identified with lower-level events.[40]

In political science and the social sciences more generally, Shapiro has formulated this problematic in terms of *multiple true descriptions*, where determining the "right descriptive cut" or finding the "right sorting criterion" is a matter of problematizing descriptions of social reality.[41] As Lukes has noted, "[i]t is important to see, and it is often forgotten, that to *identify* a piece of behaviour, a set of beliefs, etc., is sometimes to explain it."[42] Put differently, particular descriptions or specifications of the ontological status of a social phenomenon would yield different strategies—with varying degrees of germaneness—for studying that phenomenon.[43] In a particularly vivid example, Popper suggests in *The Poverty of Historicism* that when we wish to ascertain the cause of death of Giordano Bruno—a sixteenth-century Italian philosopher and astronomer who was burnt at the stake as a heretic—we need not invoke physical laws that pertain to organisms dying under intense heat. Rather, the level at which social scientists, historians, and others should be operating has do

[40] D. Gene Witmer, "Locating the Overdetermination Problem," *British Journal for the Philosophy of Science* 51 (2000): 278.
[41] Ian Shapiro, "Problems, Methods, and Theories in the Study of Politics, Or: What's Wrong with Political Science and What to Do About It," in *Problems and Methods in the Study of Politics*, ed. I. Shapiro, R.M. Smith, and T.E. Masoud (Cambridge: Cambridge University Press, 2004), 30.
[42] Steven Lukes, "Methodological Individualism Reconsidered," *The British Journal of Sociology* 19 (1968): 125.
[43] See also Section 4.4.

with the purposes and nature of inquiry.[44] In this example, a social and political inquiry likely has to take into account the *social* contexts within which a certain type of person could be branded as "heretic" and rendered executable, rather than lower-level physical phenomena that literally led to his death. A complete microphysical account of a social phenomenon or process can neither replace a macro-level explanation nor render it redundant.[45]

Similarly, there are irreducible properties of the international system that cannot be ascertained through the lenses of domestic processes and individual (rational) decisions. Theorizing the state in terms of multiple realizability, Wendt argues that the state could be realized by a wide range of internal organizational and political arrangements, practices, actions and dispositions, even as there might be certain necessary (for him, Weberian) conditions for being what he calls "the state-as-such."[46] Radically different lower-level descriptions or properties such as being "democratic," "authoritarian," "communist," "liberal," or "fascist" and other finer-grained distinctions—the nature of legislative-executive relations; parliamentary vs. presidential systems; plurality vs. proportional representation models—can all realize

[44] Karl R. Popper, *The Poverty of Historicism* (London: Ark, 1986 [1957]), 145. See also the thought experiment of a reduction of "murder" to the movement of particles in Kauffman, *Reinventing the Sacred: A New View of Science, Reason, and Religion*, 23.
[45] See also a discussion in Lukes, "Methodological Individualism Reconsidered."; Philip Pettit, *The Common Mind: An Essay on Psychology, Society and Politics* (Oxford: Oxford University Press, 1996), 248-64.
[46] Wendt, *Social Theory of International Politics*, 201.

the higher-level predicate "state." The same logic holds for "bureaucracy" or "collective identity" or "culture."[47]

Modern military planners also seem to have instinctively recognized emergent properties through the theory and practice of combined arms. When disparate units or branches of the military are used in conjunction with different weapons systems, they generate complex and complementary effects in coercive power. Broadly speaking, combined arms warfare can be realized in different ways by the integration of a wide variety of units and arms, including, but certainly not limited to, mechanized infantry, airborne assault teams, electronic warfare, armor, artillery, military engineers, and combat support and logistics.[48]

Whether a particular higher-level configuration or property is multiply realizable is an empirical question. But many, including Sawyer himself, believe that "[t]here are no firm data for any but the grossest and most approximate

[47] Zahle, "The Individualism-Holism Debate on Intertheoretic Reduction and the Argument from Multiple Realization," 84, 89.

[48] See Jonathan M. House, *Toward Combined Arms Warfare: A Survey of 20th-Century Tactics, Doctrine, and Organization* (Fort Leavenworth, KS: U.S. Army Command & Staff College, 1984), Introduction; Jervis, *System Effects: Complexity in Political and Social Life*, 40. House's work is available on the U.S. Army Command and General Staff College website at: http://www.cgsc.edu/carl/resources/csi/House/House.asp (last accessed June 2011). This work has been updated and published as Jonathan M. House, *Combined Arms Warfare in the Twentieth Century* (Lawrence, KS: University Press of Kansas, 2001). William Sewell's discussion of schemas gives the example of a group of soldiers who can "generate different amounts and kinds of military power" as instantiated by different conventions of warfare, regimes of training, and notions of strategy and tactics of the commander. Significant differences in the *instantiating* factors can still realize "a group of soldiers." William H. Sewell, Jr., "A Theory of Structure: Duality, Agency, and Transformation," *American Journal of Sociology* 98 (1992): 11. To continue with the military theme, it can be argued that the invention of the general staff as a structure dramatically reorganized exisiting military relations and realized different military properties as officers were put in different structured relations vis-à-vis one another.

correspondences between sociological types and individual types. There is an open empirical possibility that what corresponds to the natural kind predicates…may be a heterogeneous and unsystematic disjunction of predicates in individualist language."[49]

Although nonreductive individualism is an important rejoinder to methodological individualism, it takes an anti-realist ontological position with respect to social structures and configurations, which vitiates the case for social or higher-level causation. It is true that if the conditions for radically heterogeneous realizations hold, a multiply realizable property exists, and micro-to-macro causation becomes highly difficult. But aside from having analytic consequences (anti-reductionism), multiple realizability also means that the higher-level becomes relatively autonomous and ontologically irreducible, as well. It is partly because of relative autonomy that higher-level or anti-reductionist explanations can be theoretically tenable. Nonreductive individualists, however, believe that "[s]ocial properties do not have autonomous causal force, because their causal consequences obtain in virtue of their realizing individual supervenience base."[50] Put differently, for NRI, causal powers reside in the lower level(s) and the socially emergent is in fact

[49] Sawyer, "Nonreductive Individualism: Part I—Supervenience and Wild Disjunction," 551. See also Fodor, "Special Sciences (Or: The Disunity of Science as a Working Hypothesis)," 692-98.
[50] Sawyer, "Nonreductive Individualism: Part II—Social Causation," 207. Interested readers should compare this with Sawyer, *Social Emergence: Societies as Complex Systems*, 69-73. Here Sawyer appears to articulate a less ontologically individualist position. Yet none of his articles cited in the present work is listed amongst the articles that he specifically singles out as having been "superseded" by his book. See Sawyer, *Social Emergence: Societies as Complex Systems*, ix.

causally inert. Non-reductive individualism, if the term is to be used to go beyond Sawyer's particular formulation, would include other approaches that are committed to methodological anti-reductionism, but are, rather implausibly, wedded to the notion that only human beings have causal powers in the social world, and that there can be no second-order entities.[51] The non-reductive individualist position, broadly construed, is problematic because properties are only considered emergent if they are qualitatively different from, and could not be possessed by or reduced to, a lower level.[52] The combined arms example earlier shows that it would not be profitable or even possible to consider the *joint effects* of different units and arms in isolation, even though no one seriously doubts that individual soldiers and weapons are the condition of possibility for combined arms. A military organization integrating disparate unit types and weapon systems constitutes its own ontological entity, an *emergent* entity, with real—and different—causal powers and effects that make it distinct from its parts.

Within IR, Waltzian structural realism most closely resembles the philosophical posture of NRI, for it seeks to counter the tendency to reduce systemic properties to the characteristics of units, arguing for instance that order and stable

[51] See, e.g., a recent approach which theorizes "structures of corporate practice" with "socially embedded human beings" but without "actively causal powers" of their own; perhaps not surprisingly, it holds that "human beings are the sole actors" in the social world. Ulrich Franke and Ulrich Roos, "Actor, Structure, Process: Transcending the State Personhood Debate by Means of a Pragmatist Ontological Model for International Relations Theory," *Review of International Studies* 36 (2010): 1058.

[52] See Anderson, "More Is Different: Broken Symmetry and the Nature of the Hierarchical Structure of Science." See also Humphreys, "Emergence, Not Supervenience," S342; Michael Silberstein and John McGeever, "The Search for Ontological Emergence," *The Philosophical Quarterly* 49 (1999): 186.

patterns persist in spite of changes and variations at the micro-level.[53] Analytically, it aspires to be an anti-reductionist program. On the other hand, powerful states in the international system are analogized to major firms in a market (namely, an oligopolistic market) so the causal efficacy of structure seems on this view to be ultimately explainable by reference to the properties of major parts even if those properties (e.g., material capabilities) are understood in loosely relational terms (e.g., the relative distribution of capabilities throughout the system, constituting a particular polar configuration). As Fearon has pointed out, however, while state desire for survival may be a reasonable assumption in general, it is hardly the logical outcome of a purportedly structural theory built on micro-economistic foundations.[54] Maximization of gains, not survival per se, is the primary motive of firms in neoclassical theory. If shareholder value can be enhanced through mergers or acquisitions, the existence or the identity of the firm itself becomes a secondary concern. In general, the same cannot be said of the state or of political communities. Waltz's particular notion of market ontology and its attendant instrumentalism thus

[53] Goddard and Nexon have pointed out that while Waltz's central insight is that "*reductionist theories cannot account for international order and change*," the structural functionalist foundations of neorealism fail to account for precisely the problem of order which the theory poses. See Goddard and Nexon, "Paradigm Lost? Reassessing *Theory of International Politics*," 10-11.

[54] James D. Fearon, "Domestic Politics, Foreign Policy, and Theories of International Relations," *Annual Review of Political Science* 1 (1998): 294. Wolfers, however, takes the opposite view regarding survival. Arnold Wolfers, *Discord and Collaboration: Essays on International Politics* (Baltimore: Johns Hopkins University Press, 1962), 60.

inadvertently undermines the case for non-reductive inquiry in international relations theory.[55]

In an important sense, this can be seen as a consequence of adopting a form of nonreductive individualism because while NRI holds that emergent entities or configurations are able to produce observable, tangible effects independently of their realizing lower-level properties, those entities or configurations have not been postulated to be real, or they have been analogized to fictitious or unsuitable entities. Thus, in sharing the same anti-(philosophical) realist ontological commitments with microfoundationalism, NRI's—and Waltz's—analytical program of structural theorizing is compromised. Although Wendt has employed the concept of supervenience (in addition to multiple realizability) in IR theory, he now appears to have some reservations about supervenience without repudiating it.[56] Unlike Sawyer, however, Wendt has maintained a scientific realist position regarding social ontology, and should not be regarded as holding a NRI position.

3.5 Synthetic Emergence and Social Explanation

[55] Waltz does allow for the possibility of "amalgamation," but for theory-building purposes he still adheres to the as-if assumption that survival is the first and foremost priority. For problems of instrumentalism in Waltz's *Theory of International Politics*, see Fred Chernoff, "Scientific Realism as a Meta-Theory of International Politics," *International Studies Quarterly* 46 (2002): 192; Patomäki and Wight, "After Postpositivism? The Promises of Critical Realism," 215; Wendt, *Social Theory of International Politics*, 61.

[56] Wendt, *Social Theory of International Politics*; Alexander Wendt, "The State as Person in International Theory," *Review of International Studies* 30 (2004): footnotes 56 and 72.

Synthetic emergence, cell (D), adopts the multiple realizability argument, but rejects NRI's hidden ontological individualism and substitutes in its place a non-reductive view towards social ontology and causation.[57] Against NRI, and pace Wendt, the emergence argument advanced here holds that the supervenience thesis cannot, as we have seen, be easily (if at all) accommodated within the framework of emergence, nor can it support a downward causation argument in international politics. Thus, though NRI may seem an attractive alternative due to the perceived need for "compromise" and injunctions against reifying social structures, it cannot in fact serve as an adequate framework onto which properly anti-reductionist theories of international politics are grafted. Jaegwon Kim is right in pointing out that nonreductive materialism, a philosophical stance on which NRI is based, is a "halfway house" that represents an "inherently unstable position."[58] Thus, if a position with regard to the social emergence of international politics is to be adopted, the transition from nonreductive individualism to synthetic emergence is both defensible and desirable.

To distinguish synthetic emergence from other varieties of emergentism (e.g., NRI) and also to make clear why the particular strand of emergence theory being advanced here is "synthetic," the question of complexity theory needs to be

[57] It should be noted that a rejection of ontological individualism, itself a rejection of the ontological existence of collectives, is not the same as a denial of the existence and plurality of individuals (or of lower-level components of a collective entity). See a discussion in Floyd H. Allport, "Logical Complexities of Group Activity," in *Philosophical Problems of the Social Sciences*, ed. David Braybrooke (New York: Macmillan, 1965).
[58] Kim, "Making Sense of Emergence," 5. Jaegwon Kim, "The Myth of Nonreductive Materialism," in *Supervenience and Mind: Selected Philosophical Essays* (1993).

examined, if briefly. As a variant of emergence theory, complexity theory argues that stable macro-level outcomes can obtain even given lower-level fluctuations or contingencies. In a social or demographic system, for example, micro-level patterns "make up a fantastically irregular filigree of life trajectories," but standing back, an observer would notice an emergent simplicity: the "sudden twists and turns of individual lives fall away, leaving only—in many cases—a pattern of stable or gently cyclic population flow."[59]

There are at least two views on complexity within the political science literature: agent-based and emergent.[60] A major part of the former focuses on simulations of artificial societies and agent-based modeling, which often begin by specifying a set of basic rules governing individual agent behavior and the interaction of agents in a system. Cooperation, in Axelrod's well-known example, is said to emerge from the interactions of lower-level actors operating under "tit-for-tat" rules.[61] More recently, and working in a similar vein, Jervis has emphasized

[59] Strevens, *Bigger Than Chaos: Understanding Complexity through Probability*, 1, Ch.4. See also Gregory Brunk, "Why Do Societies Collapse? A Theory Based on Self-Organized Criticality," *Journal of Theoretical Politics* 14 (2002): 199; Monetti and Albano, "On the Emergence of Large-Scale Complex Behavior in the Dynamics of a Society of Living Individuals: The Stochastic Game of Life."

[60] There is a wide variety in various disciplines. Another branch is autocatalytic theory, discussed in John F. Padgett and Walter W. Powell, "The Problem of Emergence," in *The Emergence of Organizations and Markets*, ed. J. Padgett and W. Powell (Princeton, NJ: Princeton University Press, 2012). See also discussions in Cunningham, "The Reemergence of 'Emergence'."; Stephan, "Varieties of Emergentism." See also selections in Bedau and Humphreys, ed., *Emergence: Contemporary Readings in Philosophy and Science*. For a more general exposition, see Peter Coveney and Roger Highfield, *Frontiers of Complexity: The Search for Order in a Chaotic World* (London: Faber and Faber, 1995).

[61] Robert Axelrod, *The Complexity of Cooperation: Agent-Based Models of Competition and Collaboration* (Princeton: Princeton University Press, 1997); Robert Axelrod, *The Evolution of Cooperation* (New York: Basic Books, 1984). See also Joshua M. Epstein and Robert Axtell, *Growing*

emergent properties in social systems and re-interpreted Waltzian realism to mean that systemic patterns of balancing are maintained through unit-level responses to local threats without any central coordination. Waltz himself has called this a form of "organized complexity," where "[o]rder may prevail without an orderer; adjustments may be made without an adjuster; tasks may be allocated without an allocator."[62] Indeed, years earlier Polanyi had noted in *The Great Transformation* that "[e]ven without an established center, regular meetings, common functionaries, or compulsory code of behavior, Europe had been formed into a system simply by the continuous close contact between the various chancelleries and members of the diplomatic bodies," thereby forming what he called an "informal system" of balance of power.[63] While not employing an emergence argument (of the NRI variant) explicitly, Waltz's critique of reductionism begins with the specification of an

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Artificial Societies: Social Science from the Bottom Up (Cambridge, Mass.: MIT Press, 1996); Chris Goldspink, "Modelling Social Systems as Complex: Towards a Social Simulation Meta-Model," *Journal of Artificial Societies and Social Simulation* 3, no. 2 (2000); Timothy O'Connor and Jonathan D. Jacobs, "Emergent Individuals," *The Philosophical Quarterly* 53 (2003); Sawyer, "The Mechanisms of Emergence."; Schelling, "Dynamic Models of Segregation."; Thomas C. Schelling, *Micromotives and Macrobehavior* (New York: W.W. Norton, 1978).

[62] Kenneth Waltz, *Theory of International Politics* (Boston: Addison-Wesley, 1979), 77. Jervis, *System Effects: Complexity in Political and Social Life*. Cf. Alan Beyerchen, "Clausewitz, Nonlinearity, and the Unpredictability of War," *International Security* 17 (1992). Others such as Cederman agree that balancing may well be a fairly stable result of unintended consequences, but argue that assumptions about automatic balancing rest on the existence of substantial positive feedback loops. See Lars-Erik Cederman, "Emergent Polarity: Analyzing State Formation and Power Politics," *International Studies Quarterly* 38 (1994); Diana Richards, "A Chaotic Model of Power Concentration in the International System," *International Studies Quarterly* 37 (1993). An early work in political science on feedback is Karl W. Deutsch, *The Nerves of Government: Models of Political Communication and Control* (New York: Free Press of Glencoe, 1963). Both Jervis and Cederman suggest that Neorealism, a purported "structural" theory, represents a "*laissez-faire*" interpretation of power politics. See Cederman, "Emergent Polarity: Analyzing State Formation and Power Politics," 528. This is an interesting question that has to be set aside for the time being.

[63] Karl Polanyi, *The Great Transformation: The Political and Economic Origins of Our Time* (Boston: Beacon Press, 1957 [1944]), 262.

international *system* composed of a *structure* and *interacting units*.[64] This system is characterized by (1) an ordering principle, anarchy, that is, the absence of a world sovereign authority, (2) states as units of the system, functionally undifferentiated and similar to one another, and (3) the relative distribution of capabilities within the system.

As pointed out above, while Waltz's goal of developing an anti-reductionist theory points in the right general direction, his reliance on microeconomic analogies and the invisible hand metaphor does not address the issue of ontological reductionism in neorealism. Wendt has rightly pointed out that, though *Theory of International Politics* aspires to explanatory anti-reductionism, it founders—like NRI—on a tacitly individualist or at least instrumentalist social ontology.[65] Among political realists, Copeland is perhaps the only one who clearly recognizes that without a philosophically realist scaffolding for collective concepts and categories, structural theory will always be vulnerable to the challenge of reductionism from the social ontological flank.[66]

Although work in the agent-based complexity genre has sometimes been characterized as "emergent," and one of its aims is to show the inadequacy of reductionism, it is not entirely clear how social structures constructed from the

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[64] Waltz, *Theory of International Politics*. Cf. Patrick James, *International Relations and Scientific Progress: Structural Realism Reconsidered* (Columbus: Ohio State University Press, 2002), Ch.4.
[65] Wendt, "The Agent-Structure Problem in International Relations Theory," 341-42.
[66] Dale Copeland, "The Constructivist Challenge to Structural Realism," *International Security* 25 (2000): 198.

ground up can be considered irreducible, much less how they can exert downward causal powers. This is crucial, because one of the key reasons for structural entities or configurations to be taken seriously is because they are emergent, and can exercise causal powers which govern or regulate the lower levels.[67] Reductionism, taking its own ontological commitments seriously, would have to reject downward causation and anti-reductionism, defend it; this point is not in dispute for either side of the reduction vs. emergence debate in the social sciences, the philosophy of mind, or in theoretical and systems biology.[68]

None of the discussion thus far should be construed as opposing complexity to emergence. Indeed, emergence is the study of macro-phenomena and properties that arise out of, but are irreducible to, the complex interactions of units and components, requiring analytical attention to the higher level(s).[69] Unlike most other agent-based theorists in political science, Cederman—who has used complexity theory to model state formation, the democratic peace as well as the power-law patterns of the size of

[67] For arguments as to why this is the case, see, e.g., Silberstein and McGeever, "The Search for Ontological Emergence," 182; Alexander Wendt, "Why a World State Is Inevitable," *European Journal of International Relations* 9 (2003): 500.

[68] For more on this issue, see May Brodbeck, "Methodological Individualism: Definition and Reduction," in *Readings in the Philosophy of the Social Sciences*, ed. M. Brodbeck (London: Macmillan, 1968), 283; Martin Carrier and Patrick Finzer, "Explanatory Loops and the Limits of Genetic Reductionism," *International Studies in the Philosophy of Science* 20, no. 3 (2006); Kim, "Making Sense of Emergence," 19; James A. Marcum, "Metaphysical Presuppositions and Scientific Practices: Reductionism and Organicism in Cancer Research," *International Studies in the Philosophy of Science* 19 (2005); Roberta L. Millstein, "Natural Selection as a Population-Level Causal Process," *British Journal for the Philosophy of Science* 57 (2006); Rosenberg and Kaplan, "How to Reconcile Physicalism and Antireductionism About Biology."; Stephan, "Emergentism, Irreducibility, and Downward Causation."

[69] See, e.g., Coveney and Highfield, *Frontiers of Complexity*, 6-7. Earlier I was discussing the *agent-based modeling* strand of complexity, and more precisely a segment of that genre.

wars[70]—recognizes the importance for complexity research to adopt a more emergentist approach that incorporates downward causation. The reason for this is that in most agent-based models, agents have very "primitive cognitive capacity" and operate under few and unrealistically simple rules, which means that such models "conceive of emergent properties as epiphenomenal configurations…that do not feed back down to the microlevel."[71] The unintended consequence in all this is that societal actors have been granted freedom of action, only to act without the cognitive capacity that would be consistent with meaningful human agency.

Wendt's discussion of the teleological logic of anarchy in helping to form a "global monopoly over the legitimate use of organized violence," or a world state, complements the focus on the agent-level by stipulating not only an upward—*chaotic*—force, but importantly, also a downward—*stabilizing*—one.[72] From very different starting points, other scholars have also arrived at the conclusion that micro-level chaos and turbulence are compatible with fairly stable macro-level outcomes in social and political life.[73]

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[70] Lars-Erik Cederman, "Back to Kant: Reinterpreting the Democratic Peace as a Macrohistorical Learning Process," *American Political Science Review* 95 (2001); Cederman, "Emergent Polarity: Analyzing State Formation and Power Politics."; Lars-Erik Cederman, "Modeling the Size of Wars: From Billiard Balls to Sandpiles," *American Political Science Review* 97 (2003). See also George Modelski, "Is World Politics Evolutionary Learning?" *International Organization* 44 (1990).
[71] Cederman, "Computational Models of Social Forms: Advancing Generative Process Theory," 877. Cf. James Mahoney, "Toward a Unified Theory of Causality," *Comparative Political Studies* 41 (2008).
[72] Wendt, "Why a World State Is Inevitable."
[73] David Waldner, "Quantum Irrelevance" (paper presented at the International Studies Association, Montreal, Canada, 2004).

These scholarly contributions rightly allude to the need for the explanatory component of synthetic emergence to be articulated in terms of downward causation. Stated differently, emergence entails downward causation because without this causal component the ontological status of emergent entities or properties cannot be established, and emergence would have no epistemological import. Besides a realist view towards social structures, then, it is the downward causation argument that distinguishes synthetic emergence from NRI and microfoundationalism, neither of which can well support a downward causal argument in virtue of their ontological presuppositions.[74] This is significant because while emergentism and reductionism both share a layered view of ontological organization, the latter implicitly accepts the intertheoretic reduction thesis, whereas emergence theory holds that different levels of organization have irreducible causal powers and propensities.[75] In this sense, that which is *international* has relative causal and ontological autonomy from the lower levels, but does not attain absolute analytical priority. Thus, this conception separates the theory of emergence not only from intertheoretic reduction and methodological individualism, but also from Waltzian and Wallersteinian structuralism. International politics is considered to be neither strictly explicable by reference to microfoundations, nor structurally (pre-)determinant.

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[74] As I have noted earlier, Sawyer's later work seems to have attenuated its ontological individualism, which would make his argument for downward causation more defendable.

[75] Claus Emmeche, Simmo Køppe, and Frederik Stjernfelt, "Levels, Emergence, and Three Versions of Downward Causation," in *Downward Causation: Minds, Bodies, and Matter*, ed. P.B. Andersen (Århus: Århus University Press, 2000); Wendt, *Social Theory of International Politics*, 499; Wight, *Agents, Structures, and International Relations: Politics as Ontology*.

Downward causation does not sit very well with conventional notions of causation in IR. This is partly because Humeanism has for a long time been the dominant model of causation in IR research.[76] This causal model supposes that if *C* causes *E*, (1) *C* and *E* are ontologically distinct entities, (2) *C* precedes *E* temporally, and (3) *E* always follows *C* under like conditions with a probability of *P*.[77] According to this view, causal relationships are established by a regularity of conjoined events (or constant conjunction of events). Thomas Reid, a major representative of the Scottish Enlightenment and Hume's contemporary, put it this way more than two centuries ago: "[w]hen we ascribe [causal] power to inanimate things, we mean nothing more than a constant conjunction by the laws of nature which experience discovers between the event which we call the effect and something which goes before it."[78]

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[76] For a recent, extended discussion of this state of affairs, see Ch.1-3 in Milja Kurki, *Causation in International Relations: Reclaiming Causal Analysis* (Cambridge: Cambridge University Press, 2008). See also Mahoney, "Toward a Unified Theory of Causality."; Wight, *Agents, Structures, and International Relations: Politics as Ontology*.

[77] David Hume, *An Enquiry Concerning Human Understanding and Concerning the Principles of Morals* (Oxford: Clarendon Press, 1975 [1777]), §7. See also John Gerring, "Causation: A Unified Framework for the Social Sciences," *Journal of Theoretical Politics* 17 (2005): 174-76; Carl G. Hempel, *Aspects of Scientific Explanation* (New York: Free Press, 1970).

[78] Thomas Reid, "Of Power," *The Philosophical Quarterly* 51 (2001 [1792]): 11. There is probably not the place to develop an extended critique of this view of causation, but its flaws have been amply discussed. See, e.g., Roy Bhaskar, *A Realist Theory of Science* (Brighton, UK: Harvester, 1975), Introduction, Ch.2; Rom Harré and E.H. Madden, "Causal Powers: A Theory of Natural Necessity," in *Critical Realism: Essential Readings*, ed. M. Archer, R. Bhaskar, A. Collier, T. Lawson, and A. Norrie (London: Routledge, 1998); Martin Hollis and Steve Smith, *Explaining and Understanding International Relations* (Oxford: Clarendon Press, 1990), 49; Kurki, *Causation in International Relations: Reclaiming Causal Analysis*; Patomäki and Wight, "After Postpositivism? The Promises of Critical Realism," 222-28; Jorge Rivas, "Realism. *For Real This Time*: Scientific Realism Is Not a Compromise between Positivism and Interpretivism," in *Scientific Realism and International Relations*, ed. J. Joseph and C. Wight (New York and Basingstoke, UK: Palgrave Macmillan, 2010); Amit Ron, "Regression Analysis and the Philosophy of Social Science: A Critical Realist View,"

Downward causation, by contrast, is a form of higher-level explanation that involves emergent configurations or properties; its causal mechanisms can be formal, generative, or regulatory, not necessarily efficient.[79] In an early work on systems, Kaplan may be said to have identified some of the features of downward causation when he describes *regulation* as the "process by means of which a system attempts to maintain or preserve its identity over time as it adapts to changing conditions."[80] Other earlier seminal works by Parsons, Deutsch, and Ashby likewise focused on mechanisms of control, steering, regulation, and maintenance in social systems, with Ashby showing that system stability is a systemic property and it "*belongs only to the combination; it cannot be related to the parts considered separately*."[81] Today the idea that multiply realized emergent configurations are capable of preserving macro-structures by regulating and "filtering out" micro-level fluctuations is once again gaining traction and attention.[82] As Holland argues, "emergence is above all a

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Journal of Critical Realism 1 (2002); Alexander Wendt, "On Constitution and Causation in International Relations," *Review of International Studies* 24 (1998); Wight, *Agents, Structures, and International Relations: Politics as Ontology*.

[79] See Emmeche, Køppe, and Stjernfelt, "Levels, Emergence, and Three Versions of Downward Causation"; Wendt, "Why a World State Is Inevitable."

[80] Kaplan, *System and Process in International Politics*, 89. See also W. Ross Ashby, *Design for a Brain: The Origin of Adaptive Behaviour* (New York: Wiley, 1960 [1952]), 54.

[81] Ashby, *Design for a Brain: The Origin of Adaptive Behaviour*, 56. Deutsch, *The Nerves of Government: Models of Political Communication and Control*, 76. Talcott Parsons, "An Outline of the Social System," in *Theories of Society: Foundations of Modern Sociological Theory*, ed. T. Parsons, E. Shils, K. Naegle, J. Pitts (New York: Simon & Schuster, The Free Press, 1961). See Craig Calhoun, Joseph Gerteis, James Moody, Steven Pfaff and Indermohan Virk, eds., *Classical Sociological Theory* (Malden, Mass.: Blackwell Publishing, 2007), especially 424-25. See also Norbert Wiener, *Cybernetics: Or Control and Communication in the Animal and the Machine*, 2nd ed. (Cambridge, Mass.: MIT Press, 1965).

[82] C.A. Hooker, "Asymptotics, Reduction and Emergence," *British Journal for the Philosophy of Science* 55 (2004): 470. See also Laughlin and Pines, "The Theory of Everything." Yaneer Bar-Yam,

product of coupled, context-dependent interactions. Technically these interactions and the resulting system are nonlinear."[83] Though highly dynamic, nonlinear, and difficult to predict, stabilizing forces and patterns do exist.

Downward causation works through higher-level boundary conditions that regulate the developmental trajectories of their lower-level components. A case in point in the social world would be Wendt's three cultures of anarchy. From the standpoint of downward causation, structures do not so much cause lower-level events as constitute, condition, constrict, and regulate them.[84] It is concerned primarily with what kinds of structural configurations are, the tendencies and powers peculiar to them, and their relations and effects on the lower-level, and only secondarily with prediction.[85]

Since some lower-level outcomes and interactions obtain in virtue of causal relations at the emergent level of organization, a key explanatory strategy of synthetic emergence would be to "account for the properties of things by reference to the

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Dion Harmon, and Benjamin de Bivot, "Systems Biology: Attractors and Democratic Dynamics," *Science* 20 (2009); Tienson, "Higher-Order Causation."

[83] See John H. Holland, *Emergence: From Chaos to Order* (Reading, Mass.: Addison Wesley, 1998). As cited in Chris Goldspink and Robert Kay, "Bridging the Micro-Macro Divide: A New Basis for Social Science," *Human Relations* 57 (2004): 604. See also Brunk, "Why Do Societies Collapse? A Theory Based on Self-Organized Criticality."

[84] This is still a form of causality, more broadly construed, i.e., in non-positivist terms. Such conditioning forces are important, but are not the same as determinism. See, e.g., Margaret S. Archer, "The Ontological Status of Subjectivity," in *Contributions to Social Ontology*, ed. C. Lawson, J. Latsis, and N. Martins (London: Routledge, 2007), 17.

[85] Cf. Bhaskar, *A Realist Theory of Science*, 18.

structures in virtue of which they exist."[86] In theorizing power, for example, Barnett and Duvall have argued that the effects of power can be produced at a social distance and through relations of constitution, in addition to being the direct outcome of agentic interactions.[87] If research is guided primarily by a focus on agent-specific and micro-level mechanisms, the multifaceted character of power in international politics will be overlooked.

Similarly, if institutions are indeed authoritative social forms for the distribution of resources, knowledge and/or information, then examining "domestic institutional conditions that make it rational to delegate authority to international institutions"—a research frontier for institutionalists[88]—will likely fail to capture the spatial or temporal distance that imparts authority to international institutions.[89] Authority, in this sense, should be seen as an emergent property, rather than simply as a derivative phenomenon.

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[86] Wendt, "On Constitution and Causation in International Relations," 105. Cf. Kaplan, *System and Process in International Politics*, 89-93.
[87] Michael Barnett and Raymond Duvall, "Power in International Politics," *International Organization* 59 (2005).
[88] Beth A. Simmons and Lisa L. Martin, "International Organizations and Institutions," in *Handbook of International Relations*, ed. W. Carlsnaes, T. Risse, and B. Simmons (London: Sage, 2002), 205. See also contributions in Darren Hawkins, David Lake, Daniel Nielson and Michael Tierney, eds., *Delegation and Agency in International Organizations* (Cambridge: Cambridge University Press, 2006).
[89] Barnett and Duvall, "Power in International Politics," 51. For further discussions, see Michael Barnett and Martha Finnemore, *Rules for the World: International Organizations in Global Politics* (Ithaca: Cornell University Press, 2004); Lloyd Gruber, *Ruling the World: Power Politics and the Rise of Supranational Institutions* (Princeton: Princeton University Press, 2000); Terry M. Moe, "Power and Political Institutions," in *Rethinking Political Institutions: The Art of the State*, ed. I. Shapiro, S. Skowronek, D. Galvin (New York: New York University Press, 2006).

Clearly, not every property is emergent and not every institution has the property of being "authoritative." Insofar as an institution is authoritative at all, however, it can no more be considered the product of particular, resource-laden actors, than law can be regarded as specific pieces of legislation or the work of individual legislators through a "reductive translation."[90] Institutionalization means that power cannot be fully monopolized, nor can control over social or international outcomes be guaranteed.[91] Put differently, the degree of power, influence, or authority may be inversely related to the extent to which an institution can be reduced to, or derived from, its delegating microfoundations.[92]

An emergent view would conceptualize social phenomena not only organizationally but also temporally. Ontological presuppositions impinge on the *levels* at which social explanation is provided, as well as on the *time horizons* which it covers.[93] Different levels of social life and organizational forms move at different speeds, so do causal forces.[94] The historiography of Braudel and the social theory of Archer, joined on the same plane by the Gouldian view of evolution, help define

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[90] Dworkin's notion of law whose integrity stems in part from the creative interpretive endeavors of a group of legal minds over time is an example of what can be called an emergentist, non-reductive view of law. Ronald Dworkin, *Law's Empire* (Cambridge, Mass.: Harvard University Press, 1986), 168-69, 228-32, 63.

[91] See, e.g., Robert Grafstein, *Institutional Realism: Social and Political Constraints on Rational Actors* (New Haven, NJ: Yale University Press, 1992), 36.

[92] More on this and related issues in Chapter Four.

[93] The relationships among reductionism, emergence, and time-sensitive explanation are intricate and can only be touched on briefly here. For an extended treatment of these issues, see Archer, *Realist Social Theory: The Morphogenetic Approach*.

[94] Archer, *Realist Social Theory*, Ch.3. See also Mark A. Bedau and Paul Humphreys, "Introduction to Scientific Perspectives on Emergence," in *Emergence: Contemporary Readings in Philosophy and Science*, ed. M. Bedau and P. Humphreys (Cambridge, MA: MIT Press, 2008), 210.

approaches that are attentive to a layered view of social and political life in organization as well as in time.[95] As the size and arrangement of units impart to them different temporal properties and propensities, attention to the micro-level, while important, often translates willy-nilly into a neglect of causes and effects that have longer time horizons in part because of the implicit assumption that causes are operative in the same instance or at the same speed.[96] If the most relevant units are individuals and social groups, it is perhaps not coincidental that in reductive explanations causality is often "attributed to those factors that…are temporally proximate to outcomes of interest…"[97] This can, however, lead to erroneous causal inferences in accounts of institutional autonomy and effects, democratic transitions, state-building, globalization and other political phenomena. It can also introduce a

[95] See Fernand Braudel, *On History* (Chicago: University of Chicago Press, 1982). His views on history are also examined in Ch.2 of Spruyt, *The Sovereign State and Its Competitors: An Analysis of Systems Change*. Overviews of Stephen Jay Gould's understanding of the ordering of causal forces, and of structuralism and the philosophy of (social) science more generally can be found in Richard York and Brett Clark, *The Science and Humanism of Stephen Jay Gould* (New York: Monthly Review Press, 2011). Also see Gould, "The Patterns of Life's History."

[96] On this point, see Paul Pierson, "Big, Slow-Moving, and Invisible: Macrosocial Processes in the Study of Comparative Politics," in *Comparative Historical Analysis in the Social Sciences*, ed. J. Mahoney and D. Rueschemeyer (Cambridge: Cambridge University Press, 2003); Paul Pierson, *Politics in Time: History, Institutions, and Analysis* (Princeton: Princeton University Press, 2004). Consider, for example, the different properties generated by the *temporal* as opposed to *functional* separation of powers in liberal democratic systems as examined in William E. Scheuerman, *Liberal Democracy and the Social Acceleration of Time* (Baltimore, MD: Johns Hopkins University, 2004), Ch.2. See also Chapter Five for a discussion.

[97] Pierson, "Big, Slow-Moving, and Invisible: Macrosocial Processes in the Study of Comparative Politics," 203.

high level of fragmentation into the study of historical processes and institutional evolution.[98]

Theorizing emergence has major explanatory and analytical implications for social-scientific research because it can help researchers guard against or avoid erroneous causal and time-sensitive inferences that draw attention away from what Pierson has identified as threshold effects, cumulative events, and causal chains in the study of macrosocial processes.[99] Taking emergence theory seriously is therefore an important step towards removing the theoretical and conceptual blind spots created by the hidden peculiarities of an empiricist and reductionist philosophy of science. Recent efforts to integrate the insights of complex adaptive social systems into the evolutionary study of globalization are a welcome antidote to temporal fragmentation in analysis.[100]

3.6 CONCLUSION

[98] See, e.g., Cederman, "Complexity and Change in World Politics: Resurrecting Systems Theory," 130. Modelski, Devezas, and Thompson, ed., *Globalization as Evolutionary Process*. Pierson, *Politics in Time: History, Institutions, and Analysis*. Some works on war, for example, disaggregate "wars" into individual "battlefield events" of various durations that bear on decisions on war termination, down to individual "battle days." See, e.g., Kristopher W. Ramsey, "Settling It on the Field: Battlefield Events and War Termination," *Journal of Conflict Resolution* 52 (2008).

[99] Pierson, "Big, Slow-Moving, and Invisible: Macrosocial Processes in the Study of Comparative Politics."

[100] See contributions in George Modelski, Tessaleno Devezas, and William R. Thompson, eds., *Globalization as Evolutionary Process: Modeling Global Change* (New York: Routledge, 2008). Tessaleno Devezas and George Modelski, "Power Law Behavior and World System Evolution: A Millennial Learning Process," *Technological Forecasting and Social Change* 70 (2003). See also contributions in William R. Thompson, ed., *Evolutionary Interpretations of World Politics* (New York: Routledge, 2001).

Emergence theory, much like rationalism and constructivism, is cross-disciplinary and meta-theoretical in nature. Political contents, both theoretical and empirical, have to be grafted onto the framework in order to generate substantive knowledge and insights about world politics.[101] This chapter has set out to consider what is really a prior question or debate; it has sought both to show the inadequacy of different forms of reductive approaches in IR theory and to introduce "synthetic emergence" as a necessary corrective to reductive versions of emergence.

This chapter has endeavored to show that the search for explanatory microfoundations in IR theory is embedded within complexes of epistemological claims that feed on background ontological commitments in the form of a reductive philosophy of science. Microfoundationalism and other forms of reductive approaches are susceptible to the challenge of intertheoretic reduction, which means either that individualists in IR (and in the social sciences generally) are not coherent individualists, or that they must have had an implicit, if unexamined, theory of emergence about the social microfoundations of international politics. After all, taking individuals and groups to be primary analytical units means that mechanisms internal to these units are bracketed and that these units are assumed—albeit tacitly—to be emergent in some meaningful sense. Reduction and emergence are incompatible philosophies that set different aims and scopes for substantive theories,

[101] See Martha Finnemore and Kathryn Sikkink, "Taking Stock: The Constructivist Research Program in International Relations and Comparative Politics," *Annual Review of Political Science* 4, no. 391-416 (2001): 393; Duncan Snidal, "Rational Choice and International Relations," in *Handbook of International Relations*, ed. W. Carlsnaes, T. Risse, and B. Simmons (London: Sage, 2002), 74-75.

in this case, theories of international relations. On the assumption that few IR scholars would subscribe to the program of intertheoretic reduction once they had realized its connection to individualism in the social sciences, the question then becomes whether they would acknowledge (and analyze) irreducibly emergent properties at a higher, international, level. This chapter has argued that there are good social-scientific and philosophical grounds for doing so, and it has demonstrated this through a critical engagement with some key recent developments in the philosophy of science, philosophy of mind, and social theory on reduction and emergence. Developments in these and other fields provide the contours for a reasoned defense of the continuing relevance of structural analysis in international relations theory. Synthetic emergence theory subscribes to a scientific realist view on the ontological status of emergent properties and an anti-reductionist analytical component. Taking this view seriously would mean that, as those who work at the intersection of social science, philosophy, and complex systems have argued, theoretical advance "should increase the degree and kinds of emergence postulated of system properties," which directly contradicts the positivist and reductionist prescription that emergence and structural theorizing ought to decrease over time.[102]

Structural theorizing is indispensable to IR, but it has to be reformulated, and this paper has used synthetic emergence to show why it is sound to theorize emergent causal entities or configurations, even unobservable ones. The research on

[102] Wimsatt, "Emergence as Non-Aggregativity and the Biases of Reductionisms."

emergence has wide-ranging implications for natural and social systems, and is fast becoming a converging point of sophisticated research from a variety of disciplines. This chapter has sought to situate the concept and theory of emergence, and to indicate the promise that it holds for the study of international politics as a complex social system. Inasmuch as the theory of emergence is centrally concerned with addressing the problems posed by reductionism, it offers a potentially fruitful conceptual framework to international relations scholars and other social scientists. With the intellectual architecture of emergence in place, the remaining chapters of the dissertation will attend to the more specific problem of theorizing international institutions and their effects in world politics.

CHAPTER FOUR

ON INSTITUTIONAL ENDOGENEITY IN INTERNATIONAL RELATIONS

4.1 INTRODUCTION

The intra-rationalist debates between neorealism and institutionalism in international relations theory have now settled into an empirically driven research agenda that focuses on how—rather than whether—international institutions matter.[1] Efforts to come to terms with the empirical consequences of different institutional design features are spearheaded by scholars who want to find a firm anchor in rationality and in rational design, in particular.[2] At the same time, constructivism and allied

[1] See, e.g., James G. March and Johan P. Olsen, "Elaborating the 'New Institutionalism'," in *The Oxford Handbook of Political Science*, ed. R. Goodwin (Oxford: Oxford University Press, 2009), 163; Beth A. Simmons and Lisa L. Martin, "International Organizations and Institutions," in *Handbook of International Relations*, ed. W. Carlsnaes, T. Risse, and B. Simmons (London: Sage, 2002), 193. See also contributions in David Baldwin, ed., *Neorealism and Neoliberalism: The Contemporary Debate* (New York: Columbia University Press, 1993).

[2] See, e.g., Barbara Koremenos, Charles Lipson, and Duncan Snidal, "The Rational Design of International Institutions," *International Organization* 55 (2001); Barbara Koremenos, Charles Lipson, and Duncan Snidal, "Rational Design: Looking Back to Move Forward," *International Organization*

approaches, including sociological institutionalism, have emerged as an additional major research frontier—centered on norms, institutions, and social construction—effectively meeting the challenge of empirical relevancy issued by many international relations scholars.[3] There is, in short, no dearth of empirical research on international institutions from broadly rationalist and constructivist perspectives in contemporary international relations scholarship.[4] Yet despite the growth of the empirical literature, a number of key scholars of international institutions have begun to revisit an old problem that has dogged the study of institutions from the very beginning: Are international institutions capable of exerting causal force independently of states? In other words, are causal powers that have been attributed to institutions epiphenomenal to states after all? Questions of this kind, posed perhaps most

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55 (2001); Alexander Thompson, "Rational Design in Motion: Uncertainty and Flexibility in the Global Climate Regime," *European Journal of International Relations* 16 (2010).

[3] See, e.g., Emanuel Adler and Michael Barnett, eds., *Security Communities* (New York: Cambridge University Press, 1998); Michael Barnett and Martha Finnemore, *Rules for the World: International Organizations in Global Politics* (Ithaca: Cornell University Press, 2004); Martha Finnemore and Kathryn Sikkink, "Taking Stock: The Constructivist Research Program in International Relations and Comparative Politics," *Annual Review of Political Science* 4, no. 391-416 (2001); Derrick Frazier and Robert Stewart-Ingersoll, "Regional Powers and Security: A Framework for Understanding Order within Regional Security Complexes," *European Journal of International Relations* 16 (2010); Alastair Iain Johnston, *Social States: China in International Institutions, 1980-2000* (Princeton: Princeton University Press, 2008); Alastair Iain Johnston, "Treating International Institutions as Social Environments," *International Studies Quarterly* 45 (2001); Peter J. Katzenstein, ed., *The Culture of National Security* (New York: Columbia University Press, 1996); Robert O. Keohane, "International Institutions: Two Approaches," *International Studies Quarterly* 32 (1988); Ronald R. Krebs and Jennifer K. Lobasz, "Fixing the Meaning of 9/11: Hegemony, Coercion, and the Road to War in Iraq," *Security Studies* 16 (2007).

[4] See, e.g., Andreas Hasenclever, Peter Mayer, and Volker Rittberger, *Theories of International Regimes* (Cambridge: Cambridge University Press, 1997); Joseph Jupille, James A. Caporaso, and Jeffrey T. Checkel, "Integrating Institutions: Rationalism, Constructivism, and the Study of the European Union," *Comparative Political Studies* 36 (2003).

forcefully by Mearsheimer,[5] have generated a number of empirical studies which seem to suggest that even great powers have been bound by norms and institutions in such areas as noncombatant immunity and decision-making in foreign aid.[6]

Yet the theoretical foundations for institutional effects remain vulnerable, even from the standpoint of those who would like to argue otherwise. This chapter attempts to address issues concerning the causal powers and theoretical status of international institutions, albeit not by direct reference to the empirical record. These are questions having to do with theoretical logics; as such they call for a reconsideration of the underpinnings of institutional ontology in international relations theory, and I argue as to why that is the case. For the purpose of this chapter it takes the vast body of empirical work on institutional effects as the starting point in addressing these challenging questions on the terrain of theory.

This chapter begins by providing, in Section 4.2, an exposition of the problem of *institutional endogeneity*—the notion and possibility that international institutions are seemingly causally efficacious when they may in fact be epiphenomenal due to the singular focus on their instrumentality. Section 4.3 provides a defense for

[5] John J. Mearsheimer, "The False Promise of International Institutions," *International Security* 19 (1994): 7, 13; John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: Norton, 2001), 17. See also Robert Jervis, "Realism, Neoliberalism, and Cooperation: Understanding the Debate," in *Progress in International Relations Theory*, ed. C. Elman, and M. Elman (Cambridge, Mass.: MIT Press, 2003), 280.

[6] Colin H. Kahl, "In the Crossfire or the Crosshairs? Norms, Civilian Casualties, and U.S. Conduct in Iraq," *International Security* 32, no. 1 (2007); David Halloran Lumsdaine, *Moral Vision in International Politics: The Foreign Aid Regime, 1949-1989* (Princeton: Princeton University Press, 1993). Of course, insofar as foreign aid is not often given unconditionally, it can be considered a type of "positive sanction," i.e., an exercise of power. See David A. Baldwin, "Power Analysis and World Politics: New Trends Versus Old Tendencies," *World Politics* 31 (1979).

developing a theoretical solution to the problem based on the nature of the endogeneity problem in analyzing institutional effects, and also in part on a non-radical interpretation of the underdetermination of theories by empirical data.[7] Section 4.4 dissects this problem by looking at the relationships among empirical content, ontological assumptions, and the nature of social explanation. It suggests that evidence may be multiply and even incompatibly interpreted, given the parameters of a theory, so empirical content alone is an insufficient arbiter of theory choice. Explanatory thickets posed by problematic theoretical foundations could confound advances in theory-building and have a direct bearing on the interpretation of empirical content, something not addressed head-on by much of the empirical studies of international institutions. A defensible ontology of institutions is a possible way of overcoming the paradox posed by institutional endogeneity. Having situated the problem on the planes of ontology and explanation, Section 4.5 examines principal-agent theory, arguably one of the main theoretical defenses that has been marshaled to address the problem of institutional endogeneity from the institutionalist perspective, which allows that institutions may be created by states without committing itself to the view that they are necessarily subservient to states, thereby leaving institutions with some measure of causal efficacy, autonomy, and discretion. It is argued, however, that principal-agent theory, premised on a hierarchical, bilateral

[7] By this I mean taking some of the consequences of the underdetermination thesis seriously enough such that the need for theoretical, rather than primarily empirical, solutions to the institutional endogeneity problem is recognized. On the other hand, I do not hold the more radical view that underdetermination makes theory choice practically impossible. See section 4.3.

delegation of tasks, essentially takes institutions as subcontractors whose latitude for independent effects can be severely restricted even within the framework of the logic.

Section 4.6 takes up the issue of rationality in approaches to international institutions. Principal-agent theory as applied to international institutions is a theoretical solution based on a particular notion of rationality. Inasmuch as rationality is prominent in PA theory and indeed also in constructivist accounts of norms and institutions in the form of "strategic social construction,"[8] the standard interpretation of rationality as primarily a micro-level phenomenon of individual interest calculus warrants closer scrutiny. This seeming detour will in fact bring us back to the problem of institutional endogeneity with which the chapter has begun, as the upshot of the argument here will not be the rejection of rationality *tout court*, but rather of a reductionist interpretation of rationality which places unnecessary limits on rationalism in theories of international institutions. Indeed, there is an open possibility of cross fertilization and mutual advancement in different approaches to international institutions.[9]

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[8] See, e.g., Martha Finnemore and Kathryn Sikkink, "International Norm Dynamics and Political Change," *International Organization* 52 (1998). Rationalism and constructivism are not mutually exclusive. See James D. Fearon and Alexander Wendt, "Rationalism v. Constructivism: A Skeptical View," in *Handbook of International Relations*, ed. W. Carlsnaes, T. Risse, and B. Simmons (London: Sage, 2002).

[9] Grafstein has noted that "[t]he diversity of *rationality*'s definitions is not always appreciated by those who stand outside this approach." Robert Grafstein, *Choice-Free Rationality: A Positive Theory of Political Behavior* (Ann Arbor, MI: University of Michigan Press, 1999), 13. Here I hope to draw out the implications of a less restrictive and reductive definition of rationality for theorizing institutional effects.

4.2 Institutional Endogeneity and the Status of Institutional Effects

In an appraisal of theoretical developments in international relations, Keohane and Martin maintain that many intellectual challenges to institutionalism have been overcome. At the level of theoretical premises, they argue, concerns about relative gains can be accommodated within the terms of absolute gains and no basic assumption of the theory's rationalist core need be violated. Empirically, they regard the expansion of NATO and the implementation of the European Economic and Monetary Union as instances of institutional deepening that contradict realist predictions and affirm institutionalist logics.[10] Koremenos, Lipson, and Snidal have suggested that a focus on rational institutional design is moving the field "beyond the question of whether institutions promote cooperation to an analysis of how specific institutional features promote cooperation."[11]

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[10] Robert O. Keohane and Lisa L. Martin, "Institutional Theory as a Research Program," in *Progress in International Relations Theory: Appraising the Field*, ed. C. Elman and F.M. Elman (Cambridge, Mass.: MIT Press, 2003), 88-90. Though also see accounts of the relatively weak state of security institutionalization in the Asia-Pacific compared to Europe. John Duffield, "Asia-Pacific Security Institutions in Comparative Perspective," in *International Relations Theory and the Asia-Pacific*, ed. G. Ikenberry, and M. Mastanduno (New York: Columbia University Press, 2003); Christopher Hemmer and Peter J. Katzenstein, "Why Is There No NATO in Asia? Collective Identity, Regionalism, and the Origins of Multilateralism," *International Organization* 56 (2002). For the relative gains debate, see contributions by Grieco, Snidal, and Powell in Baldwin, ed., *Neorealism and Neoliberalism: The Contemporary Debate*. For institutional effects in other contexts, see also Bruce Cronin, *Institutions for the Common Good: International Protection Regimes in International Society* (Cambridge: Cambridge University Press, 2003); Marc Lanteigne, *China and International Institutions: Alternate Paths to Global Power* (New York: Routledge, 2005).

[11] Koremenos, Lipson, and Snidal, "Rational Design: Looking Back to Move Forward," 1054. Oftentimes, the emphasis on cooperation has come at the expense of issues of power and competition. Some works have rightly sought to restore a sense of balance, see, e.g., Michael Barnett and Raymond Duvall, "Power in International Politics," *International Organization* 59 (2005); Michael Barnett and

Nevertheless, it is significant that Keohane and Martin single out what they acknowledge as a "fundamental challenge," namely, the possibility that international institutions may in fact be endogenous to state interests and can have little causal influence on state behavior. Drawing on models of domestic politics and non-cooperative games, institutional theory stipulates that rational state actors operating under anarchy and uncertainty use institutions opportunistically to help them solve coordination, collaboration, and other cooperation problems.[12] The explanation of institutional forms that issues from this logic, as Pierson has pointed out, "is to be found in their functional consequences for those who create them."[13] In other words,

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Martha Finnemore, "The Power of Liberal International Organizations," in *Power in Global Governance*, ed. M. Barnett and R. Duvall (Cambridge: Cambridge University Press, 2005); Jack Knight, *Institutions and Social Conflict* (New York: Cambridge University Press, 1992); Mearsheimer, "The False Promise of International Institutions."; Mearsheimer, *The Tragedy of Great Power Politics*; Terry M. Moe, "Power and Political Institutions," in *Rethinking Political Institutions: The Art of the State*, ed. I. Shapiro, S. Skowronek, D. Galvin (New York: New York University Press, 2006); Claus Offe, "Political Institutions and Social Power: Conceptual Explorations," in *Rethinking Political Institutions: The Art of the State*, ed. I. Shapiro, S. Skowronek, D. Galvin (New York: New York University Press, 2006).

[12] Robert Axelrod and Robert O. Keohane, "Achieving Cooperation under Anarchy: Strategies and Institutions," *World Politics* 38 (1985); Hasenclever, *Theories of International Regimes*; Robert O. Keohane, *After Hegemony: Cooperation and Discord in the World Political Economy* (Princeton: Princeton University Press, 1984); Lisa L. Martin and Beth A. Simmons, "Theories and Empirical Studies of International Institutions," *International Organization* 52 (1998); Kenneth Oye, ed., *Cooperation under Anarchy* (Princeton: Princeton University Press, 1986). Koremenos, Lipson, Snidal, "The Rational Design of International Institutions." Though institutionalists claim that they borrow the rationality assumption from neorealism, Waltz states that his theory does not in fact rely on such an assumption. Kenneth Waltz, "Thoughts About Assaying Theories," in *Progress in International Relations Theory*, ed. C. Elman, and F.M. Elman (Cambridge, Mass.: MIT Press, 2003). See also John J. Mearsheimer, "Reckless States and Realism," *International Relations* 23 (2009). Whether assumptions about rationality are borrowed from neorealism or not, they *do* have a central place in institutional theory (also known as neoliberal institutionalism).

[13] Paul Pierson, "The Limits of Design: Explaining Institutional Origins and Change," *Governance: An International Journal of Policy, Administration, and Institutions* 13 (2002): 475. I do not use "functional" as a derogatory term in this work. It is a description of the central features of some approaches. Furthermore, making institutions more functional or effective can arise from normative

institutional theory derives its explanatory leverage from the fact that international institutions are said to be able to overcome persistent barriers to cooperation because they are *functional instruments* devised for tasks others have assigned to them. Such tasks include, but are not limited to, mitigating anarchy's adverse effects, signaling commitment, locking in policy choices, reducing uncertainty, enhancing informational flows, and institutionalized balancing.[14] It implies that institutional theory can cover "novel" empirical ground by accounting for the presence of interstate cooperation *without* abandoning neorealism's core assumptions about unitary state actorhood, the international system, and the lack of centralized enforcement.

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concerns. See, e.g., Robert O. Keohane, "Big Questions in the Study of World Politics," in *The Oxford Handbook of Political Science*, ed. R. Goodwin (Oxford: Oxford University Press, 2009), 774.

[14] See, e.g., Songying Fang, "The Informational Role of International Institutions and Domestic Politics," *American Journal of Political Science* 52 (2008); Barbara Koremenos, "Contracting around International Uncertainty," *American Political Science Review* 99 (2005); Lisa L. Martin, "Distribution, Information, and Delegation to International Organizations: The Case of IMF Conditionality," in *Delegation and Agency in International Organizations*, ed. D. Hawkins, D. Lake, D. Nielson, and M. Tierney (Cambridge: Cambridge University Press, 2006); Lisa L. Martin, "The President and International Agreements: Treaties as Signaling Devices," *Presidential Studies Quarterly* 35 (2005); Offe, "Political Institutions and Social Power: Conceptual Explorations."; Eric Reinhardt, "Tying Hands without a Rope: Rational Domestic Response to International Institutional Constraints," in *Locating the Proper Authorities: The Interaction of Domestic and International Institutions*, ed. D. Drezner (Ann Arbor, MI: University of Michigan Press, 2003); Duncan Snidal and Alexander Thompson, "International Commitments and Domestic Politics: Institutions and Actors at Two Levels," in *Locating the Proper Authorities: The Interaction of Domestic and International Institutions*, ed. D. Drezner (Ann Arbor, MI: University of Michigan Press, 2003). For international institutions as instruments for institutionalized balancing, see Charles A. Kupchan and Clifford A. Kupchan, "The Promise of Collective Security," *International Security* 20 (1995). Reprinted in Michael E. Brown, Owen R. Coté Jr., Sean M. Lynn-Jones, Steven E. Miller, ed., *Theories of War and Peace* (Cambridge, Mass.: MIT Press, 1998). See also Kai He, "Institutional Balancing and International Relations Theory: Economic Interdependence and Balance of Power Strategies in Southeast Asia," *European Journal of International Relations* 14, no. 3 (2008). The works above examine the functions institutions can play, but I do not intend to imply that they are all *functionalist* in orientation.

The growth of empirical studies of norms and institutions has been called "progressive" in reference to Lakatosian criteria for productive scientific research programs.[15] But institutionalism's theoretical edifice reveals, even on account of its own leading proponents, some notable deficiencies. In assessing the development of the institutionalist research program, Keohane and Martin are troubled by the fact that *the logic of the theory entails "complete endogeneity" and is, paradoxically, "strongest when institutions are entirely explained by state interests and strategies":*

> Insofar as the theory of institutional origins and functions is accepted, the independent explanatory power of institutional theory seems to disappear. The structural factors accounting for institutions also seem to account for outcomes—which should therefore be seen not as effects of the institutions, but of these more fundamental factors.[16]

More recently, Mitchell has elaborated the problem of institutional endogeneity further, suggesting that scholars should take seriously the very real possibility that institutional design could be endogenous to structural imperatives or state interests, which would render epiphenomenal any behavioral patterns that correlate with institutional explanations.[17] Despite the efforts of these scholars, this problem

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[15] See Imre Lakatos, "Falsification and the Methodology of Scientific Research Programmes," in *Criticism and the Growth of Knowledge*, ed. I. Lakatos and A. Musgrave (Cambridge: Cambridge University Press, 1970). See also Keohane and Martin, "Institutional Theory as a Research Program"; Colin Elman and Miriam Fendius Elman, "Introduction: Appraising Progress in International Relation Theory," in *Progress in International Relations Theory*, ed. C. Elman and M.F. Elman (Cambridge, Mass.: MIT Press, 2003); Colin Elman and Miriam Fendius Elman, "Lessons from Lakatos," in *Progress in International Relations Theory*, ed. C. Elman and M.F. Elman (Cambridge, Mass.: MIT Press, 2003); Finnemore and Sikkink, "Taking Stock: The Constructivist Research Program in International Relations and Comparative Politics."

[16] Keohane and Martin, "Institutional Theory as a Research Program," 98, also 105. Emphasis added.

[17] Ronald B. Mitchell, "The Influence of International Institutions: Institutional Design, Compliance, Effectiveness, and Endogeneity," in *Power, Interdependence and Non-State Actors in World Politics:*

remains largely neglected, yet it is a serious consequence that follows directly from the basic theoretical premises of leading approaches to international institutions. It also has a major impact on accounts concerning instances of cooperation and the ontological status of institutions, as well as on the range of plausible interpretations which could be conjoined with empirical studies and findings. In short, institutional effects are not compatible with the prevailing functionalist framework and empirical observations themselves cannot establish the causal powers of institutions without a major theoretical reconstruction that links up ontology and explanation.

4.3 The Need for Theoretical Solutions: Some Implications of Underdetermination

The awareness that the problem of institutional endogeneity cannot be resolved by reference to empirics alone points to a major issue in the philosophy of political and social inquiry: the underdetermination of theory by data (UTD). Whether one approaches theory-building from a deductive or inductive standpoint, a conventional and understandable desire in political science has been to let empirical evidence settle theoretical disputes and questions of theory choice. Some influential proponents of the rational design approach to international institutions believe that it is "neither

Research Frontiers, ed. H. Milner (Princeton, NJ: Princeton University Press, 2009). Mitchell argues that under conditions where structure underdetermines institutional design, institutional choices can diverge from more fundamental forces and make institutional effects meaningful.

necessary nor desirable" to engage in debates about the merits or demerits of theoretical statements regarding international institutions, or to examine fundamental theoretical conjectures because such conjectures "can be tested against empirical evidence without reference to other theories."[18] Similarly, in some quarters of political science, (meta-)theoretical disputes are seen as useless chatter or unproductive squabbles. Some scholars have announced that "the metatheoretical debate about institutions has run its course and must now give way to theoretical, methodological, and carefully structured empirical dialogue."[19] It is not clear if it is an empirical fact that the metatheoretical debate has indeed "run its course" (which, if true, makes it strange that it somehow needs to "give way"), or whether it is a directive to shut down that debate and to get on with the real business. An appreciation of underdetermination may give pause to these impulses, and it is worthwhile to see why a major part of the problem is at the level of core theoretical logic, and why proposed solutions also have to be located at the same level.

At its simplest, the *underdetermination* thesis holds that empirical evidence alone cannot be the arbiter of rival theories if these theories are individually compatible with available evidence or if they entail similar or identical empirical consequences.[20] In a study of underdetermination that goes beyond political science,

[18] Koremenos, Lipson, and Snidal, "Rational Design: Looking Back to Move Forward," 1052.
[19] Jupille, Caporaso, and Checkel, "Integrating Institutions," 8.
[20] On this issue, see, e.g., Richard N. Boyd, "Realism, Underdetermination, and a Causal Theory of Evidence," *Noûs* 7 (1973); Fred Chernoff, *The Power of International Theory: Reforging the Link to Foreign Policy-Making through Scientific Enquiry* (London: Routledge, 2005); Fred Chernoff,

it has been shown that research on smoking behavior from a multitude of disciplines—medicine, public health, economics, sociology and so on—focuses mostly on the theories themselves, rather than on the data, and for good reasons. This is an area of study where "empirical evidence is both extensive and largely uncontested," and where competing theoretical rivals have already generally regarded "rivals' data as factual," but debates still cannot be decided by empirics, at least not alone.[21]

Theories of international institutions can be underdetermined as well. For example, it may be difficult to assign causal weight to institutions in cases of international cooperation if institutions are theorized as solutions that reduce information scarcity, lower transaction costs, facilitate issue linkages, lengthen the shadow of the future, and address political market failures in international public goods provision, when *state strategies* can be said to account for these institutional functions.[22] Thus, some scholars may not in fact argue that the level of cooperation

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"Scientific Realism as a Meta-Theory of International Politics," *International Studies Quarterly* 46 (2002); Jarrett Leplin, *A Novel Defense of Scientific Realism* (Oxford: Oxford University Press, 1997), 12-14; Ilkka Niiniluoto, *Critical Scientific Realism* (Oxford: Oxford University Press, 1999), 176; W.V.O. Quine, *Word and Object* (Cambridge, Mass.: MIT Press, 1964), Ch.2.

[21] Robert S. Goldfarb, Thomas C. Leonard, and Steven M. Suranovic, "Are Rival Theories of Smoking Underdetermined?" *Journal of Economic Methodology* 8 (2001): 229-30. I am referring to the "empirical" world in the Bhaskarian sense. See the distinctions on the empirical, the actual, and the real in Roy Bhaskar, *A Realist Theory of Science* (Brighton, UK: Harvester, 1975). This empirical world in some ways resembles Popper's "world 2" of perceptions and experiences. See Karl R. Popper, *Objective Knowledge: An Evolutionary Approach* (Oxford: Clarendon Press, 1972); Karl R. Popper, "Three Worlds" (paper presented at the Tanner Lecture on Human Values, University of Michigan, Ann Arbor, MI, 1978).

[22] For the functional roles of institutions, see Fang, "The Informational Role of International Institutions and Domestic Politics."; Keohane, *After Hegemony: Cooperation and Discord in the World Political Economy*; Robert O. Keohane and Lisa L. Martin, "The Promise of Institutionalist

in the international system is low, or that institutions do not matter; rather they contend that cooperation and institutions are both *products* of state action.[23] In these instances, empirical observations of an outcome (i.e., institutions as being instrumental or functional in some way) that is postulated by a theory cannot, by themselves, serve as the basis for institutional causal powers because confirmatory instances of institutional effects can reasonably be reinterpreted to mean that state interests and considerations are paramount. Theories of institutions-fostered cooperation are thus underdetermined to the extent that the empirical record does not yield an unambiguous choice regarding theoretical explanation. It is therefore important to examine the theoretical and even meta-theoretical bases, and not to let

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Theory," *International Security* 20 (1995); Koremenos, "Contracting around International Uncertainty." See also Randall L. Calvert, "Rational Actors, Equilibrium, and Social Institutions," in *Explaining Social Institutions*, ed. J. Knight and I. Sened (Ann Arbor, MI: University of Michigan Press, 1995); Helga Haftendorn, Robert O. Keohane, and Celeste Wallander, eds., *Imperfect Unions: Security Institutions over Time and Space* (Oxford: Oxford University Press, 1999); Koremenos, "The Rational Design of International Institutions."; Lisa L. Martin, "Interests, Power, and Multilateralism," *International Organization* 46 (1992); Oye, ed., *Cooperation under Anarchy*; Kenneth A. Shepsle, "Institutional Equilibrium and Equilibrium Institutions," in *Political Science: The Science of Politics*, ed. H. Weisberg (New York: Agathon, 1986). The conventional view is that when the shadow of the future is lengthened, prospects of cooperation increase, but Fearon argues that longer time horizons also exacerbate distributional issues. See James D. Fearon, "Bargaining, Enforcement, and International Cooperation," *International Organization* 52 (1998). Copeland offers a different argument about future in his account of differential growth and expectations of decline, see Dale Copeland, "Economic Interdependence and the Future of U.S.-Chinese Relations," in *International Relations Theory and the Asia-Pacific*, ed. G. Ikenberry and M. Mastanduno (New York: Columbia University Press, 2003); Dale Copeland, "Economic Interdependence and War: A Theory of Trade Expectations," *International Security* 20, no. 4 (1996). On information and institutions, Jervis argues that "it is hard to see how changes in information can be effective [in inducing cooperation] when changes in preferences over outcomes are required…[Institutionalists] do not discuss how states do or should behave when vital interests clash." Jervis, "Realism, Neoliberalism, and Cooperation: Understanding the Debate," 292.

[23] Charles L. Glaser, "Realists as Optimists: Cooperation as Self-Help," *International Security* 19 (1994): 85; Jervis, "Realism, Neoliberalism, and Cooperation: Understanding the Debate."; Mearsheimer, "The False Promise of International Institutions."; Mearsheimer, *The Tragedy of Great Power Politics*; Sebastian Rosato, *Europe United: Power Politics and the Making of the European Community* (Ithaca, NY: Cornell University Press, 2010).

the empirical record "speak for itself." For example, do internal, altruistic reasons for aid-giving in the foreign aid regime, even if separable from particularistic national interests through empirical documentations of appeals to general moral principles in institutional settings,[24] explain the causal efficacy of institutions and morality in world politics? Perhaps, but even if those appeals were present, another aspect of foreign aid is that it represents tiny fractions in the national budgets of even the most generous donor-states. The empirical structure of the foreign aid regime is arguably not the deciding factor in theory choice, but rather how that is conjoined with an appropriate, corresponding theoretical logic.

Consider also the remarkable project of European integration. The empirical fact of Europe's deepening economic cooperation and then political integration since the 1950s points to the existence of institutional effects only in the presence of a certain corresponding theoretical framework, without which—or in place of which—an account of institutionalized cooperation induced instead by balancing considerations and by concerns about unchecked Soviet power on the Continent after the Second World War is hardly out of the question.[25] Mismatches between

[24] Cf. Lumsdaine, *Moral Vision in International Politics: The Foreign Aid Regime, 1949-1989*.

[25] See, e.g., Rosato, *Europe United: Power Politics and the Making of the European Community*. Rosato's critique of democratic peace theory also brings this point into sharper relief as he takes as a starting point that "democracies have rarely if ever fought one another [since the end of the Second World War] and have created a separate peace," and then goes on to suggest that there is a mismatch between the logic of the theory and observed outcomes. Sebastian Rosato, "Explaining the Democratic Peace," *American Political Science Review* 99 (2005): 471; Sebastian Rosato, "The Flawed Logic of Democratic Peace Theory," *American Political Science Review* 97, no. 4 (2003). On the democratic peace, see, e.g., contributions in Michael E. Brown, Sean M. Lynn-Jones, Steven E. Miller, ed., *Debating the Democratic Peace* (Cambridge, Mass.: MIT Press, 1996).

theoretical logics and empirical evidence are not uncommon. Braumoeller's recent study of great power conflict is similar in form in suggesting that the deterrence model has greater explanatory power than the spiral model even though the two models "contradict each other directly" while offering plausible rival explanations of the process by which great power frictions lead to militarized interstate disputes.[26]

The problem of institutional endogeneity also runs deeper than the largely intra-realist debate as to whether states balance against, or bandwagon with, great powers, where, Lake and Powell suggest, "the empirical results are largely irrelevant to [realist] theory because the theory itself is underspecified," and so even apparent corroborating evidence becomes inadmissible as predicted outcomes do not follow from the theoretical assumptions.[27] As Fearon has also argued, "even if it happened that some empirical facts accord with [claims or arguments], if the theoretical arguments for the claims are not valid in the sense that [they] do not follow from reasonable premises," then the theory in question "has not explained the facts."[28] Here the situation that institutional theory confronts is not that it is necessarily underspecified, but that the causal logics derived from its basic, specified,

[26] Bear F. Braumoeller, "Systemic Politics and the Origins of Great Power Conflict," *American Political Science Review* 102, no. 1 (2008): 77.
[27] David A. Lake and Robert Powell, "International Relations: A Strategic Choice Approach," in *Strategic Choice and International Relations*, ed. D. Lake and R. Powell (Princeton: Princeton University Press, 1999), 24.
[28] James D. Fearon, "Comments on R. Harrison Wagner's *War and the State: The Theory of International Politics*," *International Theory* 2 (2010): 335. Writing in regard to realist theory, Fearon is in fact making a more general point in agreeing with Wagner, who also makes this point in Harrison Wagner, *War and the State: The Theory of International Politics* (Ann Arbor, MI: University of Michigan Press, 2007).

assumptions seem capable of endorsing rival interpretations that compromise the theory's explanatory power, and empirics will not address the problem.[29]

The fact that theories of institutions may provide different or rival explanations to account for the same empirical phenomenon does *not* mean that they need be *radically* underdetermined by evidence, such that there can be no reasonable ground to favor one theory or the other as both theories accord with the evidence but are otherwise in conflict with one another for ontological, epistemological, or other reasons.[30] All theories are probably underdetermined in some sense, but the extent of underdetermination is in question here. One could argue that underdetermination precludes theory choice and leads to theoretical nihilism because of intertheoretic incompatibility but independent compatibility with observation data. This need not be the case. Both Laudan and Kitcher have observed that the challenge of underdetermination, while sensible, should not be overstated.[31] The underdetermination of theory by data hinges on the empirical equivalence of the theories in question and that may not turn out to be the case.[32] More crucially, as Leplin has argued, theories are said to have certain observational predictions "only in conjunction with further, presupposed background theory, [so] what observational

[29] Cf. Fearon, "Comments on R. Harrison Wagner's *War and the State: The Theory of International Politics*," 334.
[30] In this regard, I do not subscribe to the stronger version of underdetermination.
[31] For a brief overview, see Andrew Bennett, "A Lakatosian Reading of Lakatos: What Can We Salvage from the Hard Core?" in *Progress in International Relations Theory*, ed. C. Elman, and M. Elman (Cambridge, Mass.: MIT Press, 2003), 479-80.
[32] For a discussion, see Leplin, *A Novel Defense of Scientific Realism*.

consequences a theory has is relative to what other theories we are willing to presuppose."[33] As Chernoff has also argued, "even when there are many theories consistent with the evidence, there are non-arbitrary methods in the sciences for choosing among them, including consistency, coherence, simplicity, and explanatory scope."[34]

It is sometimes thought that underdetermination totally obviates theory choice because one can never arrive at a "sound" theory that mirrors the world. However, this view is misplaced given the fallibilistic nature of theories.[35] It is because we posit entities, units, or structures to be real for the purpose of theory construction that we can ever be possibly proved wrong by something that is impervious to our thought. If the world were entirely a product of our thought we could never be wrong or

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[33] Leplin, *A Novel Defense of Scientific Realism,* 155. See also Ian Shapiro, *The Flight from Reality in the Human Sciences* (Princeton: Princeton University Press, 2005); Ian Shapiro, "Problems, Methods, and Theories in the Study of Politics, Or: What's Wrong with Political Science and What to Do About It," in *Problems and Methods in the Study of Politics*, ed. I. Shapiro, R.M. Smith, and T.E. Masoud (Cambridge: Cambridge University Press, 2004).

[34] Chernoff, *The Power of International Theory: Reforging the Link to Foreign Policy-Making through Scientific Enquiry*, 184; Chernoff, "Scientific Realism as a Meta-Theory of International Politics," 203.

[35] This is often posed as an objection to scientific realism, but this objection often mistakes realism for dogmatic, naïve empiricism. See a discussion in Roy Bhaskar, "Theorising Ontology," in *Contributions to Social Ontology*, ed. C. Lawson, J. Latsis, and N. Martins (New York: Routledge, 2007), 196; Tony Lawson, "Economic Science without Experimentation," in *Critical Realism: Essential Readings*, ed. M. Archer, R. Bhaskar, A. Collier, T. Lawson, and A. Norrie (London: Routledge, 1998 [1997]). See also Richard N. Boyd, "The Current Status of Scientific Realism," in *Scientific Realism*, ed. J. Leplin (Berkeley: University of California Press, 1984); Ernan McMullin, "A Case for Scientific Realism," in *Scientific Realism*, ed. J. Leplin (Berkeley: University of California Press, 1984), 24; Andrew Sayer, *Realism and Social Science* (Thousand Oaks, CA: SAGE Publications, 2000). Worrall suggests that scientific realism (and his version of structural [scientific] realism) is not undermined by the underdetermination thesis. See John Worrall, "Underdetermination, Realism and Empirical Evidence," in *Theoretical Frameworks and Empirical Underdetermination Workshop* (Düsseldorf: 2009).

contradicted, nor could there be any scientific discovery or growth in knowledge—only a change of mind.[36] Wendt argues that conceding the fact that "theory is underdetermined by reality…does not mean that meaning is entirely socially or mentally constructed. In the [scientific] realist view beliefs are determined by discourse *and* nature. This solves the key problems of the description and relational theories: our ability to refer to the same object even if our descriptions are different or change, and the resistance of the world to certain representations."[37]

The point here is that empirical observations often fail to—and indeed ought not—be the sole or even primary arbiter of theories even though they set bounds on the range of plausible interpretations. Empirical evidence often "rules out" but not "rules in" theories.[38] This qualified view of empirical adequacy can be contrasted

[36] See, e.g., the distinction between transitive and intransitive dimensions in Roy Bhaskar, *The Possibility of Naturalism: A Philosophical Critique of the Contemporary Human Sciences*, 3rd ed. (London: Routledge, 1998 [1979]). See also Peter Blau's structural parameters as discussed (and critiqued) in Anthony Giddens, *The Constitution of Society: Outline of the Theory of Structuration* (Berkeley & Los Angeles: University of California Press, 1984), 207-13. Jackson, however, rejects this view as mind-world dualism and argues in favor of monism. See Patrick Thaddeus Jackson, *The Conduct of Inquiry in International Relations: Philosophy of Science and Its Implications for the Study of World Politics* (London and New York: Routledge, 2011); Patrick Thaddeus Jackson, "Foregrounding Ontology: Dualism, Monism, and IR Theory," *Review of International Studies* 34 (2008). For an overview of Popper's metaphysical and scientific realism and his critique of solipsism, see William A. Gorton, *Karl Popper and the Social Sciences* (Albany, NY: State University of New York Press, 2006), Ch.2.

[37] Alexander Wendt, *Social Theory of International Politics* (Cambridge: Cambridge University Press, 1999), 57. See also Shapiro, *The Flight from Reality in the Human Sciences*; Shapiro, "Problems, Methods, and Theories in the Study of Politics, Or: What's Wrong with Political Science and What to Do About It."

[38] For a related discussion, see Ch.1 of Karl R. Popper, *Conjectures and Refutations: The Growth of Scientific Knowledge* (London: Routledge, 2002 [1963]).

with what empiricism—whose motto, if there were one, would be *esse est percipi*[39]—prescribes, namely, that a scientific theory ought to have only observable referents, and falsifiable hypotheses can be derived from the theory and tested against empirical "reality," often assumed to be observable sense-data. Even in the natural sciences, however, it is often tricky to decide what relevant empirical content is implied by a given theory. Not dissimilarly, in jurisprudence, as concepts and categories are characterized by fuzzy boundaries forming what H. L. A. Hart has termed the "penumbra" of indeterminacy,[40] more emphasis has been placed upon empirical observations at the expense of efforts to identify the underlying and often unseen causal mechanisms. There may be considerations other than or in addition to congruence with data or observations that should figure in questions of theory choice, especially if causal relations or mechanisms, in contrast to their effects, are often not directly observable. In such a case, an empiricist bias would unwarrantably restrict the universe of valid causal claims to those which privilege empirical observations at the expense of more abstract relations, configurations, institutions, and structures—amounting to a reduction to sense-data.[41] As Lawson has argued, adjudicating

[39] "To be is to be perceived." See a discussion of George Berkeley's influential notion in Colin Wight, *Agents, Structures, and International Relations: Politics as Ontology* (Cambridge: Cambridge University Press, 2006), 25.
[40] H.L.A. Hart, *The Concept of Law* (New York: Oxford University Press, 1997 [1961]); H.L.A. Hart, *Essays in Jurisprudence and Philosophy* (New York: Oxford University Press, 1983), 64. See also a discussion in James W. Davis, *Terms of Inquiry: On the Theory and Practice of Political Science* (Baltimore: The Johns Hopkins University Press, 2005), 88-89.
[41] Bhaskar, *The Possibility of Naturalism: A Philosophical Critique of the Contemporary Human Sciences*; Bhaskar, *A Realist Theory of Science*; John Coates, *The Claims of Common Sense: Moore, Wittgenstein, Keynes and the Social Sciences* (Cambridge: Cambridge University Press, 1996), 25-29;

between theories "does not turn upon whether or not the hypothesised causal relations is observable or otherwise." Instead, how tendencies and structures, including grammar and rules of a game, produce effects can, and in fact often are, described and analyzed.[42] If social scientific explanation deals with emergent, collective entities and structures, as has already been argued, then it is to the tendencies, propensities, and causal powers of these "structured entities" that we should turn.[43] In short, the institutional endogeneity problem, like a number of other problems in the field of international relations, cannot be tackled from a purely or perhaps even primarily empirical angle, but must also be grasped theoretically. It is ultimately a bedrock problem that cannot be resolved by reference to empirics alone.[44]

As we have seen, the underdetermination of theory by data militates against the view that "hard (empirical) evidence" is itself a sufficient arbiter of theoretical disputes. It can, however, serve to motivate theoretical innovation once a more qualified or circumscribed view of empirical adequacy is accepted. In the study of

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Alexander L. George and Andrew Bennett, *Case Studies and Theory Development in the Social Sciences* (Cambridge, Mass.: MIT Press, 2004), Ch.7; John Gerring, "The Mechanistic Worldview: Thinking inside the Box," *British Journal of Political Science* 38 (2007): 166-67; Leszek Kolakowski, *The Alienation of Reason: A History of Positivist Thought* (New York: Doubleday Anchor Books, 1969), Ch.1; Ian Shapiro and Alexander Wendt, "The Difference That Realism Makes: Social Science and the Politics of Consent," *Politics and Society* 20 (1992); Wight, *Agents, Structures, and International Relations: Politics as Ontology*, 21-25.

[42] Lawson, "Economic Science without Experimentation," 159-60.

[43] Bhaskar, *The Possibility of Naturalism: A Philosophical Critique of the Contemporary Human Sciences*, Ch.2; Amit Ron, "Regression Analysis and the Philosophy of Social Science: A Critical Realist View," *Journal of Critical Realism* 1 (2002): 122.

[44] See similar discussions in Barnett and Finnemore, *Rules for the World*, 4. Robert Grafstein, *Institutional Realism: Social and Political Constraints on Rational Actors* (New Haven, NJ: Yale University Press, 1992), Ch.1. Waltz also makes his views on this issue abundantly clear in Waltz, "Thoughts About Assaying Theories."

American politics, for example, congressional oversight was thought to be ineffectual because of insufficient resources, lack of expertise of legislators, and bureaucratic intransigence, but some scholars have *reinterpreted* these empirical observations (in light of principal-agent theory) to mean that the evidence only pointed to a lack of congressional monitoring, not to an abdication of control.[45] As Cox has put it, "[i]n judging the scientific value of a theory, the production of new empirical content is not the only criterion; old empirical content is often in play too." In the analysis of congressional oversight, "*[t]he facts were not in dispute; their interpretation was.*"[46] From this recognition a large body of rationalist literature on an already well-developed area of research has emerged.[47] In this case, the issue is not whether

[45] Gary J. Miller, "The Political Evolution of Principal-Agent Models," *Annual Review of Political Science* 8 (2005): 209. See also Matthew D. McCubbins and Thomas Schwartz, "Congressional Oversight Overlooked: Police Patrols Versus Fire Alarms," *American Journal of Political Science* 28 (1984); Barry Weingast and Mark Moran, "Bureaucratic Discretion or Congressional Control? Regulatory Policymaking by the Federal Trade Commission," *Journal of Political Economy* 91 (1983). Note that this example is cited for showing the relationship between empirics and theoretical explanations and interpretations, not necessarily for the substantive content of the claim. In fact, I question the use of PA theory in analyzing institutional effects and autonomy below.

[46] Gary W. Cox, "The Empirical Content of Rational Choice Theory: A Reply to Green and Shapiro," *Journal of Theoretical Politics* 11, no. 2 (1999): 162. Emphasis added. See also Fearon, "Comments on R. Harrison Wagner's *War and the State: The Theory of International Politics*," 334. Cox also points to Schelling's "reinterpretation of white flight as a coordination game," a theoretical innovation that would later inspire empirical studies. See Thomas C. Schelling, *Micromotives and Macrobehavior* (New York: W.W. Norton, 1978). Yet another example of the importance of theoretical interpretation can be found in the finding that parental voter turnout behavior correlates with voter turnout behavior in young adults. Some scholars interpret this finding as a case of environmental influence, whereas others argue that hereditary causes are involved. But the empirical observations (of a relationship) are not in dispute; the theoretical interpretations are. See, e.g., James H. Fowler, Laura A. Baker, and Christopher T. Dawes, "Genetic Variation in Political Participation," *American Political Science Review* 102 (2008).

[47] Carpenter, however, argues that PA models understate bureaucratic autonomy vis-à-vis Congress. Daniel P. Carpenter, *The Forging of Bureaucratic Autonomy: Reputations, Networks, and Policy Innovation in Executive Agencies, 1862-1928* (Princeton: Princeton University Press, 2001).

empirical investigations have been exhaustive, but whether there needs to be a thorough rethinking of basic theoretical logics and premises.

4.4 Institutional Endogeneity, Institutional Ontologies, and Explanatory Thickets

The foregoing discussion has shown that the institutional endogeneity problem is a core theoretical problem with implications for interpreting evidence, and cannot be decided by empirics alone partly because of the underdetermination of theories by data, and partly because a functionalist ontology of institutions cannot serve as a basis for explaining institutional effects. Instead, theoretical refinement, renovation, or even reconstruction is needed. This section suggests that the problem is in fact a set of related questions consisting of the following:

(*a*) apparent empirical instances of institutional effects on interstate relations or state behavior (the *empirical* question),

(b_1) the assumption that international institutions are instruments created by rational states to perform an informational and facilitating function under anarchy (the *ontological* question), and

(b_2) the paradox that whatever causal powers international institutions might have could be epiphenomenal to state interests and

strategies, in which case these would take explanatory priority over institutions (the *explanatory* question).

The nature of questions (*a*), (b_1), and (b_2) can be generalized to encapsulate the empirical, the ontological, and the explanatory aspects, respectively, the latter two questions being primarily theoretical. Social scientists all take positions, implicitly or explicitly, on these questions.

Within the field of international relations, theoretical approaches to institutions (and norms as well) all take positions on questions regarding ontology, empirics, and theoretical explanation. In the present case, institutionalists would presumably want to reject the notion that empirical observations of cooperation and other phenomena are not institutional effects but state effects. That is to say, that segment of institutionalist scholarship that is cognizant of the deeper problems with its core logic seeks to preserve the inferential linkages made between institutionalist explanations and relevant empirical contents, and to do so by revising and reforging their ontology of institutions, i.e., what institutions are and do. According to the designations above, they seek to leave (*a*) alone and to forestall the consequences of (b_2) by reformulating (b_1). A recent effort in this regard, for example, seeks to overturn existing rationalist assumptions about what institutions or the conditions of their crafting are, arguing instead for a revision—indeed a reversal—in the causal logic responsible for institutional creation and design, while leaving much of the empirical consequences of institutions intact. The argument is that generalized trust

needs to be present before the creation of international institutions, but it has no quarrel with the idea that institutions, once created, can deepen trust and cooperation.[48]

As for realist theories of international institutions, while a few accounts continue to dispute the apparent empirical finding that institutions matter in their own right,[49] other works have turned to the task of providing power-based explanations of institutional deepening rather than discounting it. An implicit theory of institutions can be extracted from realism and other power-based approaches, in which economic and security institutions can serve in a functional role as force multipliers or instruments of power management for states, modifying structural imperatives in such a way that outcomes cannot always be gleaned directly from power differentials in the international system. Due to different growth/decline rates and power transitions, the gap between power distribution and existing institutional arrangements can widen over time, leading to systemic disequilibrium and war that reshape or replace the established institutional order.[50] Similarly, Gruber's notion of "go-it-alone power"

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[48] Brian C. Rathbun, "Before Hegemony: Generalized Trust and the Creation and Design of International Security Organizations," *International Organization* 65 (2011).

[49] See, e.g., Mearsheimer, "The False Promise of International Institutions."; Mearsheimer, *The Tragedy of Great Power Politics*. Note that in this chapter (*a*) is provisionally assumed to be fairly uncontroversial among many IR scholars. This is, however, distinct from saying what effects they are, and whether those effects are produced by autonomous institutions—a question that would involve answering the ontological (b_1) and explanatory (b_2) questions. As we shall see, whether that is assumed or not does not adversely affect the main argument of the chapter because answers to (b_1) structure our theoretical interpretation and explanation of empirical contents.

[50] See, e.g., Edward Hallett Carr, *The Twenty Years' Crisis, 1919-1939* (New York: Perennial, 2001 [1939]); Dale Copeland, *The Origins of Major War* (Ithaca, NY: Cornell University Press, 2000); Robert Gilpin, *War and Change in World Politics* (Cambridge: Cambridge University Press, 1981);

does not dispute that institutions change state behavior—an empirical observation—but the reasons for it are very different from those proffered by institutionalists: some states in the system are powerful enough to form influential institutions which other states cannot afford *not* to join, if only because these states, being put on the defensive, can no longer return to what to them was the rather more advantageous *status quo ex ante*.[51]

Underneath the substantive debate on institutions, therefore, is at least in part a very consequential dispute as to which explanatory interpretation or causal logic, broadly construed, accords with which set of observations. It has become increasingly accepted that what observations or facts are deemed to be relevant for the evaluation of a theory is theory-laden, though not theory-determined. One may allow that theories in some sense devise their own evaluative criteria without having to carry the full weight of Kuhn's incommensurability thesis.[52] After all, even Kuhn himself has only suggested that inter-paradigmatic communication is imperfect, not impossible.[53] In this respect, the very idea of competition in theory choice operates

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Jacek Kugler and A. F. K. Organski, "The Power Transition: A Retrospective and Prospective Evaluation," in *Handbook of War Studies*, ed. M. Midlarsky (Boston: Unwin Hyman, 1989); Randall L. Schweller and David Priess, "A Tale of Two Realisms: Expanding the Institutions Debate," *Mershon International Studies Review* 41 (1997).

[51] Lloyd Gruber, *Ruling the World: Power Politics and the Rise of Supranational Institutions* (Princeton: Princeton University Press, 2000). See also Moe, "Power and Political Institutions." Moe argues that political scientists need to examine who the relevant institutional insiders are.

[52] See Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1970 [1962]).

[53] See Kuhn, *The Structure of Scientific Revolutions*, 198-99; Thomas S. Kuhn, "Theory-Change as Structure-Change: Comments on the Sneed Formalism," *Erkenntnis* 10 (1976). See also Davis, *Terms*

on a terrain that is both structured and malleable, where at least a minimal level of mutual intelligibility may be presumed. At any rate, the aim of this chapter is precisely to tackle a basic problem concerning institutions with respect to ontological assumptions and their analytical consequences, so while this discussion impinges on the theory-empirics fit, the specific empirical content of any given case is secondary to the task at hand, for the reasons stated earlier regarding the relationships among (*a*), (b_1), and (b_2).

Institutional endogeneity has been a problem of long-standing. This peculiar situation in which empirical research has apparently outpaced its theoretical foundations has led IR scholars—particularly scholars of norms and institutions—to search for new resources that can address this predicament. Aside from the skeptical stance towards institutions that realists adopt, and the micro-economistic approach by which the more recent institutionalist work is inspired, constructivists have advanced a sociologically oriented approach that theorizes international institutions as autonomous actors on the basis of their rational-legal authority and capacity for social knowledge production.[54]

This chapter holds that it is the ontological question that determines what explanatory power, if any, is attributed to which entities, and how empirical findings

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of Inquiry: On the Theory and Practice of Political Science, 84; Wight, *Agents, Structures, and International Relations: Politics as Ontology*, 42-45.

[54] Michael Barnett and Martha Finnemore, "The Politics, Power, and Pathologies of International Organizations," *International Organization* 53 (1999); Michael Barnett and Martha Finnemore, "The Power of International Organizations," in *Power and Global Governance*, ed. M. Barnett and R. Duvall (Cambridge: Cambridge University Press, 2005). Barnett and Finnemore, *Rules for the World*.

are to be made intelligible.[55] "A serious analysis of institutions," as Grafstein has argued, "is impossible without a careful consideration of their ontological status."[56] Similarly, Hay suggests that answers to ontological questions "may determine, to a considerable extent, the content of the political analysis we are likely to engage in and, indeed, what we regard as an (adequate) political explanation."[57] Thus even a primarily explanatory enterprise needs what Wight calls sustained "ontological

[55] This order of development is not coincidental, and is based on aspects of a scientific realist philosophy of science that, *inter alia*, foreground ontology. This, of course, is not to suggest that the emphasis on ontology is the only principle in scientific realism or that non-scientific realists do not share similar views on this issue. See, e.g., George and Bennett, *Case Studies and Theory Development in the Social Sciences*, Ch.7; Margaret S. Archer, *Realist Social Theory: The Morphogenetic Approach* (Cambridge: Cambridge University Press, 1995); Bhaskar, *The Possibility of Naturalism: A Philosophical Critique of the Contemporary Human Sciences*; Bhaskar, *A Realist Theory of Science*; Boyd, "The Current Status of Scientific Realism."; David Dessler, "What's at Stake in the Agent-Structure Debate?" *International Organization* 43 (1989); Wendt, *Social Theory of International Politics*; Wight, *Agents, Structures, and International Relations: Politics as Ontology*. Some scholars, including those non-scientific realists in IR, are concerned that the emphasis on ontology would lead to a status quo bias or to situations in which unobservables and entities posited in a theory are clung to dogmatically in the face of contrary evidence. See Jackson, *The Conduct of Inquiry in International Relations: Philosophy of Science and Its Implications for the Study of World Politics*; Jackson, "Foregrounding Ontology: Dualism, Monism, and IR Theory."; Juha Käpylä and Harri Mikkola, "A Critical Look at Critical Realism: Some Observations on the Problems of the Metatheory," *World Political Science Review* 6, no. 1 (2010). While this is a legitimate concern and something which scholars must guard against, it is contingent upon scholarly practice, and is not an *inherent* flaw of the scientific realist approach, or of non-scientific realist approaches that take ontology seriously. Another possible objection might be that while there is an authoritative adjudicator of knowledge in the natural world, namely science, there is no equivalent in the social world, and so we may not be warranted in making ontological claims. This is a complicated set of issues and cannot be dealt with adequately here, but three things should be noted: the first is that acknowledging the importance of ontology is not the same as committing to a particular ontology; the second is that one is rightly skeptical of an ontological claim disguised as a non-ontological claim: "I do not have an ontology and do not rely on any, even an implicit one"; the third is that social scientists should be circumspect in making ontological claims, and that they should recognize the provisional and evolving nature of those claims, which may be open to future revisions or rejections. Having said that, however, it is worth noting that natural scientists, too, would have to do likewise, even if we grant that there are differences in terms of the level of confidence we can place in natural vs. social scientific theories.

[56] Grafstein, *Institutional Realism: Social and Political Constraints on Rational Actors*, 8.

[57] Colin Hay, "Political Ontology," in *The Oxford Handbook of Political Science*, ed. R. Goodwin (Oxford: Oxford University Press, 2009), 462.

investigations."[58] The explanatory role of international institutions vis-à-vis their state creators or sponsors cannot be adequately ascertained unless ontological priors—in the present case, the background assumptions and commitments pertaining to the nature of units and categories in a theory of institutions—have been clarified. Thus, at least up until quite recently, it is because most institutionalists have a functionalist position on the ontological question that instances of cooperation can be accepted as corroborating evidence for the logic of their theory.[59] The explanatory value of institutional theory is derived from the view that causal powers reside in institutions which, once created by states, are capable of independent causal feedback to states by virtue of their informational and other functions. But it is also for the same reason that institutional endogeneity creates such a problem for institutionalism, because functionalism threatens to undermine the basis on which institutions are said to be causally efficacious in the first place. Furthermore, this potentially damaging consequence for institutionalism makes sense because it is situated within the

[58] Wight, *Agents, Structures, and International Relations: Politics as Ontology*. Charusheela has shown that in economics "different approaches to exchange rate use different ontologies, and come to different interpretations of an imbalance in payments, and a role for devaluation." S. Charusheela, *Structuralism and Individualism in Economic Analysis* (New York: Routledge, 2005), 141. See also Stephen Pratten, "Ontological Theorising and the Assumptions Issue in Economics," in *Contributions to Social Ontology*, ed. C. Lawson, J. Latsis, and N. Martins (New York: Routledge, 2007).

[59] Institutions are said to promote cooperation, but do they promote peace? The economistic foundations of institutionalism do not seem to make a distinction. As Mearsheimer has rightly noted, the "Ribbentrop-Molotov pact was a case of international cooperation, but hardly a source of peace." John J. Mearsheimer, "A Realist Reply," *International Security* 20 (1995): 87. Moe argues that "cooperation occurs among insiders, who use their cooperation to exercise power over others." The question is which actors are the "insiders" to the structure of cooperation, and which actors constitute the "relevant population" to which the outcome of cooperation among the insiders will be applied. Moe, "Power and Political Institutions," 44-45.

framework of a particular ontology of institutions as (useful state) instruments, and its associated causal mechanisms.

Padgett, in analyzing economic organization, calls a question of this kind the "organizational existence" question.[60] Other scholars, such as Claude, similarly, see it as a "constitutional" question, a question "*of* international organizations," in contrast with "substantive" ones with which such organizations have to contend.[61] Stated in general terms, it is a question of *institutional ontology*:[62] it is because of what institutions are posited to be that they are attributed certain capacities, propensities, and causal powers that are theorized to have tangible effects. Contestations regarding the ontological status of international institutions help define the explanatory role of institutions in various approaches. If they are functional devices, that may mean, as Keohane and Martin, and Mitchell have suggested, that their effects are better explained by state preferences and strategies. If they are

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[60] John F. Padgett, "The Emergence of Simple Ecologies of Skill: A Hypercycle Approach to Economic Organization," in *The Economy as an Evolving Complex System II*, ed. B. Arthur, S. Durlauf, D. Lane (Reading, Mass.: Addison-Wesley, 1997), 200. See also John F. Padgett and Walter W. Powell, "The Problem of Emergence," in *The Emergence of Organizations and Markets*, ed. J. Padgett and W. Powell (Princeton, NJ: Princeton University Press, 2012). On the question of institutional ontology, see also Dessler, "What's at Stake in the Agent-Structure Debate?" 468. Though the problem at hand is somewhat different, it brings to mind Kratochwil and Ruggie's early critique of the regime theory literature when they pointed out, through argumentation, that "a positivist epistemology simply cannot accommodate itself to so intersubjective an ontology." The point is that the ontological and analytical components are in conflict. See Friedrich Kratochwil and John Gerard Ruggie, "International Organization: A State of the Art on an Art of the State," *International Organization* 40 (1986): 765.

[61] Inis L. Claude, *Swords into Plowshares: The Problems and Progress of International Organization* (New York: Random House, 1964 [1956]), 77. Emphasis in the original. Duffield's typology of international institutions classifies them according to their functions and ontological forms. John Duffield, "What Are International Institutions?" *International Studies Review* 9 (2007).

[62] This question will also be examined in Chapter Five.

rational-legal bureaucratic actors, as Barnett and Finnemore have argued,[63] they may enjoy legitimacy that affords them greater freedom of action; or they may become "pathological," acquiring ambitions and acting on agendas unintended by their designers. Thus, what institutions are posited to be is at the core of the debate. However, if the institutional endogeneity problem is "solved" by fiat, i.e., by analytically anthropomorphizing international institutions and organizations as bureaucratic or organizational actors and endowing them with interests different from those who have designed the institutions, then such a solution would not be completely satisfactory. Surveying various forms of institutional analysis, Grafstein has argued that social scientists face the issue of treating institutions as both product of choice and producer of constraint, and have to guard against understating human agency or diminishing institutional causal powers.[64] Many of these issues are in fact traceable to the question of institutional ontology.

Although institutionalists do not see the problem in this light, they do acknowledge that this problem is serious enough for them to re-evaluate the place of functionalism in institutional theory. Now, as before, they argue that institutions have causal powers, i.e., the ability causally to influence state behavior or even to act contrary to state interests, but they have decided to re-state that case by adjusting some long-held assumptions about institutions. For some IR scholars, (*a*) alone is

[63] Barnett and Finnemore, "The Politics, Power, and Pathologies of International Organizations."; Barnett and Finnemore, *Rules for the World.*
[64] Grafstein, *Institutional Realism: Social and Political Constraints on Rational Actors*, 7-8. See also Martin and Simmons, "Theories and Empirical Studies of International Institutions."

sufficient *prima facie* evidence for accepting institutional causal powers, whatever the theory of institutional origins and functions. This is quite mistaken due to the fact that, as mentioned earlier, the ontological and explanatory questions impose some stringent limits on what those empirical observations can mean. It is for this reason that (b_1) might pose a problem to a causal view of institutions *even having accepted* (a). Therefore, many institutionalists have begun to jettison structural functionalism and placed more emphasis on domestic-level dynamics.

4.5 Principals, Agents, and Delegation: A Rationalist Solution?

One of the key developments in contemporary international relations research is that principal-agent (PA) theory has become one of the main anchors of institutionalist analysis.[65] In effect, institutionalists are now turning to a different ontology of institutions—a different theory of institutional origins and design, with a view to defending the causal efficacy of institutions against challenges of endogeneity and epiphenomenalism. This section focuses on how some scholars have theorized international institutions as products of contracting parties through relationships of delegation, and what implications this has on rationalism and its place in institutional theory.

[65] For a critique of conventionalist and new-institutionalist views on institutional emergence and design, see Grafstein, *Institutional Realism: Social and Political Constraints on Rational Actors*.

In a programmatic work, Simmons and Martin have argued that the new frontier of institutionalist research lies in the study of "domestic institutional conditions that make it rational to delegate authority to international institutions."[66] Delegation is a key concept in principal-agent theory, which was first developed in economics and finance to study contracting behavior, and which has since entered political science through legislative and comparative studies, with increasing applications in the field of international relations.[67] PA theory is concerned with the extent to which a principal (e.g., a state) can delegate revocable or conditional authority to an agent (e.g., an international organization) who acts on behalf of the principal, albeit with varying degrees of "agency slack," i.e., independent action on the part of the agent that deviates from the aims and interests of the principal.[68]

Two of the main reasons for delegation are *monitoring costs* and *information asymmetries*: it is considered costly for states to "police-patrol" the work of

[66] Simmons and Martin, "International Organizations and Institutions," 205.

[67] Roderick Kiewiet and Mathew D. McCubbins, *The Logic of Delegation: Congressional Parties and the Appropriations Process* (Chicago: University of Chicago Press, 1991); David A. Lake, "Anarchy, Hierarchy, and the Variety of International Relations," *International Organization* 50 (1996); McCubbins and Schwartz, "Congressional Oversight Overlooked: Police Patrols Versus Fire Alarms."; Miller, "The Political Evolution of Principal-Agent Models."; Terry M. Moe, "The New Economics of Organization," *American Journal of Political Science* 28 (1984). See also McCubbins and Schwartz, "Congressional Oversight Overlooked"; Weingast and Moran, "Bureaucratic Discretion or Congressional Control?"

[68] See, e.g., J. Bendor, A. Glazer, and T. Hammond, "Theories of Delegation," *Annual Review of Political Science* 4 (2001); Cary Coglianese, "Globalization and the Design of International Institutions," in *Governance in a Globalizing World*, ed. J. Donahue and J. Nye (Washington, D.C.: Brookings Institution Press, 2000); Eirik G. Furubotn and Rudolf Richter, *Institutions and Economic Theory: The Contribution of the New Institutional Economics* (Ann Arbor, MI: University of Michigan Press, 1997), 42-49; Darren Hawkins, David Lake, Daniel Nielson, Michael Tierney, "Delegation under Anarchy: States, International Organizations, and Principal-Agent Theory," in *Delegation and Agency in International Organizations*, ed. D. Hawkins, D. Lake, D. Nielson, M. Tierney (Cambridge: Cambridge University Press, 2006); Miller, "The Political Evolution of Principal-Agent Models," 204.

international institutions, and even if states are willing to bear the costs, they may not be well suited to perform certain functions. PA theory holds that principals can benefit by empowering agents and by setting up certain parameters or "fire alarms" that aim to align agent behavior with the interests of the principal.[69] This helps principals cut monitoring costs but may increase agency slack due to the lack of active monitoring. In addition, an agent (an IO or institution in an IR context) may possess information or other expertise that a principal would like to utilize. Insofar as states are quintessential managers of violence, institutions may be said to have a comparative advantage in structuring incentives and payoffs in ways that are necessary for (different kinds and degrees of) cooperation or coordination to occur. Since, according to this argument, institutions must retain a measure of autonomy from the principal(s) in order to create policy credibility or signal commitment, delegation seems to establish a range of effective autonomy for institutions.

To address the issue of institutional endogeneity more specifically, Keohane and Martin have suggested that sunk costs, path dependence, and risk aversion in institutional design processes, combined with the existence of multiple equilibria in non-zero-sum games, point to the indeterminate nature of environmental conditions.

[69] McCubbins and Schwartz, "Congressional Oversight Overlooked." See also Coglianese, "Globalization and the Design of International Institutions."; Miller, "The Political Evolution of Principal-Agent Models."; John Pratt and Richard Zeckhauser, "Principals and Agents: An Overview," in *Principals and Agents: The Structure of Business*, ed. J. Pratt and R. Zeckhauser (Cambridge, Mass.: Harvard Business School Press, 1985). Moe argues, however, that this standard view overlooks the political nature of bureaucratic agents who can mobilize to influence the decisions of their principals. "There may be a real question as to who is controlling whom." Terry M. Moe, "Political Control and the Power of the Agent," *The Journal of Law, Economics, and Organization* 22 (2005): 2.

These factors may give rise to divergences between state interests and institutional configurations and allow for some measure of institutional slack and hence, autonomy.[70] It is precisely for these reasons that the latest formulation of institutionalist theory has to move "farther from its neorealist roots, putting more emphasis on agency, less on structure."[71] But are these reasonable assumptions about the nature of institutional autonomy? And can PA theory solve the problem of institutional endogeneity?

In reconceptualizing the problem concerning the relationship between institutions and states as a principal-agent problem, institutionalists seem to have downplayed the fact that "delegation" has been formulated, in U.S. legislative studies, as a counter to "abdication," the thesis that Congress has deferred to the executive branch, thereby resulting in a systematic loss of influence and initiative.[72] The influence in question is mainly that of the *principal*. The relevant point for this discussion is that in a principal-agent relationship, the principal's interests are served by the agent in the final analysis, even if the agent has some freedom of action provided that the "fire alarms" are not set off. Indeed, by identifying the study of how principals can reassert control over institutional agents as vital to future research,

[70] Keohane and Martin, "Institutional Theory as a Research Program."
[71] Keohane and Martin, "Institutional Theory as a Research Program," 103. See also Stephan M. Haggard, "Structuralism and Its Critics: Recent Progress in International Relations Theory," in *Progress in Postwar International Relations*, ed. E. Adler and B. Crawford (New York: Columbia University Press, 1991).
[72] Kiewiet and McCubbins, *The Logic of Delegation*, 3; McCubbins and Schwartz, "Congressional Oversight Overlooked," 171-73.

some scholars working on delegation to international organizations have moved away from the goal of establishing agent autonomy and causal powers through PA theory.[73]

PA theory may be a useful tool for analyzing many important social and economic phenomena (such as the dilemmas of contracting and business management),[74] but when applied to international institutions it has the ironic result of buttressing realist skepticism about the explanatory status of institutions. The recourse to PA theory is paradoxical in another sense: it is an attempt to build a substantive anti-reductionist case on reductive grounds, whose aim it is to establish that though institutions are endogenous to state power, they are not epiphenomenal, and have real causal influence on state behavior. In other words, institutionalists are positing institutional causal powers by (1) first conceding the analytical and ontological reducibility of institutions (i.e., institutional endogeneity), and then (2) undermining the theoretical basis for relative institutional autonomy through a recasting of the debate in terms of principal-agent relationships. After all, if shirking behavior is pervasive, i.e., if the agent can often run counter to the interests of the principal, then the principal has to be *capable* of reining in the agent and protecting his own agenda, otherwise this is a principal-agent relationship devoid of meaning

[73] For a discussion, see, e.g., Christopher S. Marcoux, "Autonomous Actors or Faithful Agents?" *International Studies Review* 9 (2007): 263.

[74] Even in these areas, scholars have argued that PA theory has seriously mischaracterized the relationship between principals and agents, and that the theory's applicability for explaining political phenomena is circumscribed accordingly. See, e.g., Gary J. Miller and Andrew B. Whitford, "Trust and Incentives in Principal-Agent Negotiations: The "Insurance/Incentive Trade-Off"," *Journal of Theoretical Politics* 14 (2002).

(inasmuch as relationships of this kind involve shirking or slacking while in subservience). In fact, some studies have shown that even slacking agents tend to act as the pliant subcontractors that their principals desire.[75] This is not surprising given the menu of control mechanisms that principals can employ to rein in their institutional agents. On top of monitoring, principals can also use strategies of delineation, sharing, and reversibility to bring agents into conformity with their whims and wishes.[76] Delineation sets bounds on the scope and domain of institutional authority; sharing entails the direct participation of the principal's representatives in decision-making in the target institution, and reversibility provides escape clauses for principals to extricate themselves from the jurisdiction of institutional agents if necessary. These strategies do not guarantee full conformity or total alignment, but they can all erode institutional autonomy and assert designer control.

There is also a possibility that such principal-agent relationships can be tautological, and in cases where state interests are not served, there is a built-in tendency to rule them as falling outside of the purview of PA theory and consequently

[75] See, e.g., Andrew P. Cortell and Susan Peterson, "Dutiful Agents, Rogue Actors, or Both? Staffing, Voting Rules, and Slack in the WHO and WTO," in *Delegation and Agency in International Organizations*, ed. D. Hawkins, D. Lake, D. Nielson, M. Tierney (Cambridge: Cambridge University Press, 2006), 255-56.

[76] Coglianese, "Globalization and the Design of International Institutions."; Cary Coglianese and Kalypso Nicolaïdis, "Securing Subsidiarity: The Institutional Design of Federalism in the United States and Europe," in *The Federal Vision: Legitimacy and Levels of Governance in the United States and the European Union*, ed. K. Nicolaïdis and R. Howse (Oxford: Oxford University Press, 2001). To be sure, the noose on agents can be looser or tighter depending on the combination of these strategies, but it is a noose nonetheless.

no "anomalies" are generated for the theory. In addition to the control mechanisms already discussed, the possibility of principals controlling their agents through the threat of recontracting is ever present because institutional agents act on revocable or conditional authority. Thus, the autonomy of *agents qua subcontractors* is reduced accordingly by being in the shadow of the principal's recontracting power and command of resources, though the extent of this curtailing of autonomy can vary.[77] Security contracting and heterogeneous contracting under imperial rule show that while contracting can be employed to understand such relations,[78] the asymmetrical nature of contracting can hardly be overlooked. If principals design and revise contracts and then subcontract the work out to institutions, then it seems that what U.S. Chief Justice John Marshall said of a corporation also applies to an institution so conceived: "it possesses only those properties which the charter of its creation confers upon it, either expressly, or as incidental to its very existence…[such properties are] best calculated to effect the object for which it was created."[79] Can institutional

[77] Alter takes up the issue of how salient recontracting power is, focusing on international courts. She also distinguishes between delegation for efficiency gains and delegation for self-binding. See Karen J. Alter, "Agents or Trustees? International Courts in Their Political Context," *European Journal of International Relations* 14 (2008); Karen J. Alter, "Delegation to International Courts and the Limits of Recontracting Power," in *Delegation and Agency in International Organizations*, ed. D. Hawkins, D. Lake, D. Nielson, M. Tierney (Cambridge: Cambridge University Press, 2006). See also Lake, "Anarchy, Hierarchy, and the Variety of International Relations," 6-7.

[78] Lake, "Anarchy, Hierarchy, and the Variety of International Relations."; Daniel Nexon and Thomas Wight, "What's at Stake in the American Empire Debate," *American Political Science Review* 101 (2007).

[79] *Trustees of Dartmouth College v. Woodward*, 17 U.S. 518 (1819).

agents evolve and go outside of the design charter or box? Yes, but it is an open question as to whether PA theory is a framework that can best accommodate that.[80]

Within the interpretative-explanatory logic of PA theory, congressional parties, which delegate to the executive branch (which then delegates to various administrative agencies and departments), are themselves the product of individual legislators.[81] *Applying PA theory to international institutions simply extends the chain of delegation*, with individual legislators in individual states and other types of principals (such as multinational corporations and transnational advocacy groups) on the one end, and international organizations and less formal international institutions and regimes on the other, not to mention multiple intervening principals-cum-agents in between. Two problems are hereby created: a *long delegation chain* and *heteronomy*—a complicated web of multiple, overlapping powers and obligations.[82] While the problems identified thus far may not be insurmountable and further research may yield better results, in creating these problems, principal-agent theory,

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[80] We will revisit this issue in Chapter Five. See also Barnett and Finnemore, *Rules for the World*; Michael Barnett, "Evolution without Progress? Humanitarianism in a World of Hurt," *International Organization* 63 (2009); Miles Kahler, "Evolution, Choice, and International Change," in *Strategic Choice and International Relations*, ed. D. Lake and R. Powell (Princeton: Princeton University Press, 1999); Knight, *Institutions and Social Conflict*, Ch.4; Wolfgang Streeck and Kathleen Thelen, "Institutional Change in Advanced Political Economies," in *Beyond Continuity: Institutional Change in Advanced Political Economies*, ed. W. Streeck and K. Thelen (Oxford: Oxford University Press, 2005). This is not a rhetorical question meant to denigrate the approach. It is possible that, with revisions and elaborations, PA theory can accommodate that, and quite likely some scholars are working in that area in this fertile field. I argue instead for an alternative, emergent, approach to international institutions, and incorporate elements of institutional change and evolution into it.

[81] Kiewiet and McCubbins, *The Logic of Delegation*, 132.

[82] For a discussion of the related problem of having multiple principals, see Moe, "The New Economics of Organization." See also the discussion in Miller, "The Political Evolution of Principal-Agent Models," 211-14.

at least as it has been adapted for providing the theoretical groundwork for institutional effects, makes the original problem of institutional endogeneity all the more intractable.

4.6 Rationality and International Institutions: Further Considerations

Transposing principal-agent theory into the context of international institutions is problematic for undermining the basis for taking institutions seriously in the first place: institutions seem to have lost their relative causal autonomy *even in theory*, because in the latest evolution of institutionalism they are, from an ontological point of view, pliant subcontractors of other consequential entities. This essentially amounts to a restatement of the useful instruments ontology that has proved problematic as the bedrock for institutionalist explanation. Environmental factors and structural considerations disappear from view as well, for in the final analysis, PA theory is partial to a local model of dyadic interaction. International institutions become, on this view, the outcome of dyadic obligations between two local actors engaging in micro-rational contracting behavior.[83] By reducing institutions to "a set of bilateral contracts," Padgett cautions in a study of organization, PA theory

[83] March and Olsen also use the term "micro-rational" to describe some strands of institutionalism. March and Olsen, "Elaborating the 'New Institutionalism'," 171. For the distinctions between rational and reasoned choices, see Martin Hollis and Steve Smith, *Explaining and Understanding International Relations* (Oxford: Clarendon Press, 1990).

overlooks "the institutionalized autonomy of all stable organizations."[84] In complex social systems, as Jervis has also noted, "relations are often not bilaterally determined."[85] He goes on to quote President Eisenhower's insight that "anyone who becomes immersed in international affairs soon realizes that no important issue exists in isolation; rarely is it only bilateral."[86]

Throughout this theoretical development, rationalism in institutional theory has remained intact, and indeed it has become even more prominent in the theory as it seeks microfoundations in principal-agent models. On the explanatory side of the equation, one that is to provide at least a plausible fit between the reformulated ontology of institutions (as products of dyadic contracting) and empirical observations of institutional effects, the micro-economic or more specifically the individualistic interpretation of rationality is what turns the supposed strengths of institutional theory into liabilities.

Rather than jettisoning appeals to rationality in explanation altogether, the remainder of this chapter and the next chapter point to other approaches to the problem of endogeneity. The first is to revisit and resituate rationalism in international relations theory, and the other is to theorize institutions in emergent

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[84] Padgett, "The Emergence of Simple Ecologies of Skill: A Hypercycle Approach to Economic Organization," 199-200. See also John F. Padgett and Paul D. McLean, "Organizational Invention and Elite Transformation: The Birth of Partnership Systems in Renaissance Florence," *American Journal of Sociology* 111 (2006): 1469-71.

[85] Robert Jervis, *System Effects: Complexity in Political and Social Life* (Princeton: Princeton University Press, 1997), 32.

[86] Dwight D. Eisenhower, *The White House Years, Vol. 1: Mandate for Change: 1953-1956* (Garden City, NY: Doubleday, 1963), 409. As quoted in Jervis, *System Effects*, 32.

terms. These two approaches are by no means mutually exclusive; indeed, this dissertation attempts to synthesize the two. The discussion below will bring us back to the problem of institutional endogeneity by way of a reappraisal of rationalism in IR theory. This seeming detour is taken in order to give some clues as to how institutional endogeneity and (a particular interpretation of) rationality are connected, and why reformulating aspects of rationality in institutional analysis holds out the possibility of a solution—however tentative—to the institutional endogeneity problem.[87]

Now the standard interpretation of institutionalism has at its core the rational design and functioning of institutions; it actually rests on a particular notion of rationality. In a succinct statement of rational choice theory, Cox observes that it "takes actors and their goals as primitives, then proceeds to explain how the given actors' pursuit of their posited goals leads to systematic tendencies in observed behavior."[88] The conventional, *internalist*, view thus focuses on preferences, reasons, purposes, or what Bernard Williams has called an individual's "subjective

[87] In Chapter Five, I will discuss corporate agency and the issue of anthropocentrism as well, and why social emergence may be a defensible theoretical alternative to the solutions provided by both the principal-agent and the anthropocentric ontological models.

[88] Cox, "The Empirical Content of Rational Choice Theory: A Reply to Green and Shapiro," 151. The literature on rational choice is vast, see, e.g., Jon Elster, *Nuts and Bolts for the Social Sciences* (Cambridge: Cambridge University Press, 1989); Mancur Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups* (Cambridge, Mass.: Harvard University Press, 1965); Schelling, *Micromotives and Macrobehavior*. Fearon and Wendt have likewise suggested that a defining feature of rationalism is its commitment to explaining how micro-level motives lead to macro-level outcomes. They go on to argue in favor of a "pragmatic" reading of rationalism, and seem agnostic as to whether rationalism implies methodological individualism and other associated attributes. Fearon and Wendt, "Rationalism v. Constructivism," 56. For a discussion of why methodological individualism implies ontological individualism/reductionism, see Chapter Two of this dissertation.

motivational set."[89] According to this view, rational and reasoned choices are indeed causes of intentional actions for micro-rational individuals. Perhaps not surprisingly, some variations on this individualist-internalist theme have been employed in principal-agent models of international institutions that are gaining traction in IR theory.

It is worthwhile to place this development in the context of a number of recent attempts to reorient notions of rationality *away from* their usual individualist grounds while holding onto some of their insights. Competing notions of rationality and of its proper explanatory role, going back at least to Hume and Kant,[90] hold out very different possibilities for theorizing international institutions. According to the *moderate externalist* view which Satz and Ferejohn defend at length, rationalism is actually most explanatory when environmental constraints are most stringent.[91] The idea, which might seem ironic on its face, is that rationalism arguably derives more explanatory power from environmental factors than from psychological factors and intentional states, which typically serve as the theoretical foundations within an

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[89] Bernard Williams, *Moral Luck: Philosophical Papers, 1973-1980* (Cambridge: Cambridge University Press, 1981), 102. See also Philip Pettit, *The Common Mind: An Essay on Psychology, Society and Politics* (Oxford: Oxford University Press, 1996), 239-48. For a seminal philosophical statement of this view, see Donald Davidson, "Actions, Reasons, Causes," *Journal of Philosophy* 60 (1963). On related issues, see also Elster, *Nuts and Bolts for the Social Sciences*; John Ferejohn, "Symposium on Explanations and Social Ontology 1: Rational Choice Theory and Social Explanation," *Economics and Philosophy* 18 (2002); Paul K. MacDonald, "Useful Fiction or Miracle Maker: The Competing Epistemological Foundations of Rational Choice Theory," *American Political Science Review* 97 (2003).

[90] For an overview of these competing traditions and their implications for the social sciences, see Martin Hollis, *The Cunning of Reason* (Cambridge: Cambridge University Press, 1987), Ch.6.

[91] Debra Satz and John Ferejohn, "Rational Choice and Social Theory," *Journal of Philosophy* 91 (1994).

internalist framework. Consider the example of how rational individuals and firms operating under an oligopoly, a monopoly, and a free market pursue their goals differently, yet they are all presumed to be guided by similar desires and expectations with respect to gains. Arguably, explaining differences in their aggregate behavior can be done mainly by explicating how different institutional contexts (or situations, or normative milieux) channel individual reasons and desires into different behavioral directions, or how such contexts play a major role in determining what individuals consider to be rational action.[92]

The internalist interpretation, by implication, could be decentered, i.e., treated instead as an auxiliary hypothesis within the larger rationalist framework rather than as a core element of rationalist explanation. As Ferejohn has also elaborated:

> If the rationality hypothesis is taken merely as a kind of consistency condition on patterns of choice—and this is the way rationality works within formal models—*and if the mechanisms by which this consistency condition is maintained are left open, the psychological interpretation is no more than one interpretation*.[93]

In internalist terms, as we have seen, the mechanisms by which this consistency condition is met are through an individual's reasons for action, viz., desires, values,

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[92] What Landa has called "justificatory communities" can play such a role, see Dimitri Landa, "Rational Choice as Social Norms," *Journal of Theoretical Politics* 18 (2006). I say aggregate because exceptions always exist at the individual level, but they are exceptions for a reason. There is a subjective element in individual responses to these institutional, structural contexts as well. Cf. Margaret S. Archer, "The Ontological Status of Subjectivity," in *Contributions to Social Ontology*, ed. C. Lawson, J. Latsis, and N. Martins (London: Routledge, 2007).

[93] Ferejohn, "Symposium on Explanations and Social Ontology 1: Rational Choice Theory and Social Explanation," 224, also 18. Emphasis added. See also Satz and Ferejohn, "Rational Choice and Social Theory," Amartya Sen, "Rational Fools: A Critique of the Behavioral Foundations of Economic Theory," *Philosophy and Public Affairs* 6 (1977).

opportunities, and beliefs.[94] The upshot of the externalist view is that the relationship between internalism and rationalism is contingent, not intrinsic.

Though perhaps not as well known or as widely adopted in contemporary political analysis, the externalist view of rationality can find intellectual allies in different quarters of philosophy and the social sciences. As the economist Aoki has noted, while much of game theory may be "a construct of methodological individualism par excellence…we need not confine the meaning of games to a strictly classical, individualist sense." Without denying that internal factors can play a role, he argues that those working inside corporations "might rely on the evolving organizational frame as the rules of games, and comply with them in a manner that is not entirely self-regarding."[95] In other words, supposedly individualist considerations in decision-making implicate, through institutionalized channels, considerations that are not directly localizable to the individuals in question. In philosophy, Popper, for one, did not think "psychologism" is essential to the rationality principle, and Popperian situational analysis adopts a thin view of rationality that places more emphasis on the forces and situations that shape rational decisions, rather than on

[94] See, e.g., Elster, *Nuts and Bolts for the Social Sciences*, Ch.2; Jon Elster, *Reason and Rationality* (Princeton, NJ: Princeton University Press, 2008), 16. This notion is similar to Weber's notion of *Wertrationalität* (value-rationality). See Max Weber, *Weber: Selections in Translation*, ed. W. Runciman, trans. E. Matthews (Cambridge: Cambridge University Press, 1978), 7, 28.

[95] Masahiko Aoki, *Corporations in Evolving Diversity: Cognition, Governance, and Institutions* (Oxford: Oxford University Press, 2010), 66-68. See also Brian Epstein, "When Local Models Fail," *Philosophy of the Social Sciences* 38 (2008). See also Chapter Five.

individual psychological or intentional states.[96] Searle has also argued that there are many intervening steps or what he calls *gaps* between intentional states and outcomes in the execution of complex activities.[97] If that is the case, and if, as is likely, action in the international system is highly complex due to the multi-dimensionality of phenomena (political, economic, social, cultural) and the plethora of actors, entities, layers, levels, then the internalist view looks increasingly untenable.

Echoing the anti-reductionist stance adopted in Chapter Three, Wolfers also argues in *Discord and Collaboration* that while in no way denying the importance of human beings and human agency, "psychological events are not the whole stuff out of which international politics is formed. If they were, the political scientist would have to leave the field to the psychologist."[98] Similarly, evolutionary game theory, which can be regarded as coming under the broad rubric of rationalism, does not need to be premised upon individual means-ends rationality; it need only assume a minimalist individual-rational profile.[99] Selection at the population or systems level can create

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[96] See James Farr, "Situational Analysis: Explanation in Political Science," *The Journal of Politics* 47 (1985); Gorton, *Karl Popper and the Social Sciences*, Ch.1; Karl R. Popper, *The Myth of the Framework: In Defence of Science and Rationality*, ed. M.A. Notturno (London: Routledge, 1996 [1994]). None of this precludes people from giving reasons for their actions. See Richard N. Langlois and László Csontos, "Optimization, Rule-Following, and the Methodology of Situational Analysis," in *Rationality, Institutions, and Economic Methodology*, ed. U. Mäki, B. Gustafsson, and C. Knudsen (London: Routledge, 1993), 117. There is a tension between Popper's view on methodological individualism and his situational analysis. See Gorton's work for a discussion. Given Popper's alleged associations with "positivism" in political science (and all that this label entails), it is good to be reminded that he "boasted of having 'killed positivism.'" See p.1087 of Farr's work just cited.

[97] John R. Searle, *Rationality in Action* (Cambridge: MIT Press, 2001), Ch.3.

[98] Arnold Wolfers, *Discord and Collaboration: Essays on International Politics* (Baltimore: Johns Hopkins University Press, 1962), 8.

[99] Cf. Harold Kincaid, "Functional Explanation and Evolutionary Social Science," in *Handbook for the Philosophy of Science, Vol.15*, ed. M. Risjord, and S. Turner (Amsterdam: Elsevier, 2006); John

downward pressures that select for unit-level responses.[100] While not endorsing an external interpretation of rationality, Elster has described some of its key features quite succinctly: "[c]onstraints operate before the fact, to make certain choices unfeasible. Selection operates after the fact, to eliminate those who have made certain choices."[101] "Rational design choices," Pierson also argues, can be circumscribed by "*change in broader social environments and/or in the character of*

Maynard Smith, *Evolution and the Theory of Games* (Cambridge: Cambridge University Press, 1982); Richard Nelson and Sidney G. Winter, *An Evolutionary Theory of Economic Change* (Cambridge, Mass.: Harvard University Press, 1982); Stewart Patrick, "The Evolution of International Norms: Choice, Learning, Power, and Identity," in *Evolutionary Interpretations of World Politics*, ed. W.R. Thompson (New York: Routledge, 2001); Hendrik Spruyt, "Diversity of Uniformity in the Modern World? Answers from Evolutionary Theory, Learning, and Social Adaptation," in *Evolutionary Interpretations of World Politics*, ed. W.R. Thompson (New York: Routledge, 2001).

[100] One can see this theme in segments of the state formation literature. See, e.g., Richard Bean, "War and the Birth of the Nation State," *The Journal of Economic History* 33 (1973); Brian M. Downing, *The Military Revolution and Political Change: Origins of Democracy and Autocracy in Early Modern Europe* (Princeton: Princeton University Press, 1992), 70-72, Ch.3; Otto Hintze, "Military Organization and the Organization of the State," in *The Historical Essays of Otto Hintze*, ed. Felix Gilbert (New York: Oxford University Press, 1975), 70-72, Ch.3; Paul Kennedy, *The Rise and Fall of the Great Powers* (New York: Random House, 1987), 70-72, Ch.3; Michael Mann, *The Sources of Social Power: A History of Power from the Beginning to A.D. 1760* (Cambridge: Cambridge University Press, 1986), 454; William H. McNeill, *The Pursuit of Power: Technology, Armed Force, and Society since A.D. 1000* (Chicago: University of Chicago Press, 1982); Hendrik Spruyt, *The Sovereign State and Its Competitors: An Analysis of Systems Change* (Princeton: Princeton University Press, 1994); Charles Tilly, *Coercion, Capital, and European States, AD 990-1992* (Cambridge, Mass.: Blackwell, 1992); Charles Tilly, "War Making and State Making as Organized Crime," in *Bringing the State Back In*, ed. P. Evans, D. Rueschemeyer, T. Skocpol (Cambridge: Cambridge University Press, 1985).

[101] Jon Elster, *Explaining Social Behavior: More Nuts and Bolts for the Social Sciences* (Cambridge: Cambridge University Press, 2007), 297. "Eliminate" may be too strong a term, but elimination can happen. Still, in international politics, "state death," for instance, has become a relatively rare phenomenon after the Second World War. See Tanisha M. Fazal, "State Death in the International System," *International Organization* 58 (2004). More often than not, failure to act "rationally"—here meaning, in an externalist vein, the pursuit of a rational course of action in view of structural constraints, enablement, and selection, and under the shadow of the future—still often disadvantages "maladapters" greatly. Despite Elster's generally strong treatment of the role of selective mechanisms in social behavior, however, he still remains (perhaps a bit surprisingly) an internalist with respect to rationality and a reductionist with respect to explanation.

these actors themselves."[102] In IR theory, implicit in neorealism is an evolutionary process whereby states are selected by consequence, whereas in institutionalism selection works according to the logic of consequence, which implicates strategic anticipation or foresight.[103]

To the twin environmental mechanisms of *constraint* and *selection* might be added *enablement*, as it has been shown that institutional arrangements, divisions of labor, operating procedures, and other "rules of the game" can serve both to limit *and* enable social capacities and influence.[104] For example, the evolving post-Cold War unipolar system has taken on some features of a domestic political system, enabling the development of (particular sets of) regulating norms and laws at the international level.[105] There is a temporal dimension to this as well: whether one finds the shadow of the future to be conducive to,[106] or inhibitive of,[107] cooperation, the point remains that probable futures of advantage or disadvantage condition the choice set and behavior of actors today. The internalist stance tends to construe rationality narrowly, and with a presentist flavor, so much so that rational actors become, in the words of

[102] Paul Pierson, *Politics in Time: History, Institutions, and Analysis* (Princeton: Princeton University Press, 2004), 108. Emphasis is Pierson's.
[103] In other contexts, see Elster, *Explaining Social Behavior: More Nuts and Bolts for the Social Sciences*, 16-17; Patrick, "The Evolution of International Norms: Choice, Learning, Power, and Identity."; Pierson, *Politics in Time: History, Institutions, and Analysis*, Ch.4.
[104] See, e.g., Barnett and Duvall, "Power in International Politics."; Giddens, *The Constitution of Society: Outline of the Theory of Structuration*, 170. For distributional consequences of institutions, see Knight, *Institutions and Social Conflict*.
[105] Robert Jervis, "Unipolarity: A Structural Perspective," *World Politics* 61 (2009).
[106] See, e.g., Keohane, *After Hegemony: Cooperation and Discord in the World Political Economy*; Martin, "Interests, Power, and Multilateralism."
[107] See, e.g., Copeland, "Economic Interdependence and the Future of U.S.-Chinese Relations."; Copeland, *The Origins of Major War*; Fearon, "Bargaining, Enforcement, and International Cooperation."

Martin Hollis, "hopelessly improvident."[108] It can be argued that rational choice on the part of the individual actors occupies a secondary position in explanatory terms with respect to environmental mechanisms and is in evidence through the different rates at which they discount the future. Put differently, rational action is based in part on backward induction from expected future outcomes that are in turn a function of the structure of constraint, enablement, and selection that is operative at present. Anticipation of *potential* rather than actual action is also important.[109] In naval strategy, for instance, a *fleet in being* is a concept articulated by Corbett, Mahan and others, which suggests that the presence of a fleet in port is sufficient to induce rational restraint and caution on the part of a target nation's naval forces and merchant marine, tying up their resource. In principle, a fleet in being also exercises prudence. The possibility of defeat in open sea battles in the future makes jeopardizing the strategic advantages enjoyed by a fleet in potentiality unappealing, thereby inducing restraint as well.[110] So sea denial, while different from victory, is predicated on rational foresight and, if done well, on little or no actualized violence. This is quite close in spirit to Sun Tzu's idea that "supreme excellence" consists not

[108] Hollis, *The Cunning of Reason*, 75.
[109] See, e.g., Thomas C. Schelling, *Arms and Influence* (New Haven, CT: Yale University Press, 1966).
[110] Julian Stafford Corbett, *Some Principles of Maritime Strategy* (Annapolis, MD: Naval Institute Press, 1988 [1911]), Part 3.3; Alfred Thayer Mahan, *The Life of Nelson: The Embodiment of the Sea Power of Great Britain*, 2 vols., vol. 1 (Boston: Little Brown, 1897), 136-37, 96-97; Jon Tetsuro Sumida, *Inventing Grand Strategy and Teaching Command: The Classic Works of Alfred Thayer Mahan Reconsidered* (Baltimore, MD: The Johns Hopkins University Press, 1997), 48, 151.

in fighting and conquering in battles, but in "breaking the enemy's resistance without fighting."[111]

What are the implications of an internalist or reductive conception of rationality for the study of international institutions and institutional effects? At least two key implications can be outlined here. First, as discussed earlier, institutions, when construed as dyadic contracts between two local rational actors, create the long delegation chain and heteronomy problems, which lose sight of the structure in which the parties operate. Thus, from an organizational or spatial standpoint, this approach fails to capture the non-local dimensions and relations that impinge on such behavior. Moreover, from a temporal standpoint, local inferences are built essentially on cross-sectional analysis, which sees contracting behavior as a moment in time and fails to capture the irreducible dimensions of institutional autonomy.[112] Therefore, if conceived as "a psychological theory wedded to a reductionist program in the social sciences, where the behavior of a social aggregation is explained in terms of the

[111] "是故百戰百勝, 非善之善者也;不戰而屈人之兵, 善之善者也". 《孫子兵法•謀攻篇》See Tzu Sun, *The Art of War by Sun Tzu—Classic Edition*, trans. L. Giles (El Paso, TX: El Paso Norte Press, 2009 [ca. 515 BC]), Ch.3. This edition is good in that it combines both the original Chinese text and the classic Lionel Giles translation from 1910. While a fleet in being is a sea denial rather than a sea control strategy, economy of force and potentiality are still important and noteworthy aspects of this strategy.

[112] See Carpenter, *The Forging of Bureaucratic Autonomy: Reputations, Networks, and Policy Innovation in Executive Agencies, 1862-1928*; Epstein, "When Local Models Fail."; Paul Pierson, "Big, Slow-Moving, and Invisible: Macrosocial Processes in the Study of Comparative Politics," in *Comparative Historical Analysis in the Social Sciences*, ed. J. Mahoney and D. Rueschemeyer (Cambridge: Cambridge University Press, 2003); Pierson, *Politics in Time: History, Institutions, and Analysis*.

mental states…of its component individuals,"[113] the internalist approach to rationality is vulnerable to a number of major problems associated with methodological and ontological forms of individualism in the social sciences as discussed in earlier chapters.[114] A broader view of rationality makes it possible to go outside of the constricted framework of micro-rational, local, and dyadic contracting and reveals the emergent, non-local, and relational characteristics of institutional complexes. These issues, as we shall see in Chapter Five, have a direct impact on how institutional multilateralism's effects on domestic political arrangements can be assessed.[115]

Second, the turn to PA theory as a rationalist solution to institutional endogeneity arguably puts it at odds with some of the theoretical explanations of major economic and political phenomena. It is not at all coincidental that, in analyzing economies and societies, the theory of the firm tends to have more

[113] Satz and Ferejohn, "Rational Choice and Social Theory," 71. Epstein, "When Local Models Fail," 5.See also Ferejohn, "Symposium on Explanations and Social Ontology 1: Rational Choice Theory and Social Explanation."; Frank Lovett, "Rational Choice Theory and Explanation," *Rationality and Society* 18 (2006); MacDonald, "Useful Fiction or Miracle Maker: The Competing Epistemological Foundations of Rational Choice Theory."

[114] As discussed in Chapter Two, Elster argues that "reductionism is the engine of progress in science." Elster, *Explaining Social Behavior: More Nuts and Bolts for the Social Sciences*, 258. While I disagree with Elster's reductionist approach to social science, he should be given credit for trying to make a strong case for this claim, and for calling individualist explanations and internalist conceptions of rationality what they really are: reductionism. Reductionism is a major approach in the natural and social sciences and there is no need to dance around the term (scientists and biologists who subscribe to this view do not; social scientists do, perhaps for sociological reasons). See Elster's reductionist stance and reactions from physicists like Schwegler in Chapter Two.

[115] Cf. Erik Gartzke and Megumi Naoi, "Multilateralism and Democracy: A Dissent Regarding Keohane, Macedo, and Moravcsik," *International Organization* 65 (2011); Robert O. Keohane, Stephen Macedo, and Andrew Moravcsik, "Constitutional Democracy and World Politics: A Response to Gartzke and Naoi," *International Organization* 65 (2011); Robert O. Keohane, Stephen Macedo, and Andrew Moravcsik, "Democracy-Enhancing Multilateralism," *International Organization* 63 (2009).

explanatory leverage than the theory of consumer behavior, or that rationalist explanations tend to be more robust when the object of study is the behavior of political parties rather than that of individual voters. The reason for this is that "consumers and voters face less competitive environments than firms and parties…[Paradoxically,] the theory of rational choice is most powerful in contexts where choice is limited."[116] This insight is not an indictment of the social sciences if social scientists are committed to explicating the behavior, propensities, and effects of higher-level relations and entities, as well as underlying causal mechanisms, instead of individual dispositions.[117] In electoral studies, what is commonly known as Duverger's law stipulates that single-member plurality (SMP) systems tend to produce two-party electoral competition, and this makes sense in terms of the institutional and opportunity structures in which parties and candidates operate.[118] In

[116] Satz and Ferejohn, "Rational Choice and Social Theory," 72. See also Kincaid, "Functional Explanation and Evolutionary Social Science." Elster entertained this idea but rejected it.

[117] For the traditions of "explanation" (*Erklären*) and "understanding" (*Verstehen*) in Weber as adapted to the study of international politics, see Hollis and Smith, *Explaining and Understanding International Relations*.

[118] Maurice Duverger, *Political Parties: Their Organization and Activity in the Modern State* (New York: Wiley, 1963). See also John Aldrich, *Why Parties? The Origin and Transformation of Political Parties in America* (Chicago: University of Chicago Press, 1995); Rein Taagepera and Matthew Soberg Shugart, *Seats and Votes: The Effects and Determinants of Electoral Systems* (New Haven, CT: Yale University Press, 1989). On the structure of political opportunities in electoral systems, see Joseph A. Schlesinger, *Political Parties and the Winning of Office* (Ann Arbor, MI: University of Michigan Press, 1991), Ch.3. Seeking to take the exceptions into account, Riker's revised formulation states that: "Plurality election rules bring about and maintain two-party competition except in countries where (1) third parties nationally are continually one of two parties locally, and (2) one party among several is almost always the Condorcet winner in elections." William Riker, "The Two-Party System and Duverger's Law: An Essay on the History of Political Science," *American Political Science Review* 76 (1982): 761. Sartori suggests that Duverger's *law* is better understood as a *tendency*. Giovanni Sartori, "The Influence of Electoral Systems: Faulty Laws or Faulty Method?" in *Electoral Laws and Their Political Consequences*, ed. B. Grofman and A. Lijphart (New York: Agathon Press, 1986). Brady suggests that it is better conceived as a deeper *causal mechanism* that has observable

international relations, Waltz argues that systemic pressures lead to the functional undifferentiation of states: states under anarchy perform similar tasks and do not undergo a division of labor as is common in domestic economy and society.[119] For example, states by and large do not outsource their national defense or healthcare provision functions, at least not to foreign governments. Though Duverger's and Waltz's studies contain exceptions,[120] the theoretical explanations and interpretations behind them provide insights into the behavior and propensities of actors under SMP systems and units under anarchy, respectively.

Taking a broader view of rationality is a welcome antidote to the reductionist appropriation of that concept, which allows the concept a limited explanatory range. Its less restrictive interpretation does not have to impute preferences to individuals as

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referents and consequences. Henry E. Brady, "Causation and Explanation in Social Science," in *The Oxford Handbook of Political Methodology*, ed. J. Box-Steffensmeier, H. Brady, and D. Collier (Oxford: Oxford University Press, 2008).

[119] Kenneth Waltz, *Theory of International Politics* (Boston: Addison-Wesley, 1979). Again, Waltz does not explicitly assume rationality, but a case can still be made that functional undifferentiation counts as a "rational" outcome given the system's downward pressures, irrespective of unit-level intentions regarding differentiation. One might also add that the democratic peace has been described as close to being a "law." Jack Levy, "Domestic Politics and War," *Journal of Interdisciplinary History* 18 (1988). For reasons that are outside of the scope of this chapter, I am not persuaded by the causal logic of the democratic peace thesis, but if it were taken to be a description of trends in the international system, that would make more sense. Cederman's rendering of the thesis as a macrohistorical learning process seems more promising than studies of dyads. Lars-Erik Cederman, "Back to Kant: Reinterpreting the Democratic Peace as a Macrohistorical Learning Process," *American Political Science Review* 95 (2001).

[120] For exceptions to Duverger's law, see Brian D. Humes, "Multi-Party Competition with Exit: A Comment on Duverger's Law," *Public Choice* 64 (1990); William Riker, "The Number of Political Parties: A Reexamination of Duverger's Law," *Comparative Politics* 9 (1976). With respect to Waltz's claim: states can, of course, choose between internal and external balancing, that is, between arms build-up and alliance formation. Even though some states at some point may try to substitute alliances for arms, it hardly rises to the level of "outsourcing" national security. See, e.g., Kevin Narizny, "Both Guns and Butter, or Neither: Class Interests in the Political Economy of Rearmament," *American Political Science Review* 97, no. 2 (2003).

it recognizes that collective outcomes emerge from and depend on, but are not reducible to or determined by, individual intentional states.[121] The concept of *emergent rationality* has been developed in science and philosophy for entities, properties, and relations in complex systems.[122] While in formulating structural explanations researchers should take care not to make heroic assumptions or to reify entities, actors, or preferences that are patently incompatible with their known capacities (the usual disclaimers of instrumentalism notwithstanding), the less restrictive criterion of congruence/non-contradiction with the micro-level would serve as a workable baseline position.[123] In place of dyadic local contracting, which institutionalists introduce into the study of international institutions via principal-agent theory, a broader view of rationality draws on the theory of emergence through its invocation of multiple realizability, arguing, as Satz and Ferejohn have put it, that "the stability of the [standard] equilibrium explanation is lost: the inductivist psychological explanation does not illuminate why the same results obtain across putatively different microlevel psychologies." Importantly, in equilibrium analysis,

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[121] On supervenience, see the discussion in Chapter Two, and also R. Keith Sawyer, "Nonreductive Individualism: Part I—Supervenience and Wild Disjunction," *Philosophy of the Social Sciences* 32 (2002); Wendt, *Social Theory of International Politics*, 155-56.

[122] See a discussion in Ivan M. Havel, "Causal Domains and Emergent Rationality," in *Rationality and Irrationality. Proceedings of the 23rd International Wittgenstein Symposium*, ed. B. Brogaard, and B. Smith (Vienna: 2001). This also touches on the question of whether only human beings are capable of causal influence. I do not think so, and I take up this issue in parts of Chapter Five.

[123] See, e.g., George and Bennett, *Case Studies and Theory Development in the Social Sciences*, 140-41. This is where a qualified empiricism comes in: ruling out impossible propositions, rather than let empirics take on the task of theory choice. Wendt suggests that the externalist view depends on an "adequate internalist one." Wendt, *Social Theory of International Politics*, 121. I do not disagree with the "adequate" part. As long as researchers are not making false or impossible assumptions about actors' intentional states an externalist analysis need not resort to "as-if" assumptions.

structural conditions "constrain and narrow" micro-level possibilities and these conditions "*select for compatible microlevel psychologies.*"[124] That is a sense in which the Downsian political organizations in a single-member plurality system can be interpreted: "[t]o attain their private ends [parties] formulate whatever policies they believe will gain the most votes." In other words, it is a form of system-induced, relatively foresighted rationality.[125]

4.7 Conclusion

The debates about institutionalist and principal-agent theories of international institutions are at heart debates about their deeper foundations: functionalism and contractualism. These are also issues that emanate at least in part from broader

[124] Satz and Ferejohn, "Rational Choice and Social Theory," 80-81. Emphasis added. This theme plays out in the structuralist vs. intentionalist debates in historiography and the philosophy of history as well. British historian Ian Kershaw's influential study of Hitler and the Third Reich comes to the conclusion that a new approach is required, "one which attempts to integrate the actions of the Dictator into the political structures and social forces which conditioned his acquisition and exercise of power, and its extraordinary impact. An approach which looks to the expectations and motivations of German society…more than to Hitler's personality in explaining the Dictator's immense impact…" Germans, Kershaw argues, were induced to "'work towards the Führer along the lines he would wish' without awaiting instructions from above." Ian Kershaw, *Hitler, 1889-1936: Hubris* (New York: W. W. Norton, 1999), xxix. Other works convincingly show that, despite the forceful character of the regime, the largest resource transfers for war preparations in peacetime, stunning early military victories, the exploitation of occupied advanced industrialized economies, and even finally having caught up with the Soviet Union in arms production by 1944, Germany simply could not overcome the structural imbalance of forces. See, e.g., Mark Harrison, ed., *The Economics of World War II: Six Great Powers in International Comparison* (Cambridge: Cambridge University Press, 1998); Peter Liberman, *Does Conquest Pay? The Exploitation of Occupied Industrial Societies* (Princeton: Princeton University Press, 1996), Ch.3; Adam Tooze, *The Wages of Destruction: The Making and Breaking of the Nazi Economy* (New York: Viking/Penguin, 2006), especially Chs.17 and 20.

[125] Anthony Downs, *An Economic Theory of Democracy* (New York: Harper, 1957), 295.

debates concerning the nature of political inquiry, and of institutional ontology in particular, in the sense that different ontological conceptions of the defining features of institutions impinge on how institutional effects are to be explained and interpreted. It has been further argued that inasmuch as empirical studies of international institutions have stretched their supporting logics to the limit, where such logics do not provide for adequate institutional autonomy even in theory, solutions will have to come in the form of refinement, reconstruction, or reconceptualization at the underlying theoretical level, and not strictly or even primarily at the empirical level.

Using problems associated with functional and contractual approaches to institutions as an organizing template, this chapter has proceeded to examine proposed solutions to these problems that are based on principal-agent theory. This chapter has suggested that principal-agent theory is an innovative approach that seeks to offer a theoretical solution to the problem of institutional endogeneity, but the chapter has also provided grounds for questioning its applicability to international institutions. Specifically, it has been argued that PA theory as applied to international institutions is not entirely appropriate for the task at hand to the extent that it is built on a localized model of bilateral, hierarchical contracting, which concedes the ground for institutional autonomy even when agency slack is taken into account. Institutional agents are, according to this logic, subject to an impressive array of strategies that

effectively certify them as the pliant and useful subcontractors of states and other consequential entities.

While rationality remains—and should remain—central to the study of institutions, this chapter has argued, in agreement with the externalist interpretation, that the rationality concept has been unnecessarily restrictive, which limits its explanatory potential in theories of international institutions. Taking a broader view of rationality and its role in the study of international institutions has other implications as well. For example, it also means that the focus on the empirical content of individual actor preferences and intentions, while not unimportant, detracts from larger questions about the relative salience of individual versus environmental factors in broadly rational explanations for a range of issues including the crafting of international institutions, and delegation to international organizations. The localized model of micro-rational contracting does not take into account the non-local determinants of the complex entanglement of states and institutions in the international system. In order to capture some of these dimensions of international institutions—e.g., autonomy, complexity, causal efficacy—there should be an adequate basis for conceiving institutions instead as complex social environments and structural arrangements that are emergent from, but irreducible to, the conditions of their crafting and contracting. It is a subject that will be taken up in the next chapter.

CHAPTER FIVE

THE SOCIAL EMERGENCE OF INTERNATIONAL INSTITUTIONS

5.1 INTRODUCTION

Thus far we have examined two broad approaches underlying different theoretical traditions in international relations that provide implicit answers to the question of institutional ontology. The mainline functional approach takes international institutions as useful instruments crafted by states and other consequential actors to solve coordination, cooperation, and collective action problems, as well as market failures in the provision of international public goods. Mostly it is rational institutionalists who hold this view, especially when it is couched in terms of problem-solving and finding ways to reap joint gains, but liberals and constructivists to some extent subscribe to this view as well, for they see institutions as the sites through which epistemic communities and advocacy groups engage in strategic actions to alter state behavior or even identities and interests. Realists, while seeing

world politics in more conflictual terms, are not adverse to the functional view inasmuch as it suggests that states are resourceful in advancing their interests through various institutional channels. A major amendment drawing on principal-agent theory adopts a modified ontological stance by regarding institutions as subcontractors who undertake state-delegated tasks on a dyadic, contractual basis. The implications of these basic ontological positions for explanation can scarcely be overemphasized. Although they contain insights worthy of consideration and engagement, such as the role of state interests in rational institutional design, it has been shown that they fall short in establishing an adequate basis for explaining independent institutional effects.

Below, this chapter juxtaposes the functional and contractual approaches to international institutions, already examined, with the corporate approach. Corporate approaches are rooted in the argument that second-order entities are actors in the international system, understood in legal/fictitious, bureaucratic/organizational,[1] or corporeal/superorganic[2] terms. What unites these otherwise disparate perspectives is that actorhood allows the corporate approaches to endow institutional or organizational actors with identities and interests distinct from their designers, but establishing autonomy and resolving the institutional endogeneity problem in this way is premised on likening second-order entities to human beings. This chapter

[1] In the IR literature this argument builds in part on sociological institutionalist insights, as we shall see.
[2] See below.

argues that there are irreducible properties that these entities possess that make them fundamentally unlike human beings; it further develops a theory of international institutions as emergent configurations or constellations, building on the scaffolding constructed in earlier chapters, and positioning it as an alternative to functional, contractual, and corporate approaches.

The argument advanced in this chapter is in two parts: the first, shorter, part follows up the analysis of the functional and contractual solutions to the problem of explaining relative institutional autonomy and institutional causal powers with a reappraisal of a third, corporate, solution. Contextualizing this solution in the form of the theory of corporate agency, broadly construed, completes the spectrum containing some of the major approaches to the ontological status of international institutions. This calls for an inquiry into the presuppositions according to which our notions of international institutions are formulated. To that end this chapter begins by investigating some of the anthropomorphic arguments made in contemporary international relations theory, before briefly tracing some of their antecedents and parallels to elements of early modern political thought, whose bodily, corporate, imagery and notions of sovereign actorhood have anticipated some of the more recent argumentation in regard to state and institutional agency.[3]

[3] In so doing I am not trying to imply that a simple straight line can be drawn from that scholarship to contemporary theories of the state and of international institutions. As the discussion that follows will show, it is more diverse and complicated than that. I do, however, seek to show that there are similarities, and similar problems, that need to be taken seriously.

Reconciling the powerful role of states and other influential entities in institutional design with a view that international institutions are causally efficacious ensembles in their own right is crucial. The second part of this chapter, more important and longer in length, focuses on this problematic. By working through and tying the threads of reductionism, emergence, and various theoretical solutions to the institutional endogeneity problem, this chapter arrives at a theory of international institutions as constellations of causal powers, putting the study of institutions on a firmer ontological footing, while not denying the compositional basis of institutions. The contours of such an emergent institutional framework can be sketched, and their implications for explanation distilled, from the following key features or properties: (1) *organizational emergence and complexity*, leading to anti-reductionism in ontological and analytical terms in regard to international institutions as individuals are placed in structured relations and nested within multiple levels of social organization (Section 5.3)[4]; (2) *emergence through time,* underwritten by relative endurance and continuity in operation as institutions evolve, as well as by different social tempos and time horizons (Section 5.4); and (3) *non-locality and the distribution of causal powers*, encompassing joint action or the ability to exercise causal influence in multiple locales in virtue of organizational emergence, and the idea that some properties necessarily implicate non-local relations at a social distance

[4] See also Chapter Three.

(Section 5.5).[5] These qualities set international institutions, and indeed, other second-order entities apart from individuals, and goes against some core reductive-individualist and corporate assumptions about international institutions and their causal influence. All of these points will receive further elaboration in the course of the chapter.

Having elaborated on some of the key properties that render international institutions emergent, Section 5.6 turns to the issue of institutional multilateralism in order to indicate some of the ways in which taking social emergence seriously has an impact on, and can inform, institutional explanation. This section examines the extent to which different forms of multilateral global institutions and organizations can exert a downward regulatory influence on system-wide and domestic political arrangements, focusing on participation in multilateral global governance institutions, including institutional orders specifying the political and economic relations between the victors and the vanquished, as well as between status quo and rising powers.[6] It

[5] This list is not intended to be exhaustive. My aim here is to underscore some of the salient features and properties that make an emergent theory of international institutions possible. One might note that some of these features can be possessed by other second-order societies or systems, including states. That is indeed the case. It should also be noted that I am not seeking to articulate a theory of the "quintessential institution" in a way that has been attempted for "the state" before. In short, this is a more general framework that is not confined to international institutions, though they are my focus here.

[6] See, e.g., Robert O. Keohane, Stephen Macedo, and Andrew Moravcsik, "Democracy-Enhancing Multilateralism," *International Organization* 63 (2009). Alastair Iain Johnston, *Social States: China in International Institutions, 1980-2000* (Princeton: Princeton University Press, 2008). G. John Ikenberry, *After Victory: Institutions, Strategic Restraint, and the Rebuilding of Order after Major Wars* (Princeton, NJ: Princeton University Press, 2001); G. John Ikenberry, *Liberal Leviathan: The Origins, Crisis, and Transformation of the American World Order* (Princeton, NJ: Princeton University Press, 2011); G. John Ikenberry, "The Rise of China and the Future of the West: Can the Liberal System Survive?" *Foreign Affairs* 87 (2008).

shows how an emergent approach to international institutions can help clarify some core issues as well as generate an account that can contribute to an analysis of institutional effects in these areas.

5.2 Rethinking the Corporate Agency of Second-Order Entities[7]

If functional and contractual approaches do not offer the ontological ground necessary for addressing the explanatory problems associated with institutional endogeneity, then can one turn to a corporate approach? Can one treat international institutions as actors in similar ways that states have been treated as actors? This might seem like a reasonable enough possibility; after all, it is already a key ontological position with respect to the state. For present purposes, the term *corporate* is used to describe approaches that employ the unitary actor model, the bureaucratic/organizational actor model, or the model of corporate agency in relation to states or to international institutions. The first model is endorsed by various

[7] Following Buzan and Albert, Chapter Three has defined these as systems and societies that are themselves composed of still other collectives that are composed of human beings, rather than being composed of human beings directly. I argue that second-order systems have *emergent* properties. Indeed, first-order systems—those that are directly composed of human beings—have emergent properties as well. Barry Buzan, *From International to World Society? English School Theory and the Social Structure of Globalisation* (Cambridge: Cambridge University Press, 2004), xviii; Barry Buzan and Mathias Albert, "Differentiation: A Sociological Approach to International Relations Theory," *European Journal of International Relations* 16 (2010): 317.

strands of realism and segments of institutionalism,[8] and is treated as a basic assumption, often on instrumentalist grounds,[9] while the bureaucratic actor and corporate agency models are arguably more philosophically grounded defense of treating states as actors, in the sense that their proponents recognize the importance of theorizing institutional ontology and what how this may impact institutional explanation. As there is a relative lack of studies in the field of international relations regarding the ontological status of international institutions as opposed to that of the state,[10] a corporate approach to institutions is gleaned in part from extant corporate theories of the state as well. As we shall see, there is a wealth of research on the state in this particular regard, whether it is favorable to the notion of corporate state agency or not, though similar lines of research on international institutions are still lacking.[11]

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[8] With their commitment to individualism and pluralism, liberal international relations scholars generally do not adopt a corporate theory of the state or of institutions. Liberalism does provide part of the foundation for institutionalism and constructivism, however.

[9] Perhaps the most widely cited defense of the instrumentalist view in the social sciences is Milton Friedman, "The Methodology of Positive Economics," in *Essays in Positive Economics* (Chicago: Unviersity of Chicago Press, 1966 [1953]). For a critique of instrumentalism, see, e.g., Alexander Wendt, *Social Theory of International Politics* (Cambridge: Cambridge University Press, 1999); Colin Wight, *Agents, Structures, and International Relations: Politics as Ontology* (Cambridge: Cambridge University Press, 2006).

[10] A notable exception in IR is Michael Barnett and Martha Finnemore, *Rules for the World: International Organizations in Global Politics* (Ithaca: Cornell University Press, 2004). In the broader political science literature, Knight and Grafstein's earlier works are also examples. See Robert Grafstein, *Institutional Realism: Social and Political Constraints on Rational Actors* (New Haven, NJ: Yale University Press, 1992); Jack Knight, *Institutions and Social Conflict* (New York: Cambridge University Press, 1992).

[11] Ulrich Franke and Ulrich Roos, "Actor, Structure, Process: Transcending the State Personhood Debate by Means of a Pragmatist Ontological Model for International Relations Theory," *Review of International Studies* 36 (2010); Patrick Thaddeus Jackson, "Forum Introduction: Is the State a Person? Why Should We Care?" *Review of International Studies* 30 (2004); Patrick Thaddeus Jackson, "Hegel's House, or 'People Are States Too'," *Review of International Studies* 30 (2004); Marjo Koivisto, "State Theory in International Relations: Why Realism Matters," in *Scientific Realism and International Relations*, ed. J. Joseph and C. Wight (New York and Basingstoke, UK: Palgrave

It should, of course, be noted that there are many differences between states and international institutions. For instance, the state is defined by sovereignty, territoriality, and a monopoly over the legitimate use of organized violence.[12] These and other differences are important, and are readily granted. Without downplaying these differences, it should be noted that states and international institutions also share some similar attributes: they are, to borrow Maxwell's term,[13] abstract "theoretical entities" whose properties and powers are more likely to be ascertained indirectly. They do not appear to have the same mark of ontological coherence as the more primary units in the social sciences, namely, individuals.[14] By virtue of their ontological distance from the clearly discernable individuals, states and international institutions are emergent, second-order entities or systems,[15] which are often not directly composed of individuals, but of still other entities that are made up of

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Macmillan, 2010); Iver B. Neumann, "Beware of Organicism: The Narrative Self of the State," *Review of International Studies* 30 (2004); Jacob Schiff, "'Real'? As If! Critical Reflections on State Personhood," *Review of International Studies* 34 (2008); Alexander Wendt, "The State as Person in International Theory," *Review of International Studies* 30 (2004); Colin Wight, "State Agency: Social Action without Human Activity?" *Review of International Studies* 30 (2004).

[12] Max Weber, "Politics as a Vocation," in *From Max Weber: Essays in Sociology*, ed. H. Gerth and C. Mills (New York: Oxford University Press, 1946 [1918]), 82-82. Even some of the supposedly essential attributes of the state are being eroded, and are contested concepts. Obviously, the scholarly literature on the state is vast. It is not my intention to review that literature here. See also Otto Hintze, "Military Organization and the Organization of the State," in *The Historical Essays of Otto Hintze*, ed. Felix Gilbert (New York: Oxford University Press, 1975).

[13] Grover Maxwell, "The Ontological Status of Theoretical Entities," in *Minnesota Studies in the Philosophy of Science*, ed. H. Feigl and G. Maxwell (Minneapolis: University of Minnesota Press, 1962).

[14] Individuals, of course, are themselves emergent from lower levels of chemical and biological matter.

[15] Cf. Buzan and Albert, "Differentiation: A Sociological Approach to International Relations Theory," 317. Second-order entities and systems tend to exhibit emergent properties. See a discussion in Chapter Three.

individuals. More abstract and less discernable though these entities may be, they are not necessarily devoid of cohesion.[16]

Second-order attributes have led to the erroneous thesis that these entities do not actually exist or act in the social world, that only human beings do.[17] The corollary of this ontological-individualist stance is that non-entities cannot have explanatory value, paving the way for methodological individualism. This complex of reductionist modes of social-scientific analysis has already received critical attention in earlier chapters, and will not be reviewed in extended form here, but it is worth pointing out, if only because a mistaken impression is so often created, that an acceptance of second-order entities should not be equated with the denial of individuals and their causal powers. There is no basis for this equation, as we are dealing with social systems after all; *social emergence qualifies and complicates, but does not negate, human agency*. To the extent that collective and second-order entities and phenomena are the regular referents in the study of world politics, emergence ought to have a key place in international relations theory and in the social sciences. We will return to this issue later in the chapter. But first, this section explores the corporate approaches to the state and, by proxy, to international institutions.

5.2.1 "Artificial Intelligence"? International Institutions as Legal or Fictitious

[16] We will revisit this issue below.
[17] See Chapters Two and Three. For a discussion of these and other attributes, see Section 5.3, below.

The concept of a corporate actor endowed with intentionality and interests, and the capacity to act as a person, has a long lineage in social, political, and legal thought.[18] From legal theories of the firm, to theories of the state, and to theories of international institutions, scholars have approached these collective entities with a variety of ontological presuppositions, made necessary in part by the abstract nature of the subject matter. Therefore, when Walzer remarked that the state is "invisible" and "must be personified before it can be seen, symbolized before it can be loved, imagined before it can be conceived," he outlined the abstract ontological problem of the state and, by extension, of other entities such as international institutions.[19] Many thinkers have tackled this issue through what may be referred to in general terms as the concept of *incorporation*, whereby individuals cohere in an artificial person that acts as a singularity. An organized, collective political entity would be a "body politic"—and the state or "political society" tends to attain "*the* body politic" appellation[20]—just as a business corporation would be recognized as a legal person.[21]

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[18] According to Otto Gierke, the notion of the "fictional person" (*persona ficta*) was first introduced by Sinibald Fieschi (later Pope Innocent IV) in AD 1243, see Mark Neocleous, *Imagining the State* (Maidenhead, UK: Open University Press, 2003), 86.

[19] Michael Walzer, "On the Role of Symbolism in Political Thought," *Political Science Quarterly* 82 (1967): 194. He outlined a key problem, but that is *not* to suggest that Walzer, as a liberal thinker, aimed to provide for a solution to the institutional endogeneity problem, or that he advocated an emergent solution to how to make second-order entities intelligible.

[20] On the state as a particular form of political society, see, e.g., Edward Hallett Carr, *The Twenty Years' Crisis, 1919-1939* (New York: Perennial, 2001 [1939]); Raymond Duvall and Jonathan Havercroft, "Taking Sovereignty out of This World: Space Weapons and Empire of the Future," *Review of International Studies* 34 (2008).

[21] For Hobbes, people institute "a subordinate union of certain men, for certain common actions to be done by those men for some common benefit of theirs, or of the whole city; as for subordinate government, for counsel, for trade, and the like. And these subordinate bodies politic are usually called CORPORATIONS." Thomas Hobbes, *The Elements of Law Natural and Politic* (Cambridge: Cambridge

While some IR scholars debate whether states and institutions are real causal entities and indeed, whether they are real persons or not,[22] most legal scholars are content with providing the necessary legal framework for artificial personhood for second-order entities. In the words of U.S. Chief Justice John Marshall from an important 1819 judgment, a "corporation is an artificial being, invisible, intangible, and existing only in contemplation of law."[23] Most scholars, like Marshall, do not advance an organic, much less an anthropomorphic, argument for corporate agency. "Real entities" and "real people" should definitively *not* be conflated. A conflation of this kind obscures rather than illuminates the sources of causal powers of emergent institutions. As shall be argued below, an argument with respect to the reality of

University Press, 1928 [1640]), Ch.19, sec.9. It is also possible to see the state as a business firm, as in hereditary rulers who, like the owners of a firm, must rely on the expertise of the bureaucrats (the managers) to run the state. See, e.g., Pierre Bourdieu, "From the King's House to the Reason of State: A Model of the Genesis of the Bureaucratic Field," *Constellations* 11 (2004): 22.. It should be emphasized that aside from this brief gesture to the "state-as-firm" imagery, "incorporation" or "corporation" are used here in the bodily, corporeal sense of the terms. Business firms are different bureaucracies or states in that cooperative agreements reached inside those public entities govern not only internal behavior, but also the behavior of the whole general population. See Terry M. Moe, "Power and Political Institutions," in *Rethinking Political Institutions: The Art of the State*, ed. I. Shapiro, S. Skowronek, D. Galvin (New York: New York University Press, 2006).

[22] For the debates in IR regarding corporate entities, see below, and also Franke and Roos, "Actor, Structure, Process"; Jackson, "Forum Introduction: Is the State a Person? Why Should We Care?"; Jackson, "Hegel's House, or 'People Are States Too'."; Neumann, "Beware of Organicism: The Narrative Self of the State."; Michael J. Phillips, "Reappraising the Real Entity Theory of the Corporation," *Florida State University Law Review* 21, no. 1061-1123 (1994): 1064; Schiff, "'Real'? As If! Critical Reflections on State Personhood."; Wendt, *Social Theory of International Politics*, Ch.5; Wendt, "The State as Person in International Theory."; Wight, "State Agency: Social Action without Human Activity?"

[23] *Trustees of Dartmouth College v. Woodward*, 17 U.S. 518 (1819). A recent case in point is the U.S. Supreme Court's ruling that corporations are entitled to First Amendment rights to free speech in part because they are legal persons. See *Citizens United v. Federal Election Commission*, 558 U.S. 08-205 (2010). Recently there is a revival of interest in seeing legal persons as real entities, though not necessarily as real people, see, e.g., David Gindis, "From Fictions and Aggregates to Real Entities in the Theory of the Firm," *Journal of Institutional Economics* 5 (2009); David Gindis, "Some Building Blocks for a Theory of the Firm as a Real Entity," in *The Firm as Entity: Implications for Economics, Accounting and the Law*, ed. T. Kirat, Y. Biondi, and A. Canziani (London: Routledge, 2007).

causal entities need not and should not be anthropomorphic. Arcane though this issue might appear at times, there are important ramifications for law and politics, as well as normative, philosophical, and theoretical implications. At issue are rights, responsibilities, privileges, liabilities, as well as the ability to enter into relations with other persons, natural or legal, domestic or international.[24]

Issues of "political somatics" have earlier antecedents and older formulations.[25] Going back further in time, the social contract theories of Hobbes, Locke, and Rousseau can all be said to involve some form of incorporation as defined earlier. In his *Second Treatise*, Locke argues that when a number of individuals have consented to form a community, "they are thereby presently incorporated, and make

[24] See discussions in Gindis, "From Fictions and Aggregates to Real Entities in the Theory of the Firm."; Gindis, "Some Building Blocks for a Theory of the Firm as a Real Entity."; Tomohisa Hattori, "Is It Real? The Question of Juridical, Actual and Causal Responsibility in Sovereign Debt Settlements," in *Scientific Realism and International Relations*, ed. J. Joseph and C. Wight (New York and Basingstoke, UK: Palgrave Macmillan, 2010); David Runciman, "Moral Responsibility and the Problem of Representing the State," in *Can Institutions Have Responsibilities? Collective Moral Agency and International Relations*, ed. T. Erskine (New York and Basingstoke, UK: Palgrave Macmillan, 2003); Wight, *Agents, Structures, and International Relations: Politics as Ontology*, Ch.5. See also other contributions in Toni Erskine, ed., *Can Institutions Have Responsibilities? Collective Moral Agency and International Relations*, *Global Issues* (New York and Basingstoke, UK: Palgrave Macmillan, 2003). See also Marshall's judgment cited above, which specifies rights and privileges for legal persons.

[25] The term "political somatics" is from Kam Shapiro, *Sovereign Nations, Carnal States* (Ithaca, NY: Cornell University Press, 2003). For the corporate view of the state of late modern political thinkers, see Shapiro's work and also Walzer, "On the Role of Symbolism in Political Thought." For pre-modern times, at least in the West, see the king's "two bodies" problem as discussed in great detail in Ernst H. Kantorowicz, *The King's Two Bodies: A Study in Mediaeval Political Theology* (Princeton, NJ: Princeton University Press, 1997 [1957]). See also Giorgio Agamben, *Homo Sacer: Sovereignty Power and the Bare Life*, trans. D. Heller-Roazen (Stanford: Stanford University Press, 1998), Part 2, Section 5; Giorgio Agamben, *The Kingdom and the Glory: For a Theological Genealogy of Economy and Government*, trans. L. Chiesa, with M. Mandarini (Stanford, CA: Stanford University Press, 2011).

one Body Politick…with a Power to Act as one Body."[26] In Rousseau's concept of the general will an "act of association" also unites individuals into a "moral and collective body."[27] In Hobbesian political thought, the sovereign political collectivity looms even larger as a corporate body, appearing variously as an "Artificiall Man," a "Mortall God" and, most famously, as the awesome "Leviathan."[28] In *The Elements of Law Natural and Politic*, Hobbes describes the collective political community in similar terms, arguing that the incorporation of individuals and of individual wills constitutes "a BODY POLITIC…united as one person by a common power, for their common peace, defence, and benefit."[29] For Hobbes, the incorporated, unified political man holds out the possibility of delivering individuals from the "solitary, poore, nasty, brutish, and short" life in the state of nature, the state of war.[30]

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[26] John Locke, *Two Treatises of Government* (Cambridge: Cambridge University Press, 1988 [1689]), Ch.8 sec.95-96, 331. Original spellings.

[27] Jean-Jacques Rousseau, "On the Social Contract," in *The Basic Political Writings*, ed. P. Gay (Indianapolis, IN: Hackett, 1987 [1762]), 148.

[28] Hobbes, *Leviathan*; original spellings. It is instructive to quote Hobbes directly on the ontology of this political actor, in part because his prose is quite evocative: "The only way to erect such a Common Power…is [for men] to conferre all their power and strength upon one Man, or upon one Assembly of men, that may reduce all their Wills, by plurality of voices, unto one Will; which is as much as to say, to appoint one man, or Assembly of men, to beare their Person…and therein to submit their Wills, every one to his Will, and their Judgments, to his Judgment. *This is more than Consent, or Concord: it is a reall Unitie of them all, in one and the same Person*…This is the Generation of that great leviathan, or rather…of that *Mortall God*." Hobbes, *Leviathan*, Ch.17, 227. These spellings and capitalizations, like the quotes below and earlier, follow the original seventeenth-century texts. His incorporation thinking is captured in the frontispiece of his *magnum opus*, *Leviathan*, which shows a male figure holding the sword of justice in one hand, and the scepter of authority in the other; his head is adorned with a crown, and underneath this figure are images of his power: instruments of war, ecclesiastical symbols, and a court filled with royal officials. The original engraving was done by the French artist Abraham Bosse.

[29] Hobbes, *The Elements of Law Natural and Politic*, Ch.19, sec.7-8. On the important conceptual overlaps between *The Elements of Law* and *Leviathan*, see, e.g., Deborah Baumgold, "The Composition of Hobbes's *Elements of Law*," *History of Political Thought* 25 (2004).

[30] Hobbes, *Leviathan*, Ch.13, 186. Original spellings.

5.2.2 Institutions as Bureaucratic or Organizational Actors, Joined with Elements of Sociological Institutionalism

In general, within a corporate framework—whether built on sociological-institutionalist insights, or on other legal, political, and philosophical grounds—establishing the "actorhood" of international institutions would seem to be tantamount to a *prima facie* case for institutional identities, interests, preferences, and for (relative) autonomy. The desired effect from a variety of corporate perspectives has been *to put international institutions on the same ontological footing as states*. For example, realists disagree on whether states are defensively oriented or offensively oriented actors, or whether they are necessarily rational, but they do not argue whether states are the principal actors in world politics.[31] They may debate about the relative salience of unit-level vs. structural factors, but most ascribe identities, interests, intentions—and uncertainty about other states' intentions—to states. Some

[31] I will defer the discussion on the constructivist view on this issue until the next subsection. On offensive realism, see John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: Norton, 2001). On defensive realism, see Kenneth Waltz, *Theory of International Politics* (Boston: Addison-Wesley, 1979). On whether realism assumes rationality, see John J. Mearsheimer, "Reckless States and Realism," *International Relations* 23 (2009); Kenneth Waltz, "Thoughts About Assaying Theories," in *Progress in International Relations Theory*, ed. C. Elman, and F.M. Elman (Cambridge, Mass.: MIT Press, 2003). And of course, liberalism, with its individualist and pluralist approach to second-order entities, and Marxism, with its class-based worldview, eschew the unitary actor approach to states and international institutions for different reasons.

states are deemed to be status-quo powers, whereas others are said to seek the overthrow of the established order, and they act accordingly within constraints.[32]

In terms of institutional ontology, Barnett and Finnemore have underscored the importance of analyzing the ontological underpinnings of international organizations and institutions,[33] arguing that "[w]e need to understand how and why IO preferences diverge from state preferences, not just empirically but also theoretically."[34] They explicitly pose a more sociologically oriented alternative to the micro-rationalist model drawn from principal-agent theory, seeking instead to make sense of relative institutional autonomy on the basis of the normative status and epistemic authority of international organizations.

Corporate and contractual approaches are not mutually exclusive, but there are important differences that are worth examining. The institutional agents in principal-agent theory as applied in international relations are actors as well. They are usually actors endowed with rational cognition, albeit of a narrow, micro-rational sort, as we

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[32] See, e.g., Mearsheimer, *The Tragedy of Great Power Politics*; Hans Morgenthau, *Politics among Nations: The Struggle for Power and Peace*, Revised 5th ed. (New York: Alred A. Knopf, 1978 [1948]); Randall L. Schweller, *Unanswered Threats: Political Constraints on the Balance of Power* (Princeton: Princeton University Press, 2006). See also contributions in Steven Lobell, Norrin M. Ripsman, and Jeffrey W. Taliaferro, eds., *Neoclassical Realism, the State, and Foreign Policy* (Cambridge: Cambridge University Press, 2009). For realists, structure is mostly constraining, rather than both constraining and enabling. See Michael Barnett and Raymond Duvall, "Power in International Politics," *International Organization* 59 (2005). Debates about whether Hobbes was a "realist" aside, his incisive take on uncertainty can be found in his concept of war: "For as the nature of Foule weather, lyeth not in a showre or two of rain; but in an inclination thereto of many dayes together: So the nature of War, consisteth not in actuall fighting; but in the known disposition thereto, during all the time there is no assurance to the contrary." Thomas Hobbes, *Leviathan* (London: Penguin Books, 1968 [1651]), Ch.13, 185-86. Spellings and capitalizations are in the original.

[33] Barnett and Finnemore, *Rules for the World*.

[34] Barnett and Finnemore, *Rules for the World, 4*.

have seen. They are also conceptually subservient to their principals, despite some efforts to base relative institutional autonomy on principal-agent theory. Strategies employed by principals, including monitoring, delineation, sharing, and reversibility,[35] can greatly water down any discretion and independence institutional agents enjoy. The term *subcontractors* has thus been used in this work to describe actors so conceived in order to highlight not only the contractual, but also the hierarchical nature of relationships of delegation. In addition to subservience, interest homogeneity is also a problem in PA theory.[36]

Might a bureaucratic/organizational actor model provide the theoretical ground for institutional autonomy? If it does not appeal to a kind of hierarchical delegation, as rational institutionalism does, what are some of the reasons that may allow scholars to theorize institutions or organizations as relatively autonomous actors? Building on insights from sociological institutionalism, Barnett and Finnemore have argued that:

> Missing from [principal-agent analysis…] is a clear a priori specification of what IOs want in…interactions with states. Why would IOs ever want anything other than what their state principals want?...Principal-agent dynamics are fueled by the disjuncture between what agents want and what principals want…IR theory provides us with interests only for states, and since IOs are created by

[35] See Cary Coglianese, "Globalization and the Design of International Institutions," in *Governance in a Globalizing World*, ed. J. Donahue and J. Nye (Washington, D.C.: Brookings Institution Press, 2000); Cary Coglianese and Kalypso Nicolaïdis, "Securing Subsidiarity: The Institutional Design of Federalism in the United States and Europe," in *The Federal Vision: Legitimacy and Levels of Governance in the United States and the European Union*, ed. K. Nicolaïdis and R. Howse (Oxford: Oxford University Press, 2001); Christopher S. Marcoux, "Autonomous Actors or Faithful Agents?" *International Studies Review* 9 (2007).

[36] The issues of long delegation chains and heteronomy have already been highlighted in Chapter Four.

> states and their mission statements are written by states, it is not at all clear how an independent set of IO preferences might be derived.[37]

They have raised an important point in suggesting that principal-agent theory is hard pressed to establish two different sets of interests despite, as we have seen, appeals to concepts such as agentic "slacking." Their argument is that the bureaucratic nature of international organizations ought to be highlighted. "Bureaucracies," they argue, "are not just servants to whom states delegate. Bureaucracies are also authorities in their own right, and that authority gives them autonomy vis-à-vis states, individuals, and other international actors."[38] As bureaucracies, international organizations have four central features: *hierarchy, continuity, impersonality*, and *expertise*. Bureaucratic actors are hierarchical in terms of organization, staffed by bureaucrats and experts who manage repetitive tasks in impersonal settings, and who tend to share a bureaucratic culture according to which problems are identified and solved in particular ways.[39]

The sources of autonomy-grounding authority can be multiple. Authority, Barnett and Finnemore argue, can depend on the types of missions organizations pursue, and the ways they pursue them. In contemporary international politics, progressive, liberal goals such as protecting human, individual or minority rights, and the advancement of democratic deliberation processes, are examples from which

[37] Barnett and Finnemore, *Rules for the World*, 4. Barnett and Finnemore, *Rules for the World: International Organizations in Global Politics*, 4.
[38] Barnett and Finnemore, *Rules for the World*, 5.
[39] Barnett and Finnemore, *Rules for the World* Ch.2.

some scholars believe international institutions and organizations can draw varying degrees of credibility and authority.[40] As bureaucratic actors, international organizations are said to try to be non-political actors, and so act in "rational, technocratic, impartial, and nonviolent," and because bureaucratic actors are charged with translating sometimes abstract and philosophical goals into concrete steps and actions, they have to modify and interpret what they have received from their designers.[41]

As we have seen, perceived legitimacy and credibility are important for the authority and autonomy of international institutions and organizations. This more sociologically oriented institutionalist perspective stands in contrast to the rationalist institutionalism examined in Chapter Four, though the relationship between the two need not be antagonistic.[42] From a normative or sociological perspective, as March and Olsen have argued,

> [t]here are constitutive rules and practices prescribing appropriate behavior for specific actors in specific situations. There are structures of meaning, embedded in identities and belongings: common purposes and accounts that give direction and meaning to behavior, and explain, justify, and legitimate behavioral codes. There are structures of resources that create capabilities for acting.[43]

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[40] Barnett and Finnemore, *Rules for the World*. See also Michael Barnett and Martha Finnemore, "The Power of International Organizations," in *Power and Global Governance*, ed. M. Barnett and R. Duvall (Cambridge: Cambridge University Press, 2005). Keohane, Macedo, and Moravcsik, "Democracy-Enhancing Multilateralism."

[41] Barnett and Finnemore, *Rules for the World*, 5, Ch.2.

[42] Cf. James D. Fearon and Alexander Wendt, "Rationalism v. Constructivism: A Skeptical View," in *Handbook of International Relations*, ed. W. Carlsnaes, T. Risse, and B. Simmons (London: Sage, 2002).

[43] James G. March and Johan P. Olsen, "Elaborating the 'New Institutionalism'," in *The Oxford Handbook of Political Science*, ed. R. Goodwin (Oxford: Oxford University Press, 2009), 159.

The sociological institutionalism in Barnett and Finnemore's work builds on these and other normative and social insights, but takes on a more corporate character as it specifies and analyzes the conditions where the normative self-understandings of bureaucratic/organizational actors, combined with the impersonal authority, organizational expertise, and liberal goals they are said to have, underwrite an institutional ontology that is supposed to confer relative autonomy on IOs.

5.2.3 Corporate Agency?

Corporeal imaginaries are important in legal and political thought, and also in contemporary international relations theory, but even for Hobbes, the sovereign is still only an artificial man, just as for Marshall, the personhood of corporations is still only a fiction, existing only in law, and designed to grant corporate entities certain rights and capacities. Most international relations scholars who subscribe to unitary or rational actor models go as far as assuming states to be acting *as if* they were human beings, and no further.[44] While the unitary actor assumption has been central to some approaches in international relations theory, it was largely unexamined until recent years,[45] with Wolfers's justification for treating states as corporate actors being

[44] Cf. Dale Copeland, "The Constructivist Challenge to Structural Realism," *International Security* 25 (2000).
[45] See some of the references in footnote no.11 for debates in recent years.

an earlier exception in the literature.[46] While the bureaucratic actor model advanced by Barnett and Finnemore does not simply assume that international organizations are actors on instrumentalist grounds, their justifications for treating them as actors, as far as can be discerned, certainly do not see them as "real" actors. So that is a question that has been left open. Irrealism regarding the ontology of collectivities could invite problems regarding causal powers and autonomy. The pragmatic, almost atheoretical, stance, can undermine non-reductive analysis in international relations by making it "vulnerable to unit-level theorists who counter that only individuals and social groups exist, and that therefore processes within the state must be the theoretical focus."[47] There is a need for a philosophically realist theory of emergent entities like states and institutions, *but* this is not the same as, and should not be conflated with, a need for an *anthropomorphic* theory of these collectivities. The relationship between agency and acting and causal powers on the one hand, and "being human" on the other, is extraneous and not particularly helpful.[48]

Within international relations theory, Wendt has argued that states be considered real actors, to be given "bodies" and to which "we can legitimately attribute anthropomorphic qualities like desires, beliefs, and intentionality," and whose "life" is sustained by "intrinsic motivational dispositions or 'national

[46] Arnold Wolfers, *Discord and Collaboration: Essays on International Politics* (Baltimore: Johns Hopkins University Press, 1962), 8-9.
[47] Copeland, "The Constructivist Challenge to Structural Realism," 198.
[48] See also a discussion in Wight, "State Agency: Social Action without Human Activity?"

interests.'"[49] Building on this real corporate model, the notion, also put forward by Wendt, of the state as a *superorganism*—a homeostatic system with a spatiotemporal specificity, "made up of individuals who do not immediately die if the collective is destroyed"—attempts to go even further in establishing real corporate agency.[50] The superorganic argument seeks to make a definitive break with the notion that the state only acts or is treated *as* a person, arguing that the state *is* indeed a real person, albeit a peculiar kind of person, namely, a superorganic "person." A superorganism is defined as "a collection of single creatures that together possess the functional organization implicit in the formal definition of organism."[51] The details of the superorganic argument about corporate agency need not detain us here, however, as the argument has been rendered moot in part because the main proponent himself has retreated from the view.[52] Be that as it may, it would be a mistake to imply that scientific or philosophical realists would necessarily subscribe to the superorganism argument, or that this argument exhausts realism about causal entities and powers.[53]

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[49] Wendt, *Social Theory of International Politics*, 197.
[50] Wendt, "The State as Person in International Theory," 310. Though see also Alexander Wendt, "Flatland: Quantum Mind and the International Hologram," in *New Systems Theories of World Politics*, ed. M. Albert, L.-E. Cederman, A. Wendt (New York and Basingstoke, UK: Palgrave Macmillan, 2010). Wendt appears to have distanced himself from this view.
[51] David Sloan Wilson and Elliott Sober as quoted in Wendt, "The State as Person in International Theory," 309.
[52] Wendt, "Flatland: Quantum Mind and the International Hologram," 281-82. Or, perhaps he was the only one, at least in IR. I am referring only to the *superorganic* argument, and not to organic or corporeal arguments.
[53] This seems to be the view in Wendt, "Flatland: Quantum Mind and the International Hologram," 281. In addition, Wendt had suggested that collective intentionality and state personhood could be linked through the concept of inference to the best explanation (IBE). On IBE, see Fred Chernoff, "Scientific Realism as a Meta-Theory of International Politics," *International Studies Quarterly* 46 (2002): 193-94; Wendt, *Social Theory of International Politics*, 62-63.

Furthermore, the abandonment of the superorganic argument about second-order entities is a separate issue from the search for a philosophically realist theory of second-order entities.[54] The main culprit of obfuscation again seems to be the anthropocentric equation of causal powers with "being human."

Wolfers's view in *Discord and Collaboaration* defends treating state actors in corporeal terms, which is not unproblematic, but it also provides good reasons as to why they should not be reduced to individuals:

> Not only do men act differently when engaged in pursuing what they consider the goals of their "national selves," but they are able to act as they do only because of the power and influence generated by their nations organized as corporate bodies. Therefore, only when attention is focused on states, rather than on individuals, can light be thrown on the goals pursued and means employed in the name of nations and on the relationships of conflict or co-operation, of power competition or alignment that characterize international politics.[55]

Aside from the identification of the capacity to act with being "corporate bodies" (again), Wolfers's position is reasonable. Individuals, when placed in certain roles and positions, act accordingly, and because the structure in which they act so impinges on their action, no direct equivalence can be established between the actors as individuals, and the structurally embedded actors. But this line of argument could be pursued

[54] See, e.g., a (philosophically) realist and non-reductive alternative that sees states as "institutional ensembles" as discussed in Bob Jessop, *State Theory: Putting the Capitalist State in Its Place* (Cambridge: Polity Press, 1990); Koivisto, "State Theory in International Relations: Why Realism Matters." See also Wight, "State Agency: Social Action without Human Activity?" Non-scientific realist alternatives that see the state as real entities but not people can also be found in, e.g., Franke and Roos, "Actor, Structure, Process."

[55] Wolfers, *Discord and Collaboration: Essays on International Politics*, 8-9.

further, in that these structures themselves have causal powers and real effects, that they may be organizationally dependent—or "supervene"—on individuals, but for all intents and purposes are ontological entities in and of themselves, to be considered apart from the individuals, even structurally embedded individuals.

As we have seen, there are at least two main corporate approaches; both hold that organized collective entities in world politics—states and international institutions—are actors of some kind. If states are theorized to be actors in world politics that have identities and preferences, it is conceivable, with relevant considerations being taken into account, that international institutions can be analyzed likewise. One of these views treats such actors as fictitious, legal, persons, whereas the other goes beyond this and argues that they really are people. The artificial/instrumental view and the superorganic view both have something to offer, but each of them is objectionable in some key respects: the former acknowledges the human fascination and identification with bodies, including bodies politic, but stands on shaky ground for articulating an ontological position wherein something that is held to be an artificial being—something that, strictly speaking, does not even exist—is somehow capable of producing real causal effects; the latter is consistent in postulating the reality of these entities in the social world in virtue of their effects, but is wedded to an anthropocentrism that connects causal efficacy to having human-like qualities.

Works by scholars as diverse as Schmitt, Kantorowicz, Walzer, Luhmann, and Agamben have suggested that older politico-theological constructs, especially the undying fictional corpus, have been secularized and transplanted to modern political thought.[56] Although thinking in corporeal terms was historically important and still has a hold on the popular imagination, modern political communities have gradually been "disincorporated" or "desubstantialized," or divested of purported corporeality.[57] Conceptually, the "corporate solutions" allow second-order entities such as states and international institutions to acquire the standing and competencies normally reserved for human actors, but it also means that such entities are in a sense forced to be (or rather treated as) human in order to have their causal influence recognized, an arguably anthropocentric move that is understandable, but unnecessary and misleading.[58] Acting in the world is not exclusive to human beings; non-human

[56] Schmitt argues that all concepts of state theory are in fact secularized theological concepts. Carl Schmitt, *Politische Theologie: Vier Kapitel zur Lehre von der Souveränität* (München und Leipzig: Duncker & Humbolt, 1922), 37. For a similar point, see also Niklas Luhmann, *Soziale Systeme: Grundriß einer Allgemeinen Theorie* (Berlin: Suhrkamp, 1988 [1984]), 274. Similarly, Kantorowicz, argues that: "It is evident that the doctrine of theology and canon law, teaching that the Church, and Christian society in general, was a '*corpus mysticum* the head of which is Christ,' has been transferred by the jurists from the theological sphere to that of the state the head of which is the king." Kantorowicz, *The King's Two Bodies: A Study in Mediaeval Political Theology*, 15. Walzer likewise has noted that "the body politic has a pre-Christian history and a post-Christian appeal." Michael Walzer, *Regicide and Revolution: Speeches at the Trial of Louis XVI* (New York: Columbia University Press, 1992), 22. See also Agamben, *Homo Sacer: Sovereignty Power and the Bare Life*; Agamben, *The Kingdom and the Glory: For a Theological Genealogy of Economy and Government*.

[57] See discussions in Claude Lefort, *The Political Forms of Modern Society: Bureaucracy, Democracy, Totalitarianism* (Cambridge: Polity Press, 1986), 302-03. William E. Scheuerman, *Between the Norm and the Exception: The Frankfurt School and the Rule of Law* (Cambridge, Mass.: MIT Press, 1994), 179-81.

[58] See Neumann, "Beware of Organicism: The Narrative Self of the State."; Schiff, "'Real'? As If! Critical Reflections on State Personhood."; Wight, "State Agency: Social Action without Human Activity?" Franke and Roos, "Actor, Structure, Process."

beings can influence outcomes in the social world as well.[59] Being human is not a necessary condition for causal influence,[60] and second-order entities need not themselves be anthropomorphized before their relative autonomy and causal powers are established and analyzed.

5.3 Organizational Emergence and Complexity

What properties do international institutions possess that might make them possible objects of knowledge for us?[61] What might make international institutions emergent entities or configurations? If international institutions and organizations have real causal influence in world politics, but are not "people," or tools or subcontractors who simply do the bidding of others, then what are they and how can they be theorized? These are key questions that concern the ontological status of international institutions, and how that shapes the nature and scope of institutional explanation.[62] It is a question which suffuses this research project, and which has been given more definite expression in the previous chapter. By this point, the critique of ontological and analytical forms of reductionism, combined with a positive

[59] Many insightful examples can be found in Jared Diamond, *Guns, Gems, and Steel* (London: Jonathan Cape, 1997).
[60] This is a broader notion than acting, and less behavioral in meaning.
[61] Here I am paraphrasing Bhaskar by replacing "societies" with "international institutions." Roy Bhaskar, *The Possibility of Naturalism: A Philosophical Critique of the Contemporary Human Sciences*, 3rd ed. (London: Routledge, 1998 [1979]), 25.
[62] As mentioned before, I use "institutional explanation" to refer to analysis that invokes causally efficacious institutions; institutionalism is a kind of institutional explanation in this sense.

argument in defense of social emergence, and a reappraisal of some key approaches to international institutions, have allowed key concepts—some already examined, and some still to be discussed—to be more directly woven into a theory of emergence about international institutions.

It is argued that an international institution is emergent from, dependent on, but irreducible to its components, or to the conditions of its crafting or contracting. Its relative autonomy is derived from organizational and temporal emergence, with downward regulatory forces providing the glue that maintains its cohesiveness even as new interests, agendas, and capacities are developed, and as it evolves through time. It also extends in space through its ability to exercise causal powers in multiple locations simultaneously, and through its necessary implication in non-local relations and complexes, brought on in part by the increasing complexity of a world that is undergoing time-space compression, intensified interactions, and functional differentiation.

In the remaining sections of the chapter, these distinct but related theses regarding the nature of international institutions, thematized very briefly above, are brought into sharper relief and elaborated which, when taken together, may serve as a basis for theorizing international institutions as emergent, and for reconciling the tension between design and autonomy. These theses are: (1) *organizational emergence and complexity*, (2) *emergence through time*, and (3) *non-locality and the distribution of causal powers*. It should be noted that they often are mutually

reinforcing in fact, and their separate treatment here is for ease of explication more than anything else.[63]

One of the key features of organized social forms and second-order systems is that they are *emergent*: they are comprised of individuals directly or indirectly, but their *organization*—in the broader sense of structure or arrangement of parts—reaches a level of complexity that makes it resistant to reductive analysis in ontological and analytical terms.[64] As earlier chapters have established, they are more than simple direct aggregations of parts, but are rather sets of "interrelated, intercooperating or interconflicting parts creating through their interaction [and relations] new system properties which do not exist in a loose collection of individual objects."[65] If that is the case, then, as P. W. Anderson argued, the reductionist enterprise "breaks down when confronted with the twin difficulties of scale and complexity…[and] at each level of complexity entirely new properties appear, and the understanding of new behaviors requires research which…is as fundamental in its nature as any other."[66]

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[63] Some of these features are not exclusive to international institutions, but are shared in common with other second-order entities or systems, of which international institutions are a form.
[64] The term "entities" will be problematized and explained below. Extensions of social emergence to cover international institutions are covered in this chapter.
[65] Vladimír Majerník, "Systems-Theoretical Approach to the Concept of Organization," in *Systems: New Paradigms for the Human Sciences*, ed. G. Altmann and W. Koch (Berlin: Walter de Gruyter, 1998), 126. See also William C. Wimsatt, "Aggregativity: Reductive Heuristic for Finding Emergence," *Philosophy of Science* 64 (1997).
[66] P. W. Anderson, "More Is Different: Broken Symmetry and the Nature of the Hierarchical Structure of Science," *Science* 177 (1972): 393.

This deflates not just intertheoretic, but also ontological and analytical forms of reductionism, to say the least.

International institutions are similar to other second-order entities in being emergent complexes or entities.[67] In dealing with international institutions, we should bear in mind that they are circumscribed systems, systems that are nested in still other systems and networks, e.g., social and international ones, even as they are formed from individuals or collections of individuals. The folding of disparate competencies, types, roles and so on into each level of organization and within each hub or domain increases organizational complexity, and can create role strain and even induce autonomy. Padgett and Powell have argued that these are effects arising from "topological overlay."[68] The vertical organizing template of levels begins to blend into considerations of memberships and causal/application domains.[69] The

[67] They can be different in other respects. For example, international institutions do not command nationalist loyalty as nation-states do. However, such a *possibility* should not be dismissed out of hand. It is conceivable that a supranational institution can advance to such a stage where it begins to command loyalty of a similar sort. The European Union and the Union of South American Nations (UNASUR), for example, have been moving in such a direction, but even so, they still seem to be quite far from that stage. Loyalty, per se, may not be the key litmus test, however.

[68] On the folding of roles, see, e.g., John F. Padgett and Walter W. Powell, "The Problem of Emergence," in *The Emergence of Organizations and Markets*, ed. J. Padgett and W. Powell (Princeton, NJ: Princeton University Press, 2012). Padgett also argues that "potentially many action-capacities or skills can reside in individuals. Hence individuals potentially can partake in many different organizational tasks." John F. Padgett, "The Emergence of Simple Ecologies of Skill: A Hypercycle Approach to Economic Organization," in *The Economy as an Evolving Complex System II*, ed. B. Arthur, S. Durlauf, D. Lane (Reading, Mass.: Addison-Wesley, 1997), 201. On type and role identities, see Wendt, *Social Theory of International Politics*.

[69] On memberships of second-order entities, see Buzan, *From International to World Society? English School Theory and the Social Structure of Globalisation*, 188. Buzan and Albert, "Differentiation: A Sociological Approach to International Relations Theory." On domains (of application), see David A.

international system has as its "parts" states and other actors in the international arena. International institutions and organizations have members, as well as institutional insiders who exercise influence and power over institutional outsiders.[70] It is indeed instructive to look at such insiders as a "relevant population" for analysis, but while these insiders powerfully shape the institutions of which they are a part, the *exercise* of institutional power cannot be reduced to the behavior of these insiders because institutions enable, constrain, and also reconfigure the exercise of that power.

It may be useful to think of causal influence as both *extending downwards* through levels and *rippling outwards* through layered clusters and domains. International institutions, as emergent structures or constellations, can reorganize

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Baldwin, "Power Analysis and World Politics: New Trends Versus Old Tendencies," *World Politics* 31 (1979): 163; David A. Baldwin, "Power and International Relations," in *Handbook of International Relations*, ed. W. Carlsnaes, T. Risse, and B. Simmons (Thousand Oaks, CA: SAGE, 2002); Morton A. Kaplan, *System and Process in International Politics* (New York: John Wiley & Sons, 1957); Harold D. Lasswell and Abraham Kaplan, *Power and Society: A Framework for Political Inquiry* (New Haven, CT: Yale University Press, 1950). See also Barnett and Duvall, "Power in International Politics," 68; Padgett and Powell, "The Problem of Emergence." Barbara Koremenos, Charles Lipson, and Duncan Snidal, "The Rational Design of International Institutions," *International Organization* 55 (2001). Many of these scholars are referring to power's domains of application. In a similar vein, I am using the term to refer to an institution's domains of causal influence. For example, a language's "domain" would include members of that linguistic group and also foreigners who speak the language, just as the "domain" of the Ribbentrop-Molotov Pact, as an instance of institutionalized (and expansionist) cooperation, would include Germany and the Soviet Union, and also affected nations (but only Germany and the Soviet Union were what Moe would call the institutional insiders). And here an application domain's power connotations return. Havel elaborates on a more technical sense of causal domains, and is "generalizing" levels to domains. I think it is a useful concept, and I do not think *levels* and *domains* need be opposed to one another, so I have used both terms (talk of levels is prevalent in the natural and social sciences and in philosophy). Ivan M. Havel, "Causal Domains and Emergent Rationality," in *Rationality and Irrationality. Proceedings of the 23rd International Wittgenstein Symposium*, ed. B. Brogaard, and B. Smith (Vienna: 2001).

[70] On *membership properties* and the irreducibility of social phenomena, see Brian Epstein, "When Local Models Fail," *Philosophy of the Social Sciences* 38 (2008). On the power of institutional insiders, see Moe, "Power and Political Institutions." I will return to the issue of institutional insiders briefly in Section 5.6.

what Kontopolous has called the *possibility space*,[71] marshalling material and normative resources in novel ways, and setting up the conditions for different competencies, properties, and propensities. Thus far, *international institutions* has been used as a broad umbrella term in this work, and the term *entities* has often been used to describe them, ranging from organized entities as well as admittedly less concrete but still structured relations.[72] Wight, for example, has argued that organizations can be considered structures, with people occupying positions and roles.[73] To borrow Bourdieu's concept, they can be viewed as "structured structures predisposed to function as structuring structures."[74] In other words, international institutions can be (1) organized and structured through the complex arrangement of their components, members, or domains, (2) capable of structuring and regulating their components, members, or domains,[75] (3) and are themselves structures that are

[71] Cf. Kyriakos M. Kontopoulos, *The Logics of Social Structure* (Cambridge: Cambridge University Press, 1993), 39. He is discussing emergence and structure, but not international institutions in particular.
[72] Though I have used configurations, relations, and other less "concrete" terms as well.
[73] Anthony Giddens, *The Constitution of Society: Outline of the Theory of Structuration* (Berkeley & Los Angeles: University of California Press, 1984), 170; Wight, *Agents, Structures, and International Relations: Politics as Ontology*, 203. It is worth pointing out that individual actors, at any given time, are confronted with pre-established social forms. See, e.g., Bhaskar, *The Possibility of Naturalism: A Philosophical Critique of the Contemporary Human Sciences*, 34-35. In Giddens's conception also, "structure has always to be conceived of as a property of social systems, 'carried' in reproduced practices embedded in time and space." Giddens is opposed to seeing emergent entities in their own right, however, in part due to human beings' physical constraints. See Giddens, *The Constitution of Society: Outline of the Theory of Structuration*, 170, 72.
[74] Pierre Bourdieu, *The Logic of Practice*, trans. R. Nice (Stanford, CA: Stanford University Press, 1990 [1980]), 53. See also Kontopoulos, *The Logics of Social Structure*, 38; Wight, *Agents, Structures, and International Relations: Politics as Ontology*, 203.
[75] I use "regulate" in a sense similar to that adopted in such works as W. Ross Ashby, *Design for a Brain: The Origin of Adaptive Behaviour* (New York: Wiley, 1960 [1952]); Yaneer Bar-Yam, Dion Harmon, and Benjamin de Bivot, "Systems Biology: Attractors and Democratic Dynamics," *Science*

emergent from but irreducible to these components. When the level of organizational complexity is high, communication, feedback, and downward regulating forces that winnow on a plurality of individual goals, agendas, and actions are critical in holding an institution or organization together. "Communication," as Deutsch argued, "is the cement that makes organizations."[76] Different system architectures can produce different ways of regulating, structuring, coordinating parts and members, producing highly varied institutional orders and characters of international political dynamics. For example, different organizing principles of unipolar, bipolar, multipolar, imperial, and hegemonic systems have been analyzed in the field of international relations, especially by scholars who work within different structural traditions.[77] If even

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20 (2009); Karl W. Deutsch, *The Nerves of Government: Models of Political Communication and Control* (New York: Free Press of Glencoe, 1963); Kaplan, *System and Process in International Politics*; Robert B. Laughlin and David Pines, "The Theory of Everything," in *Emergence: Contemporary Readings in Philosophy and Science*, ed. M. Bedau and P. Humphreys (Cambridge, MA: MIT Press, 2008). See also Chapter Three.

[76] Deutsch, *The Nerves of Government: Models of Political Communication and Control*, 77. Also see Chapter Three. See also Buzan, *From International to World Society? English School Theory and the Social Structure of Globalisation*, 188.

[77] See, e.g., Dale Copeland, *The Origins of Major War* (Ithaca, NY: Cornell University Press, 2000); Robert Gilpin, *War and Change in World Politics* (Cambridge: Cambridge University Press, 1981); Ikenberry, *After Victory: Institutions, Strategic Restraint, and the Rebuilding of Order after Major Wars*; Ikenberry, *Liberal Leviathan: The Origins, Crisis, and Transformation of the American World Order*; Mearsheimer, *The Tragedy of Great Power Politics*; George Modelski and William R. Thompson, *Seapower in Global Politics, 1494-1993* (Seattle: University of Washington Press, 1988); Daniel Nexon and Thomas Wight, "What's at Stake in the American Empire Debate," *American Political Science Review* 101 (2007); Randall Schweller, *Deadly Imbalances: Tripolarity and Hitler's Strategy of World Conquest* (New York: Columbia University Press, 1998); Schweller, *Unanswered Threats: Political Constraints on the Balance of Power*; Waltz, *Theory of International Politics*.

simpler structures of systems at a lower level can be highly complex,[78] then complexity is most assuredly a hallmark of international institutions.

Increasing environmental complexity induces specialization or functional differentiation, as manifested in the diversity and diffusion of institutional forms. International institutions, broadly construed, can be arrayed on a spectrum according to their degree of formalization, among other criteria, thereby revealing a variety of institutional and social forms, including organizations, structures, and networks.[79] At one end are "institutions" with low levels of formalization, such as social institutions, generative structures, and *collections* of norms. The emphasis here is on their structured and interrelated nature, rather than on *singular* behavioral proscriptions or standards, where the terms "norms" and "rules" would be more in keeping with

[78] Cf. Stephen Wolfram, "Undecidability and Intractability in Theoretical Physics," in *Emergence: Contemporary Readings in Philosophy and Science*, ed. M. Bedau, and P. Humphreys (Cambridge, MA: MIT Press, 2008), 388.

[79] Many other scholars have also defined institutions broadly. See, e.g., Keohane, Macedo, and Moravcsik, "Democracy-Enhancing Multilateralism." John Duffield, "What Are International Institutions?" *International Studies Review* 9 (2007); Dave Elder-Vass, "Integrating Institutional, Relational and Embodied Structure: An Emergentist Perspective," *The British Journal of Sociology* 59 (2008); Andreas Hasenclever, Peter Mayer, and Volker Rittberger, *Theories of International Regimes* (Cambridge: Cambridge University Press, 1997), Ch.2; Beth A. Simmons and Lisa L. Martin, "International Organizations and Institutions," in *Handbook of International Relations*, ed. W. Carlsnaes, T. Risse, and B. Simmons (London: Sage, 2002). Duffield defines international institutions as "relatively stable sets of related constitutive, regulative, and procedural norms and rules that pertain to the international system, the actors in the system…and their activities. Any particular international institution need not contain all of these elements." Ibid., 7-8. Abbott and Snidal's "governance triangle" maps out the myriad firms, NGOs, and "regulatory standard-setting" (RSS) schemes in global governance. Kenneth W. Abbott and Duncan Snidal, "The Governance Triangle: Regulatory Standards Institutions and the Shadow of the State," in *The Politics of Global Regulation*, ed. W. Mattli and N. Woods (Princeton, NJ: Princeton University Press, 2009), 50.

existing terminological usage.[80] Examples here include rising institutions regulating global governance, humanitarianism, and the conduct of war, including injunctions against inflicting civilian casualties,[81] as well as sovereignty understood as an organizing principle or "grammar" of the modern international system.[82] At the other end of the spectrum would be formalized "institutions" such as international governmental and non-governmental organizations, supranational organizations, military alliances and so on. The North Atlantic Treaty Organization (NATO), the World Trade Organization (WTO), and the European Union (EU) are examples of institutions with high degrees of formalization and more concrete expressions. In between these two ends, series of agreements and treaties, as well as less formalized or *ad hoc* alliances, can be located. The Concert of Europe after the end of the Napoleonic Wars, regional security complexes,[83] and still less institutionalized

[80] See a discussion in Martha Finnemore and Kathryn Sikkink, "International Norm Dynamics and Political Change," *International Organization* 52 (1998): 891.
[81] See, e.g., Michael Barnett, "Evolution without Progress? Humanitarianism in a World of Hurt," *International Organization* 63 (2009); Colin H. Kahl, "In the Crossfire or the Crosshairs? Norms, Civilian Casualties, and U.S. Conduct in Iraq," *International Security* 32, no. 1 (2007). See also contributions in Michael Barnett and Raymond Duvall, "Power in Global Governance," ed. M. Barnett and R. Duvall (Cambridge: Cambridge University Press, 2005).
[82] On sovereignty as an organizing principle, institution, or grammar, see Robert Jackson, *Sovereignty: Evolution of an Idea* (Cambridge: Polity Press, 2007); Stephen D. Krasner, *Sovereignty: Organized Hypocrisy* (Stanford: Stanford University Press, 1999), 46; John Gerard Ruggie, "Territoriality and Beyond: Problematizing Modernity in International Relations," *International Organization* 47 (1993).
[83] Derrick Frazier and Robert Stewart-Ingersoll, "Regional Powers and Security: A Framework for Understanding Order within Regional Security Complexes," *European Journal of International Relations* 16 (2010).

bandwagoning or balancing coalitions are examples.[84] Such coalitions, however, should be distinguished from the less formalized but more primary, underlying, configurations of balance of power.[85] Before its transformation into the more formalized WTO with greater enforcement mechanisms, the General Agreement on Tariffs and Trade (GATT) inhabited this conceptual space, being a series of agreements and negotiations concerning international trade with less structure and organization.

A lower degree of formalization tends to correspond to a higher level of abstractness, while a higher level of formalization tends to indicate more concrete organizational form. For example, the generative structures of sovereignty or of anarchy, or the more contextual rules in a prisoner's dilemma game or in a suasion game resemble complexes of rules or relations more than entities, while the United Nations, NATO, the WTO and the like are more organized than formless, though

[84] See Kai He, "Institutional Balancing and International Relations Theory: Economic Interdependence and Balance of Power Strategies in Southeast Asia," *European Journal of International Relations* 14, no. 3 (2008); Charles A. Kupchan and Clifford A. Kupchan, "The Promise of Collective Security," *International Security* 20 (1995); Matthew Rendall, "Defensive Realism and the Concert of Europe," *Review of International Studies* 32 (2006). The Concert of Europe was much less institutionalized than, say, NATO is. On the Concert, see, e.g., Henry Kissinger, *Diplomacy* (New York: Touchstone, 1994), Ch.4. For ad hoc alliances and less institutionalized balancing behavior, see also the Kissinger volume, and Paul Kennedy, *The Rise and Fall of the Great Powers* (New York: Random House, 1987); Mearsheimer, *The Tragedy of Great Power Politics*; Randall Schweller, "New Realist Research on Alliances: Refining, Not Refuting, Waltz's Balancing Proposition," *American Political Science Review* 91 (1997).

[85] For an overview of some of the distinctions and of the nested nature of international institutions, see Buzan, *From International to World Society? English School Theory and the Social Structure of Globalisation*, Ch.6.

there is not to deny that they, too, are embedded in ensembles of less formal institutions and structures. Security communities, for example, are nested in and characterized by "shared understandings, transnational values, and transaction flows" through the development and evolution of ties over time.[86] Ontological abstractness is a matter of degree, however, as even the state is quite abstract, though there is nothing abstract about its effects or what it can do.

The ontological status of international institutions is more than a function of their crafting or contracting. To think that crafting or contracting conditions are analytically determinant would be to commit the genetic fallacy whereby the origins of *X* are presented as (necessary) grounds to determine *X*. For instance, while religions might have historical roots in primitive superstitions and fears, that does not necessarily mean that they are analytically reducible to their roots.[87] The focus on the instrumental nature of international institutions makes institutional explanation susceptible to the genetic fallacy, even though, ironically, such an account often simultaneously overlooks important power dynamics in international politics that are

[86] Emanuel Adler and Michael Barnett, "Security Communities in Theoretical Perspective," in *Security Communities*, ed. E. Adler, and M. Barnett (Cambridge: Cambridge University Press, 1998), 4. See also other contributions in the same volume, as well as Andrej Tusicisny, "Security Communities and Their Values: Taking Masses Seriously," *International Political Science Review* 28 (2007). Perhaps not surprisingly, the concept of security communities was first developed by the cybernetic theorist Karl Deutsch and his colleagues, which was more recently revived and elaborated by Adler and Barnett. See Karl W. Deutsch, Sidney A. Burrell, and Robert A. Kahn, *Political Community and the North Atlantic Area: International Organization in the Light of Historical Experience* (Princeton, NJ: Princeton University Press, 1957).

[87] See a discussion in Jan Dejnozka, *Corporate Entity* (2007), 7. This manuscript is available for download at: http://www.members.tripod.com/~Jan_Dejnozka/corporate_entity_book.pdf.

due to institutional design. As some scholars have rightly pointed out, states and other consequential actors often do seek to exercise power and influence in and through international institutions, and they design or interact with them in view of their own agenda and interests.[88]

Further analytical steps should therefore be taken to indicate the ways in which the conditions of functionalist design or contractual delegation can be reconciled with a non-epiphenomenal view of institutions.[89] A step in such a direction would be to reinterpret and reconstruct institutional design in terms that are amenable to the multiply realizable—emergent—nature of international institutions.[90] Different institutional designs can be considered radically disjunctive ways of combining and organizing the structural arrangements of institutional parts and competencies (e.g., franchise, representational mechanisms, decision rules, mandate, and autonomy) under different strategic environments;[91] this would in turn yield different kinds and constellations of institutional structures or environments, with different properties and powers, and levels of causal influence. The emergent organization of designed institutions attains a high degree of complexity in virtue of

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[88] See, e.g., Barnett and Duvall, "Power in International Politics." Ikenberry, *After Victory: Institutions, Strategic Restraint, and the Rebuilding of Order after Major Wars*; Ikenberry, *Liberal Leviathan: The Origins, Crisis, and Transformation of the American World Order*; Moe, "Power and Political Institutions."

[89] Sometimes these conditions can even be transcended, see rest of the chapter.

[90] See a discussion of multiple realizability in Paul Humphreys, "Emergence, Not Supervenience," *Philosophy of Science* 64 (1997); Wendt, *Social Theory of International Politics*. See also Chapter Three and relevant works cited therein.

[91] See Johnston, *Social States: China in International Institutions, 1980-2000*, 31; Ronald Rogowski, "Institutions as Constraints on Strategic Choice," in *Strategic Choice and International Relations*, ed. D. Lake and R. Powell (Princeton, NJ: Princeton University Press, 1999).

the multiply realizable configurations and reconfigurations of design elements and interplay of different levels and actors, making direct inferences from the conditions of delegation to the nature and outcomes of international institutions extremely difficult.

5.4 Continuity in Operation, Emergence Through Time

John Maynard Keynes famously said that "*in the long run* we are all dead."[92] And he was right. *But in the long run, not all of our institutions are dead*. States, parties, corporations, international institutions and organizations often mitigate our spatial-temporal limitations through their generally longer time horizons. Some of the very institutions that Keynes helped to set in motion in the aftermath of the Second World War—namely, the Bretton Woods institutions—are still operating with worldwide reach. Institutional continuity may not readily draw attention to itself, but as Rosenau has argued, "if one approaches collectivities as always on the verge of collapsing into their environments, their perpetuation through time becomes an awesome sight."[93]

Institutional and social forms, by their nature, tend to be relatively enduring.[94] From informal norms and institutions, to formal international organizations,

[92] John Maynard Keynes, *A Tract on Monetary Reform* (New York: Prometheus Book, 2000 [1924]), 80. Italics in the original.
[93] Rosenau as quoted in Shapiro, *Sovereign Nations, Carnal States*, 79.
[94] March and Olsen, "Elaborating the 'New Institutionalism,'" 159. Even a work devoted specifically to "state death" acknowledges that it has basically ceased after 1945. Tanisha M. Fazal, "State Death

potentially indefinite continuity in operation can be described as an institutional fact that has no parallel in the finite life span of man.[95] Without question, the precise durations of particular institutions vary, but institutions have a tendency to self-perpetuate, due to transaction costs, different coalitional dynamics, bureaucratic pathologies, or new constituencies being developed that have an interest in the preservation of the institutions.[96] Institutional innovations and learning can also aid in efforts to adapt to changing environments, though admittedly convergence on survival adaptations is by no means a foregone conclusion. Institutional selection still takes place.[97]

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in the International System," *International Organization* 58 (2004). Of course, endurance is not universal for institutions, and the state is only one type of institution, albeit a particularly important type.

[95] Familial continuity can be indefinite, and it transcends the life spans of individual family members. However, this is already in the territory of social institutions, not of individuals. Some may claim that mortality can be considered an illness that can theoretically be treated. If that is true, individuals will have longer life spans.

[96] On why organizations, institutions, and firms reduce transaction costs, see, e.g., Ronald H. Coase, "The Nature of the Firm," *Economica* 4 (1937); Michael J. Gilligan, "The Transaction Cost Approach to International Institutions," in *Power, Interdependence, and Nonstate Actors in World Politics*, ed. H. Milner (Princeton, NJ: Princeton University Press, 2009). On coalitional dynamics, see, e.g., Moe, "Power and Political Institutions," 44. On organizational pathologies, see, e.g., Barnett and Finnemore, *Rules for the World*. Also, functionalism may at times account for the emergence of institutions, but it often does not explain why they persist long after they have become useless in relation to their (original) intended purposes. Institutional evolution is not perfectly efficient or optimal, see, e.g., Geoffrey M. Hodgson, "Evolution and Institutional Change: On the Nature of Selection in Biology and Economics," in *Rationality, Institutions, and Economic Methodology*, ed. U. Mäki, B. Gustafsson, and C. Knudsen (London: Routledge, 1993). On the creation of new constituencies that have a vested interest in an institution's continuity, see, e.g., Wolfgang Streeck and Kathleen Thelen, "Institutional Change in Advanced Political Economies," in *Beyond Continuity: Institutional Change in Advanced Political Economies*, ed. W. Streeck and K. Thelen (Oxford: Oxford University Press, 2005).

[97] On adaptation, learning, innovation, and selection, see, e.g., Richard Bean, "War and the Birth of the Nation State," *The Journal of Economic History* 33 (1973); Tessaleno Devezas and George Modelski, "Power Law Behavior and World System Evolution: A Millennial Learning Process," *Technological Forecasting and Social Change* 70 (2003); Emily O. Goldman and Richard B. Andres, "Systemic Effects of Military Innovation and Diffusion," *Security Studies* 8 (1999); David A. Lake and Angela

There is a case for relative endurance, but it should not be overstated; an individual can at times outlast a regime, an organization, or a state, especially in the narrower sense of state apparatuses. Less often can one outlast his or her linguistic community or cultural institutions, however. In general, there remains an undeniable temporal asymmetry between actors and institutions. To put the matter simply: those institutions that are persistent can live on indefinitely, outlasting many human generations. Norm life cycles, for example, can last very long indeed. Such cycles involve processes of emergence, cascade, and internalization.[98] However, the more relevant limit here may have more to do with whether there are *institutional structures* (which need not be formal organizations) in place to sustain and reproduce certain normative commitments in international society. If those conditions exist, then presumably, after internalization, a norm or rather, a *complex* of norms, i.e., institutions, can last indefinitely until displacement. Theoretically, at least, there is no

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O'Mahony, "The Incredible Shrinking State: Explaining Change in the Territorial Size of Countries," *Journal of Conflict Resolution* 48 (2004); George Modelski, "Is World Politics Evolutionary Learning?" *International Organization* 44 (1990); George Modelski, Tessaleno Devezas, and William R. Thompson, eds., *Globalization as Evolutionary Process: Modeling Global Change* (New York: Routledge, 2008); Hendrik Spruyt, *The Sovereign State and Its Competitors: An Analysis of Systems Change* (Princeton: Princeton University Press, 1994). Streeck and Thelen, "Institutional Change in Advanced Political Economies." See also contributions in Emily O. Goldman and Leslie C. Eliason, eds., *The Diffusion of Military Technology and Ideas* (Stanford, CA: Stanford University Press, 2003); Hendrik Spruyt, "The Origins, Development, and Possible Decline of the Modern State," *Annual Review of Political Science* 5 (2002); Spruyt, *The Sovereign State and Its Competitors: An Analysis of Systems Change*. "The matching of institutions, behaviors, and contexts takes time and has multiple, path-dependent equilibria. Adaptation is less automatic, less continuous, nd less precise than assumed by standard equilibrium models and it dos not necessarily improve efficiency survival." March and Olsen, "Elaborating the 'New Institutionalism,'" 166.

[98] Finnemore and Sikkink, "International Norm Dynamics and Political Change."

upper limit to institutional continuity. So if individual life spans are roughly Gaussian in nature,[99] then institutional life spans resemble "fat tails."[100]

Not exclusively, but particularly from a longer temporal perspective, international institutions can be viewed as ensembles, relations, structures, or constellations. That institutional forms (on an abstract/concrete continuum) tend to correspond to degrees of formalization (on a high/low continuum) can be made intelligible in terms of Padgett and Powell's argument, made in a collaborative work among social scientists on the emergence of organizations, that "*in the short run, actors create relations; in the long run, relations create actors*."[101] There are several ways of interpreting and extending this rather deft formulation.[102] The structural,

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[99] Thomas L. Griffiths and Joshua B. Tenenbaum, "Optimal Predictions in Everyday Cognition," *Psychological Science* 17 (2006): 768.

[100] Mandelbrot and Taleb have done much to draw attention to, and popularize, the often non-Gaussian nature of social and economic life. See, e.g., Nassim Nicholas Taleb, *The Black Swan: The Impact of the Highly Improbable* (New York: Random House, 2007). Using research strategies for studying Gaussian phenomena to study non-Gaussian ones can lead to serious errors in analysis, with serious consequences. Taking the useful concept of "normal distributions" too seriously and in the wrong places has been linked to (the rise and then) the fall of players in the high-stakes world of derivatives. Long Term Capital Management and the hedge fund manager Victor Niederhoffer (not from LTCM) may be two such examples. See John Cassidy, "The Blow-up Artist: Can Victor Niederhoffer Survive Another Market Crisis?" *The New Yorker*, 15 October 2007; Laurent L. Jacque, *Global Derivative Debacles: From Theory to Malpractice* (Singapore: World Scientific, 2010), Ch.15.

[101] Padgett and Powell, "The Problem of Emergence," 3. Emphasis in the original.

[102] When Padgett and Powell's insight is considered in the context of insights from other social scientists (see below) it becomes easier to see why the social emergence of international institutions is a central problematic in the social sciences, recalling themes from the action-environment and agent-structure debates that have seen ebbs and flows, but always pose questions to which social inquiry must provide answers, even provisional ones, either implicitly or explicitly. I cannot hope to capture all the major works on these related problematics, but a few works in international relations and in social theory are noted: Jeffrey Alexander, *Action and Its Environment* (New York: Columbia University Press, 1988); Peter Blau, *Exchange and Power in Social Life* (New York: Wiley, 1964); James S. Coleman, *Foundations of Social Theory* (Cambridge, Mass.: Harvard University Press, 1990); David Dessler, "What's at Stake in the Agent-Structure Debate?" *International Organization* 43 (1989); Martin Hollis and Steve Smith, *Explaining and Understanding International Relations*

matter-of-fact character of institutions at any given moment, and their interaction with individuals, call to mind Marx's oft-quoted observation, made in 1852, that "[m]en make their own history, but they do not make it just as they please; they do not make it under circumstances chosen by themselves, but under circumstances directly found, given and transmitted from the past."[103] Bhaskar has also noted the "necessary preexistence of social forms…[where society] is both the ever-present *condition*…and the continually reproduced *outcome* of human agency."[104] From a temporal point of view we can liken an enduring institutional structure to Archer's example of a different social structure: a demographic structure. Even assuming that "all activities were harnessed to transforming it, the (top-heavy or whatever) structure would not disappear for several generations," so any causal influence that such a

(Oxford: Clarendon Press, 1990); Talcott Parsons, *The Social System* (New York: The Free Press of Glencoe, 1951); R. Keith Sawyer, *Social Emergence: Societies as Complex Systems* (Cambridge: Cambridge University Press, 2005); Alexander Wendt, "The Agent-Structure Problem in International Relations Theory," *International Organization* 41 (1987); Wight, *Agents, Structures, and International Relations: Politics as Ontology*. There are, of course, many more works that deal with these issues in more oblique ways.

[103] Karl Marx, "The Eighteenth Brumaire of Louis Bonaparte," in *The Marx-Engels Reader*, ed. R. Tucker (New York: W. W. Norton, 1978 [1852]), 595.

[104] Bhaskar, *The Possibility of Naturalism: A Philosophical Critique of the Contemporary Human Sciences*, 34-35. See also a discussion in Jorge Rivas, "Realism. *For Real This Time*: Scientific Realism Is Not a Compromise between Positivism and Interpretivism," in *Scientific Realism and International Relations*, ed. J. Joseph and C. Wight (New York and Basingstoke, UK: Palgrave Macmillan, 2010), 218-24. An emergentist approach holds out the possibility of toning down the stark opposition posed between relations and entities by some network approaches. The debate sometimes takes the form of taking relations and transactions as units of analysis and rejecting the notion that structures can be real causal entities. The contributions of relational approaches are important and need not reject the idea that structures, especially from some temporal vantage points, can be real causal structures. See also a discussion in Elder-Vass, "Integrating Institutional, Relational and Embodied Structure: An Emergentist Perspective."

structure possesses needs to be understood "*by reference to the activities of the long dead.*"[105]

The temporal properties of institutions, and their indefinite continuity in particular, can open up possibilities for constraint as well as enablement. Sovereign bond issues on the international market present a situation where a state and its private and institutional bondholders, each with a different time horizon, are entangled in an asymmetric temporal relationship. By contracting debt, whether through long-term bond issues or short-term bonds issued periodically (the flip side of bond laddering), a state in good standing can be continuously indebted, sometimes literally through the centuries.[106] Individuals' ability to roll over bonds at maturity is rather limited compared with that of the state to issue new bonds as old ones come due.[107] On the one hand, through the binding continuity of the state, earlier generations can saddle later generations with debt loads, thereby constraining later generations' freedom of action in budgeting and other areas.[108] This entails a loss of

[105] Margaret S. Archer, *Realist Social Theory: The Morphogenetic Approach* (Cambridge: Cambridge University Press, 1995), 143. Emphasis in the original. On the same page Archer also argues that: "This demographic structure is not due to the people here present in anything other than the truistic sense."

[106] For example, the U.S. Bureau of the Public Debt under the Department of the Treasury is in charge of borrowing money for the federal government. As it makes clear on its official website, "public debt is a fact of life. The U.S. has had debt since its inception." See "Our History," ed. U.S. Department of the Treasury Bureau of the Public Debt (2011). http://www.publicdebt.ustreas.gov/history/history.htm. Assessed on 12 July 2011.

[107] Viewed differently, it can also be said that individuals' ability to contract debt indefinitely is very limited.

[108] For example, Russia did not finish repaying its Tsarist-era debt until around 2000. Of course, while Russia's regimes had changed, the more enduring "institution" of Russia as a nation-state or as a cultural-political community has remained. See Lyndon Moore, and Jakub Kaluzny, "Regime Change and Debt Default: The Case of Russia, Austro-Hungary, and the Ottoman Empire Following World

time sovereignty for future generations as they cannot be in full command of how *their* present has been structured, just as it is a loss for the present generation in relation to the earlier ones. Some options are simply off the table.[109] On the other hand, long-term debt can also be "the price of liberty" that helps to increase productivity and to "furnish new resources, both to agriculture and commerce," as Alexander Hamilton had recognized.[110] It thus enables a state to engage in long-term planning and to expand its menu of options in the present (e.g., through war bonds) and in the future (e.g. through bonds for infrastructure projects). In general, talk of levels is revealing in that the ability to access credit *tends* to fall drastically in both duration and amount as we move from states, to corporations, to individuals.[111]

Institutional persistence does not necessarily imply total stasis. On the contrary, long durations almost ensure that as people cycle in and out of organizational forms, or as they make and remake established institutions through their appropriation and usage, institutional evolution will take place. These are

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War One," *Explorations in Economic History* 42 (2005): 250-51. In the current financial crisis, Greece got a loan through Goldman Sachs, and had it masked as "sales," but in return it had to pledge "future landing fees at the country's airports." See Louise Story, Landon Thomas, Jr., and Nelson D. Schwartz, "Wall St. Helped Greece to Mask Debt Fueling Europe's Crisis," *The New York Times*, 13 February 2010.

[109] Complying with IMF conditionality in return for loans also has similar effects.

[110] Alexander Hamilton, *First Report on the Public Credit* (1790), as quoted on the official Bureau of the Public Debt website above.

[111] This is admittedly a highly simplified picture. I also recognize that some international financial entities and institutions can rival or even surpass states in borrowing power. For an analysis of the complications arising from sovereign defaults, especially in cases of regime change, see Moore and Kaluzny, "Regime Change and Debt Default." Even in these deeply disruptive situations, nation-states—though obviously not the fallen regimes—could start borrowing again soon. The "major" exception was Russia, but even in that case it was able to access the capital markets in between two to five decades, depending on how the data are interpreted—a long time from an individual perspective, but not necessarily from an institutional perspective.

primarily changes internal to the institutions themselves. But external environments and circumstances also evolve, and the pace of change for people and their immediate environments, and for institutions and *their* environments, can be quite out of sync given their different configurations and time horizons. The longer an institutional complex endures, the more likely it is that gaps will develop between itself and social, economic, political, cultural, demographic, technological, and natural environments,[112] pending the processes of innovation, diffusion, and adjustment. All of this produces very complex effects on politics and society. For example, Tan and his colleagues have shown that, over the long term, institutional evolution, political transitions, and patterns of armed conflict in China have historically dovetailed with climate change, particularly sharp declines in precipitation and/or temperature.[113] More formal organizations and state apparatuses experience similar evolution when one component group replaces the other, and when an older generation is replaced with a newer one.[114] Streeck and Thelen have identified five types of gradual yet

[112] Claus Offe, "Political Institutions and Social Power: Conceptual Explorations," in *Rethinking Political Institutions: The Art of the State*, ed. I. Shapiro, S. Skowronek, D. Galvin (New York: New York University Press, 2006), 18. See also Paul Pierson, *Politics in Time: History, Institutions, and Analysis* (Princeton: Princeton University Press, 2004), 108.

[113] Liangcheng Tan, Yanjun Cai, Zhisheng An, R. Lawrence Edwards, Hai Cheng, Chuan-Chou Shen, and Haiwei Zhang, "Centennial- to Decadal-Scale Monsoon Precipitation Variability in the Semi-Humid Region, Northern China During the Last 1860 Years: Records from Stalagmites in Huangye Cave," *The Holocene* 21 (2010). Other long term patterns and their impacts can also be gleaned from Diamond, *Guns, Gems, and Steel*.

[114] State apparatuses are distinct from the organizing rules and institutions that govern such apparatuses. Wight distinguishes between groups and organizations. Wight, *Agents, Structures, and International Relations: Politics as Ontology*, 203.

transformative change that can take place in and through institutions:[115] displacement, layering, drift, conversion, and exhaustion, made possible by defection, differential growth,[116] neglect, reinterpretation,[117] and depletion,[118] respectively.

Aspects of emergence through time complement and go beyond the usual ontological and analytical concerns with organizational levels. As Chapter Three has indicated, social emergence can be conceptualized organizationally and temporally. Relative endurance and continuity of operation are not the only temporal properties that help to render institutions emergent. Different organizational levels and institutional forms move at different speeds, so do causal forces;[119] disparate structural arrangements of parts and relations and varying degrees of organizational complexity impart to institutions different temporal properties and propensities.[120] As

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[115] Streeck and Thelen, "Institutional Change in Advanced Political Economies."

[116] For different perspectives on the effects of differential growth that complement those of Streeck and Thelen's, see Copeland, *The Origins of Major War*; Gilpin, *War and Change in World Politics*; Kennedy, *The Rise and Fall of the Great Powers*.

[117] One can also see this theme in Michael Barnett, *Empire of Humanity: A History of Humanitarianism* (Ithaca, NY: Cornell University Press, 2011); Barnett, "Evolution without Progress? Humanitarianism in a World of Hurt." Barnett and Finnemore, *Rules for the World*, especially Ch.4.

[118] This includes decreasing returns and overextension. Studies that focus on overextension and processes of rise and decline have an important part in illuminating these dynamics. In addition some of the works just cited above or by Streeck and Thelen themselves, see, e.g., Devezas and Modelski, "Power Law Behavior and World System Evolution." William H. McNeill, *The Pursuit of Power: Technology, Armed Force, and Society since A.D. 1000* (Chicago: University of Chicago Press, 1982); George Modelski, *Long Cycles in World Politics* (Seattle, WA: University of Washington Press, 1986); Modelski and Thompson, *Seapower in Global Politics, 1494-1993*; Heikki Patomäki, *The Political Economy of Global Security: War, Future Crises, and Changes in Global Governance* (London: Routledge, 2008); Jack Snyder, *Myths of Empire: Domestic Politics and International Ambition* (Ithaca, NY: Cornell University Press, 1991).

[119] Archer, *Realist Social Theory*, Ch.3.

[120] Cf. Mark A. Bedau and Paul Humphreys, "Introduction to Scientific Perspectives on Emergence," in *Emergence: Contemporary Readings in Philosophy and Science*, ed. M. Bedau and P. Humphreys (Cambridge, MA: MIT Press, 2008), 210; Paul Pierson, "Big, Slow-Moving, and Invisible: Macrosocial Processes in the Study of Comparative Politics," in *Comparative Historical Analysis in*

Scheuerman has shown,[121] the usual separation of powers in liberal democratic systems according to judicial, executive, and legislative functions is predicated upon a *temporal* schema, where the judiciary is concerned primarily with retrospective judgment,[122] the executive with contemporaneous action, and the legislature with prospective law-making. As the external environment undergoes time-space compression in the modern age, institutional designers' key assumptions about the tempo of different political institutions are thrown into disarray, leading to the privileging of the executive.[123]

Institutions evolve and often do not achieve a form that is totally in tandem with its surroundings. The pace of change can take the form of long periods of slow, gradual change, held in check by downward regulatory forces, but can accelerate in sudden bursts of revolutionary change, as described by the punctuated equilibrium

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the Social Sciences, ed. J. Mahoney and D. Rueschemeyer (Cambridge: Cambridge University Press, 2003); Pierson, *Politics in Time: History, Institutions, and Analysis*.

[121] William E. Scheuerman, *Liberal Democracy and the Social Acceleration of Time* (Baltimore, MD: Johns Hopkins University, 2004). For related issues, see also Hartmut Rosa and William E. Scheuerman, eds., *High-Speed Society: Social Acceleration, Power, and Modernity* (University Park, PA: Penn State University Press, 2009).

[122] The prime example is the concept of judicial review in the U.S., but there has also been a trend in Western European countries of adopting *ex post* constitutional review, a trend driven by participation in multilateral international institutions. See Keohane, Macedo, and Moravcsik, "Democracy-Enhancing Multilateralism," 16.

[123] On time-space compression, see Rosa and Scheuerman, ed., *High-Speed Society*; David Harvey, *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change* (Malden, MA: Blackwell Publishers, 1990), Part 3; David Held, Anthony McGrew, David Goldblatt, and Jonathan Perraton, *Global Transformations: Politics, Economics and Culture* (Stanford, CA: Stanford University Press, 1999). On the growth of the executive branch in the U.S., see, e.g., Arthur M. Schlesinger, *The Imperial Presidency* (Boston: Houghton Mifflin, 2004 [1973]); Gordon Silverstein, *Imbalance of Powers: Constitutional Interpretation and the Making of American Foreign Policy* (New York: Oxford University Press, 1997).

model in the natural sciences.[124] Accounts inspired by this model have found their way into historical and social-scientific research. For example, Rogers, drawing on Gould and Eldredge's model which stresses long periods of relative stability punctuated by short periods of rapid change, argues that military-technological changes generally proceeded in "a *series* of sequential military revolutions, each an attempt to reverse a disequilibrium introduced by the previous one."[125] His work, much like Spruyt's in political science, is an attempt to debunk the simple unilinear view of historical development. Spruyt's work on the rise of the sovereign state also employs the punctuated equilibrium model to explain the pace and source of change, though he supplements the model with Durkheim's notion of "dynamic density"—intensified transactions and communications—as the cause of the evolutionary process.[126] Padgett and Powell argue that organizational innovations can become systemic "when local network transpositions spill over or cascade through multiple-network feedback into global networks to which local networks are linked," creating non-linearity dynamics along the lines of punctuated equilibria.[127]

As we have seen, the relative endurance of institutions, though not universal, when conjoined with the disjunctive tempos among organizational levels and

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[124] Niles Eldredge and Stephen Jay Gould, "Punctuated Equilibria: An Alternative to Phyletic Gradualism," in *Models in Paleobiology*, ed. T. Schopf (San Francisco: Freeman, Cooper, 1972).
[125] Clifford J. Rogers, "The Military Revolutions of the Hundred Years War," in *The Military Revolution Debate: Readings on the Military Transformation of Early Modern Europe*, ed. C. Rogers (Boulder, CO: Westview Press, 1993), 57.
[126] Spruyt, *The Sovereign State and Its Competitors*, 12.
[127] Padgett and Powell, "The Problem of Emergence."

domains, have key implications for political and social life and its study. The flip side of continuity is that there is more time for institutional evolution, development, and change that institutional designers and principals can neither foresee nor contemplate. Unintended consequences can magnify, and Streeck-Thelen-type conditions can take hold.[128] A reductive approach in principle would suggest that given conditions at a starting point, the future states of an institution can be predicted, perhaps even fairly reliably. On the contrary, an emergentist approach would argue that even given such conditions, those future states cannot be determined in advance.[129] As institutions persist through time, therefore, they tend to be less susceptible to analysis that traces their "origins" in design and in grants of authority, rather like the diminishing illumination that comes from a camera flash as distance increases.[130] Institutions *become* relatively autonomous from these conditions.[131]

5.5 Extension in Space: Social Distance and the Distribution of Causal Powers

[128] Streeck and Thelen, "Institutional Change in Advanced Political Economies." See above.
[129] This, of course, does not prevent analysts from making educated guesses.
[130] Though these are part of an institution's history and still have varying degrees of impact on the character of the institution. This metaphor also applies to institutions as they extend in space, see below.
[131] See also Offe, "Political Institutions and Social Power: Conceptual Explorations," 18. In this connection, the notion of *time-space distanciation* is important, see Giddens, *The Constitution of Society: Outline of the Theory of Structuration*. See also Aharon Kellerman, *Time, Space, and Society: Geographical Societal Perspectives* (Dordrecht, The Netherlands: Kluwer Academic Publishers, 1989), Chs.1-2.

While international institutions have sometimes been conceived as corporate bodies, they, like states, differ from human beings not only in their ability to persist through time, but also in their capability to extend in space. Before considering the spatial properties of institutions, it is worthwhile to recall some of the constraints facing individuals that make the enabling aspects of institutions all the more meaningful. Of course, this is not to deny that institutions also have constraining effects, some of which will be discussed below. Still, at least some key parts of social science scholarship are framed in terms of the physical constraints that human beings face, and how to theorize and treat those constraints. Conceptions of those constraints can be different, however, with different implications for analysis. Giddens, for example, discusses "the indivisibility of the body, finitude of the life span and 'packing' difficulties in time-space."[132] Dahl has claimed that there is "no action at a distance."[133] Likewise, Wendt invokes the "causal completeness of physics," meaning, for instance, that there is "no such things as action at a distance, backwards causation, or ghosts." He argues that there is a way out of this quandary: by subscribing to a quantum interpretation of social science.[134]

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[132] Giddens, *The Constitution of Society: Outline of the Theory of Structuration*, 174. The previous subsection has addressed the issue of continuity, but being related issues, some of the time-space issues in regard to institutions will be considered together here.

[133] Robert Dahl, "The Concept of Power," *Behavioral Science* 2 (1957). See a discussion in Barnett and Duvall, "Power in International Politics," 47.

[134] Wendt, "Flatland: Quantum Mind and the International Hologram," 280; 297. See a further discussion of this below. He argues that action at a distance is possible, but on quantum grounds. My conception of non-locality is very different from his, or at least our solutions to the non-locality quandary are very different, even if we both end up affirming its possibility.

A moment's thought will reveal that the physical constraints confronting us are real, and the concerns that they motivate serious. We have definite time-space dimensions and hence limitations: life is short, we cannot go back in time, and while we can multi-task,[135] we simply cannot be at different places at the same time. However, consideration should be given to how the mitigation or partial transcendence of those physical limits is possible. The argument here is that institutions create the conditions of possibility for something approximating (but not quite like) these actions in social and political life that are held to be impossible from a strictly physical point of view. It should be clear that the terms are used here in more straightforward senses as foils for some of the spatial properties of second-order entities that will be underscored. However, non-locality *is* indeed theorized in the social sciences, art and philosophy, and that is the sense in which the term is used here.[136] Non-local action and influence *are* in fact possible, at least as a different, social, conception, rather than in a technical construal of the term. Backwards

[135] But this may not be as efficient as had been presumed. See, e.g., Steve Lohr, "Slow Down, Brave Multitasker, and Don't Read This in Traffic," *The New York Times*, 25 March 2007; Christine Rosen, "The Myth of Multitasking," *The New Atlantis: A Journal of Technology and Society* 20 (2008).

[136] See, e.g., Epstein, "When Local Models Fail."; Sawyer, *Social Emergence: Societies as Complex Systems*. On the non-local dimensions of meaning and beauty, see Chapter Two; see also Douglas R. Hofstadter, *Gödel, Escher, Bach: An Eternal Golden Braid* (New York: Basic Books, 1999 [1979]), Ch.6; Sherri Irvin, "Artworks, Objects and Structures," in *Continuum Companion to Aesthetics*, ed. A. Ribeiro (London: Continuum, 2012); Jennifer Jenkins, "Where Beauty Lies: Fakes and Forgeries," *The Philosopher* 83, no. 2 (1995).

causation is also possible, albeit in a different sense of the term rather than in the sense understood by physicists.[137]

In fact, our physical limitations also serve as the very reasons that enabling institutions and other collectivities are formed in the first place: they are *unlike* human beings in key respects, and thus the anthropomorphism of second-order entities persistently muddies the water. Institutions and organizations, along with innovations in communication and transportation, are configured to circumvent our time-space constraints, allowing us as human beings to mitigate if not transcend limits on our causal powers in their duration and reach. These innovations are not confined to technological advances, though these are obviously significant. Institutional or organizational innovations and properties are just as important, some of which are derived from the division of functional and causal labor.[138] The same is true of other social, political, and economic institutions that have attained a level of complexity that makes such a division expedient or unavoidable.

The liberal, pluralist account of political actors and groups competing to shape domestic and foreign policy is not wrong *per se*. The struggle for power is as basic a fact as a social scientist can safely assume. The problem comes in when a key reason

[137] Given these caveats, I suppose I am not directly responding to Wendt's proposed quantum social-scientific solutions to these problems since there is some slippage of meaning between our accounts. The reconsideration of institutional properties (e.g., extension in space and time) presented here, however, is motivated in part by his interesting posing of these problems and also by Giddens's attention to the physical limits on individuals.

[138] Cf. Wendt, "The State as Person in International Theory," 304. Again, given all of this, it is puzzling why social scientists need to turn to quantum mechanics. It is not a matter of realism, as it is beyond doubt that such divisions of labor within states, or within other social organizations, take place, whether the physical constraints are classical or quantum.

for that struggle is not adequately recognized by the commitment to ontological and analytical individualism. *It is in large part because of the enabling but irreducible properties and powers—both political and causal—that institutions possess that individuals and groups seek to influence, capture, or act in and through them.* Taxation, for instance, is one out of many actions that is uniquely bound up with state capacity *and* legitimacy. Outside of the specificity of an *organizing* structural context, the same action would be considered extortion or, as Tilly might have called it, organized crime.[139]

Functionally, it is we who are indivisible, and institutions that are divisible. It is crucial to clarify that divisibility here does *not* refer to analytical or ontological disaggregation,[140] but rather, more precisely, to the *distribution* of functions and causal powers that enables joint organizational action at the constituted level. It means that cohesive institutional complexes or wholes can better perform non-locally through the division of functional and causal labor which, despite a slight irony in terms, is itself reliant on integral structural organization.[141] A highly fragmented or non-cohesive institution is *politically divided*, but tends not to be *functionally distributive* in this sense because the regulatory, structural organization of the system is in crisis. The ability of an institution to act is not localizable to its components

[139] See Charles Tilly, "War Making and State Making as Organized Crime," in *Bringing the State Back In*, ed. P. Evans, D. Rueschemeyer, T. Skocpol (Cambridge: Cambridge University Press, 1985).
[140] See Chapter Two.
[141] Kaplan uses the term "metatask" to describe this level of regulation where "task-oriented activity is itself organized and regulated." Kaplan, *System and Process in International Politics*, 95.

because individuals, in isolation, cannot act non-locally in the same instance, but the institution's causal powers can be distributed throughout itself.[142] If an institution is disaggregated ontologically or analytically, some of the key emergent properties and functions that it possesses *as* an institutional whole, including the capacity for non-local joint action, disappear.

Wolfers, in an earlier quote, alluded to the non-local causal powers in suggesting that individuals "are able to act as they do only because of the power and influence generated by their nations organized as corporate bodies."[143] What he said of nations is also true of institutional forms, less the part about corporeality for reasons already discussed. In a recognizably emergentist vein, Aoki makes a similar point in the context of the organization of functional labor, arguing that "the human skills required in an organizational context…may be conditional on the ways in which individuals relate to each other in that context…[i.e.,] in a particular architecture."[144]

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[142] Cf. Sawyer, *Social Emergence: Societies as Complex Systems*, Ch.1; Wendt, "The State as Person in International Theory," 302-05. It is not clear Wendt still subscribes to this emergentist view given his foray into quantum social science. Still, that should not affect the argument. I do not think that intertheoretic reduction works, and as has been pointed out in earlier chapters, some prominent physicists and those working in complexity science are themselves are much more guarded about its prospects, to say the least. Stuart A. Kauffman, *At Home in the Universe: The Search for the Laws of Self-Organization and Complexity* (Oxford: Oxford University Press, 1995); Stuart A. Kauffman, *Reinventing the Sacred: A New View of Science, Reason, and Religion* (New York: Basic Books, 2008); Robert B. Laughlin, *A Different Universe: Reinventing Physics from the Bottom Down* (New York: Basic Books, 2005); Laughlin and Pines, "The Theory of Everything."; Helmut Schwegler, "The Plurality of Systems, and the Unity of the World," in *Systems: New Paradigms for the Human Sciences*, ed. G. Altmann and W. Koch (Berlin: Walter de Gruyter, 1998).

[143] Wolfers, *Discord and Collaboration: Essays on International Politics*, 8-9.

[144] Masahiko Aoki, *Corporations in Evolving Diversity: Cognition, Governance, and Institutions* (Oxford: Oxford University Press, 2010), 30-31.

The forms that different distributions of causal powers take represent the variety of emergent properties of social, political, and economic organizations and institutions. Not only can such organizations "multi-task," as individuals can, they can work in multiple localities at the same time. The fact of organized combinations of individuals from separate locations makes this non-local display of causal influence possible. The social emergence of institutions and organization recognizes these aspects, eschewing what Wimsatt has called the pervasive *functional localization fallacy*,[145] basically the notion that the causal powers that constituent parts do possess exhaust what there is to know about the causal powers of constituted structural arrangements. Coherent armed forces, on account of their organization, are certainly capable of non-local functionality, aided or limited to different extents by factors like command, control, communications, and transportation or, more importantly, by the organization of these several factors. This applies to the combined arms example from Chapter Three as well. As institutions of organized violence, armed forces cannot realize combined arms capabilities without having their individual branches and weapons systems arranged in certain relations. For a nation-state, an element that makes the division of labor stable enough to act as an integral social whole can be nationalism, predicated on group identity dynamics,[146] or on an "imagined community" where most people never actually come into contact with or

[145] Wimsatt, "Aggregativity: Reductive Heuristic for Finding Emergence," S383.
[146] Anthony D. Smith, *National Identity* (Reno and Las Vegas: University of Nevada Press, 1991).

know most of their fellow compatriots,[147] and certainly not their distant ancestors, except through the invocation of a shared but malleable history. Time-space is therefore beyond the simply experiential. For international organizations and transnational advocacy networks, it could be the commonality of goals, a shared sense of purpose, or bureaucratic/organizational culture.[148] As March and Olsen have argued, "[i]nstitutions are carriers of identities and roles and they are markers of a polity's character, history, and visions. They provide bonds that tie citizens together in spite of the many things that divide them. They also impact institutional change, and create elements of 'historical inefficiency.'"[149] Of course, while brute force alone may be unsustainable, especially in the long term, the threat or use of violence—the Hobbesian notion of "common power" to hold people "all in awe"[150]—still has a role that can hardly be dismissed.

Institutional complexes develop causal powers not possessed by us individually. Acting simultaneously in multiple locations is a property which institutions possess, and which we, as constituent members, can possess only by

[147] Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism* (London: Verso, 1991 [1983]). As Anderson has argued, such communities are built on the institutions of "print-capitalism" and of the media.
[148] On transnational advocacy networks, see Margaret E. Keck and Kathryn Sikkink, *Activists Beyond Borders: Advocacy Networks in International Politics* (Ithaca, NY: Cornell University Press, 1998). On the liberal goals of international organizations, see Michael Barnett and Martha Finnemore, "The Power of Liberal International Organizations," in *Power in Global Governance*, ed. M. Barnett and R. Duvall (Cambridge: Cambridge University Press, 2005). On international institutions and the Washington Consensus, see Part 1 of Narcis Serra and Joseph E. Stiglitz, eds., *The Washington Consensus Reconsidered: Towards a New Global Governance* (Oxford: Oxford University Press, 2008). On bureaucratic or organizational culture, see Barnett and Finnemore, *Rules for the World*, Ch.2; Wight, *Agents, Structures, and International Relations: Politics as Ontology*, 204.
[149] March and Olsen, "Elaborating the 'New Institutionalism,'" 160.
[150] Hobbes, *Leviathan*, Ch.17, 226-27.

proxy, at a distance. *In other words, social distance makes possible the capacity for non-local causal influence, which is properly an emergent property of institutions*. One of the sources of institutional causal influence is the *organization* of strategic settings and decision-making processes, where institutional relations and apparatuses coordinate institutionalized interaction among multiple actors and groups in multiple locales in real time.[151] If one pauses to think about the implications of this simple social fact of action at a distance, there is indeed something marvelous about it, but there is nothing mysterious about it.

Theorizing non-local causality, Epstein has argued that "certain social properties of a group fail to supervene locally on the individualistic properties of the members of that group."[152] He calls such properties membership properties, whose determination necessarily involve non-local factors, i.e., factors external to the immediate actors involved. Wimsatt and Sawyer have also suggested that emergent entities are functionally non-localizable.[153] International institutions can exercise non-local causal influence through socially diffused, detached relations, or "at a

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[151] Thomas Gehring, "International Institutions as Decision-Making Systems: Lessons from the European Union," in *8th Biennial International Conference of the European Studies Association* (Nashville, TN: 2003); Knight, *Institutions and Social Conflict*, Ch.3; James D. Morrow, "The Strategic Setting of Choices: Signaling, Commitment, and Negotiation in International Politics," in *Strategic Choice and International Relations*, ed. D. Lake and R. Powell (Princeton, NJ: Princeton University Press, 1999).

[152] Epstein, "When Local Models Fail," 4. See also Philip Pettit, *The Common Mind: An Essay on Psychology, Society and Politics* (Oxford: Oxford University Press, 1996); Philip Pettit, "Groups with Minds of Their Own," in *Socializing Metaphysics: The Nature of Social Reality*, ed. F. Schmitt (Lanham, MD: Rowman & Littlefield, 2003). Non-locality is also a reason against an internalist stance on rationality, see Chapter Four.

[153] Sawyer, *Social Emergence: Societies as Complex Systems*; Wimsatt, "Aggregativity: Reductive Heuristic for Finding Emergence."

physical, temporal, or social distance."[154] Research has also shown that, in a different way, they can create and then empower their own constituencies in different states so that these constituencies will in turn act to change national policy.[155] Of course, international institutions are not the only entities capable of non-local causal powers. States, multinational corporations (MNCs), and international non-governmental organizations (INGOs) can also have international reach.

As has been discussed, people act in and through organizations, and create institutions, which confront them and their descendants as external, though not immutable, social facts. Organizations and institutions further allow individuals to (1) act in multiple locations, (2) influence current and future generations through laws, actions, and so on, done by and through institutions, (3) utilize collectively stored and share information to anticipate and grapple with likely futures, and even, to a limited extent, (4) act on the past through contestations to shape the collective social memory.[156] The second aspect has already been discussed in the last

[154] Barnett and Duvall, "Power in International Politics," 47-48.
[155] See, e.g., Xinyuan Dai, *International Institutions and National Policies* (Cambridge: Cambridge University Press, 2007).
[156] Collective memory transcends individuals and is irreducibly social. Having a vital influence on people and on their relationship to other people and societies, it is both highly contested. See, e.g., Émile Durkheim, *The Elementary Forms of Religious Life*, trans. C. Cosman (New York: Oxford University Press, 2008 [1912]), 176; Maurice Halbwachs, *On Collective Memory*, trans. L. Coser (Chicago: University of Chicago Press, 1992), 38; Ronald R. Krebs, "In the Shadow of War: The Effects of Conflict on Liberal Democracy," *International Security* 63 (2009): 188; Jay Winter, *Remembering War: The Great War between Memory and History in the Twentieth Century* (New Haven, CT: Yale University Press, 2006). See also Herf's analysis of intellectuals and politicians in the Weimar Republic who sought to package and reconfigure the front experience of the First World War to serve their reactionary political ends. Jeffrey Herf, *Reactionary Modernism: Technology, Culture, and Politics in Weimar and the Third Reich* (Cambridge: Cambridge University Press, 1984), especially Chs.2 and 4. The ongoing controversies regarding the treatment of the Second World War

subsection. With respect to the third and fourth aspects, there are indeed veritable limits that accompany the possibilities. Individual memories are confined to individual life spans, with residual effects being passed down to future generations, through written and/or oral histories. The latter type of history tends to wash out and be confined to small groups (e.g., families, particular social groups). Memories can, however, be institutionalized in the sense of being turned into collectively shared and stored experiences through history books and through the educational system, allowing short-term individual memories to be expanded indefinitely into the future. This is an instance where quantitative changes can lead to qualitative ones. Emphasizing the role of memory in (a type of) emergence, Korn compares animal memory to the IBM Deep Blue computer.[157] Without any new substantive hardware being added to the machine other than the progressive accumulation of information on past matches, the level of performance was increased substantially because through processes of long-term recalls and memory-matching, the machine became better able to grapple with its environments. Through downward regulation, new

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in Japan's history textbooks and Milošević's 1989 speech on the 600th anniversary of the Battle of Kosovo are more recent examples. See Iris Chang, *The Rape of Nanking: The Forgotten Holocaust of World War II* (New York: Penguin, 1998); Stuart J. Kaufman, *Modern Hatreds: The Symbolic Politics of Ethnic War* (Ithaca, NY: Cornell University Press, 2001), 178-81. Of course, the fact that actors, who always operate under some pre-established if contested collective memory, even try to influence how the past is remember, is because they realize that *it* in turn influences many or most members of society.

[157] Robert W. Korn, "The Emergence Principle in Biological Hierarchies," *Biology and Philosophy* 20 (2005).

features and competencies "arise when an upper level entity restrains its components in new combinations that are not expected when viewing these components alone."[158]

Some caveats are in order regarding these possibilities. People can and do distort how the past is remembered, fall prey to selective amnesia, engage in myth-making, or simply have a different way of organizing what should be salient in their shared history. Rhetoric, communication, and manipulation all play major roles. Be that as it may, people still cannot go back in time and change what had actually already happened. Strictly speaking, then, there is no backwards causation. Baum and Groeling have argued that the "elasticity of reality"—the gap between phenomena and their representations—varies and tends to recede over time, reducing the malleability of events.[159] It can be argued, however, that while the *variability* of representational elasticity is plausible, it need not proceed unidirectionally with the gradual, inevitable revelation of historical truths. It is entirely conceivable that when time horizons are stretched, faded memories, manipulation, myth-making, and other factors can serve as a counterweight to increased information. But even given the various limitations on acting on the past, there is still much room left to maneuver for the stakes are high indeed, as summed up in the Orwellian dictum: "who controls the past controls the future: who controls the present controls the past."[160]

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[158] Korn, "The Emergence Principle in Biological Hierarchies," 137.
[159] Matthew A. Baum and Tim Groeling, "Reality Asserts Itself: Public Opinion on Iraq and the Elasticity of Reality," *International Organization* 64 (2010).
[160] George Orwell, *Nineteen Eighty-Four* (New York: Plume, 1983 [1949]), 30.

Kellerman, a geographer, has summed up some of the key properties of second-order entities discussed thus far in this chapter:

> Societal time is not just the aggregate time of individuals within any given society context. This is true, too for societal *versus* personal space. Societal time is less finite than individual time. Societal horizons extend farther than those of individuals, to both past and future. This difference has a bearing on the shaping of use-norms for human time, not just on the conception of historical time. Societal space is larger than personal space, and societies act in several sites simultaneously, compared to the indivisibility of individuals.[161]

The next section will explore some of the implications social emergence has for analyzing institutional multilateralism. Before doing that, some philosophical implications of the discussion thus far can be noted. In view of social emergence, it does not seem to be the case that social scientists need to take the quantum-mechanical leap or subscribe to intertheoretic reduction.[162] While Wendt has presented an innovative and interesting argument, social emergence would appear to

[161] Kellerman, *Time, Space, and Society: Geographical Societal Perspectives*, 101.

[162] Jaegwon Kim has argued that "if you have already made your commitment to a version of physicalism worthy of the name, you must accept the reducibility of the psychological to the physical, or, failing that, you must consider the psychological as falling outside your physicalistically respectable ontology." Jaegwon Kim, "The Myth of Nonreductive Materialism," in *Supervenience and Mind: Selected Philosophical Essays* (1993), 267. Kim's argument also applies to nonreductive individualism in the social sciences; see Chapter Three. To repeat an argument quoted in Chapter Two by P. W. Anderson: "In fact, the more the elementary particle physicists tell us about the nature of the fundamental laws, the less relevance they seem to have to the very real problems of the rest of science, *must less to those of society*." Anderson, "More Is Different: Broken Symmetry and the Nature of the Hierarchical Structure of Science," 393. Emphasis added. Of course, Wendt argues that he is "betting" on a quantum social science, and more particularly, on the quantum consciousness hypothesis being able to connect the microscopic and macroscopic spheres without having to deny consciousness or other human feelings more generally. Wendt, "Flatland: Quantum Mind and the International Hologram." This is arguably the elusive bridge law in Wendt's account. On intertheoretic reduction and critiques of it, see Chapter Two. Wendt's earlier writings, it should be pointed out, also questioned the existence of the requisite bridge laws that are supposed to make intertheoretic reduction possible. For a skeptical stance towards a potential quantum social science from a different perspective, see David Waldner, "Quantum Irrelevance," in *International Studies Association* (Montreal, Canada: 2004).

short-circuit the road to a quantum social science, obviating the move to substitute a classical view of physical constraints with a quantum-mechanical one, and then taking up the burden of connecting the microscopic world of subatomic waves and particles and the macroscopic world of human agency, states, societies, institutions, war and peace.[163] Somewhere along the long road to the possibility of a quantum social science, then, the Occam's razor would seem to intervene, as we can arrive at a more basic concept where second-order entities and systems, and the people acting in and through them, are capable of non-local influence, the division of causal and functional labor, and of engaging in limited but still substantial action on the past. All of this can be analyzed without recourse to either supernatural explanation or to quantum mechanics. This is not simply a pragmatist, instrumentalist stance either. As has been argued, many, though certainly not all, of the physical constraints apply only in limited ways to second-order systems and entities, which have spatial-temporal properties and powers that are emergent from, but not possessed by, or reducible to, individual human beings or their components. Thus, a key answer to theorizing social ontology and phenomena remains pivoted on grappling with the problematic of social emergence.

[163] Even individual psychology becomes "macroscopic" when placed next to an all-the-way-down reductionist account. As Fodor has observed, reductionism "is intended to play a regulative role in scientific practice. Reducibility to physics is taken to be a *constraint* upon the acceptability of theories in the special sciences [which include the social sciences and international relations]." Jerry Fodor, "Special Sciences (Or: The Disunity of Science as a Working Hypothesis)," in *Readings in the Philosophy of Social Science*, ed. Michael Martin and Lee C. McIntyre (Cambridge, Mass.: MIT Press, 1994 [1974]), 687.

5.6 Institutional Multilateralism: Towards an Emergent View

The previous sections as well as earlier chapters have examined some of the key emergent properties of international institutions, properties which reside at the constituted, structured level of organization, and not at the constituent levels. While, throughout this chapter, the need for an emergent view of international institutions has been indicated for different areas, this section focuses on issues in institutional multilateralism and global governance in order to suggest some of the ways in which an approach based on the social emergence of international institutions can contribute conceptually to the study of international relations.

Gruber's research on power and the rise of supranational institutions has characterized world politics as moving gradually "from anarchy to organization."[164] More recently, Barnett and Sikkink have argued that global governance is emerging as an organizing schema that plays a similar role in research as international anarchy has done for decades in the field of international relations.[165] They urge scholars to "be attentive to the possibility of governance through decentralized rule, including

[164] Lloyd Gruber, *Ruling the World: Power Politics and the Rise of Supranational Institutions* (Princeton: Princeton University Press, 2000). On anarchy, i.e., the absence of a world sovereign who authoritatively adjudicates disputes among nations, and the implications that it has on world politics, see, e.g., Mearsheimer, *The Tragedy of Great Power Politics*; Waltz, *Theory of International Politics*.
[165] Michael Barnett and Kathryn Sikkink, "From International Relations to Global Society," in *The Oxford Handbook of Political Science*, ed. R. Goodwin (Oxford: Oxford University Press, 2009). Also see contributions in Barnett and Duvall, eds., *Power in Global Governance*.

governance through networks…*This suggests that we focus attention less on specific actors, such as specific IOs, and more on 'rule systems' and often on multilayered structures where governance actually occurs*."[166] The emergent approach is highly sympathetic to such views. Major strands of current research on multilevel, multilateral governance center on the extent to which institutions or organizations can reshape system-wide and domestic political arrangements that have an impact on such matters as free trade, reducing the power of special interests, rights protection, and enhanced deliberation in decision-making.[167]

An emergent view of international institutions is highly relevant to these avenues of research because it can help clarify or provide the theoretical grounds for associated arguments, including the organizational complexity of multilateral institutional governance, the contested issue of unaccountability arising from the social distance between international institutions and domestic publics, and the question of accounting for the notion of time when assessing multilateral institutional effects. We can proceed with the observation that states and other consequential entities realize how their strategic interests are powerfully shaped by institutional structures. Strong or victorious states, at least in the modern context, create anew or

[166] Barnett and Sikkink, "From International Relations to Global Society," 764. Emphasis added.
[167] See, e.g., Keohane, Macedo, and Moravcsik, "Democracy-Enhancing Multilateralism." Erik Gartzke and Megumi Naoi, "Multilateralism and Democracy: A Dissent Regarding Keohane, Macedo, and Moravcsik," *International Organization* 65 (2011); Gruber, *Ruling the World: Power Politics and the Rise of Supranational Institutions*; Robert O. Keohane, Stephen Macedo, and Andrew Moravcsik, "Constitutional Democracy and World Politics: A Response to Gartzke and Naoi," *International Organization* 65 (2011).

consciously mould or influence international institutions in order to constrain, co-opt, manage, or socialize other states with a view to structuring future interactions, while weak or vanquished states follow along grudgingly and, over time, may even be induced to become stakeholders of the established set of relations.[168]

Some of these insights are not incongruent with segments of the examined approaches, but, as we have seen, these approaches do not adequately capture some aspects of the emergence of institutional influence and power in strategies that victorious states pursue in constructing institutional orders.[169] As Ikenberry has shown, institutional strategies for power management and advancement of national interests actually require states to engage in self-binding.[170] This is an important but not self-evident insight. To come to terms with it requires that we understand the actionable emergent properties of institutions that make self-binding possible as a mechanism for diffused political control through relatively autonomous institutional intermediaries.

If institutions are not relatively autonomous, they are not capable of exerting indirect causal influence and institutional power because their effects would be seen as too socially proximate to the causes. The power exercised by and through

[168] See, e.g., Ikenberry, *After Victory: Institutions, Strategic Restraint, and the Rebuilding of Order after Major Wars*; Ikenberry, *Liberal Leviathan: The Origins, Crisis, and Transformation of the American World Order*; Ikenberry, "The Rise of China and the Future of the West: Can the Liberal System Survive?"

[169] On institutional power, see, e.g., Barnett and Duvall, "Power in International Politics." Gruber, *Ruling the World: Power Politics and the Rise of Supranational Institutions*.

[170] Ikenberry, *After Victory: Institutions, Strategic Restraint, and the Rebuilding of Order after Major Wars*; Ikenberry, *Liberal Leviathan: The Origins, Crisis, and Transformation of the American World Order*.

international institutions, as opposed to the direct Dahlian power of particular actors over still other particular actors,[171] is contingent on social and temporal distance imparted by the emergence of international institutions. As the emergent approach has suggested, the multi-layered nature of second-order systems like international institutions makes them ontologically distant from their microfoundations. This very ontological distance makes it hard to pin down definitively the *current* statist origins of multilateral institutional complexes that have been constructed long ago, when they were quite possibly governed by different purposes and rules of the game. Arguably, institutional power tends to grow in time because on top of social distance, the dimming "camera flash" of temporal distance may also be counted on to dilute the hold that any particular actor may have on a multilateral institutional complex over time, which also means, as suggested earlier, that such a complex cannot be reduced analytically to crafting or contracting conditions either. Unintended consequences are unavoidable even for the most consciously designed institutions.[172] In this connection, then, there are different reasons for Ikenberry's analysis to focus mostly, though not exclusively, on what comes "after victory" in post-war settlements. Obviously, the immediate aftermath of a major war provides victorious states with particularly propitious opportunities to remake international institutions and indeed the international system according to their needs, but social distance and relative

[171] See Barnett and Duvall, "Power in International Politics," 44.
[172] Cf. Robert Jervis, *System Effects: Complexity in Political and Social Life* (Princeton: Princeton University Press, 1997).

institutional autonomy are key emergent institutional properties that are not eschewed or suppressed, but are consciously cultivated. The outcomes, such as whether a rising state like China will challenge or be willing to advance its claims and interests within the existing liberal institutional order—are now hotly debated,[173] but these outcomes are not easily predictable in advance even though institutional designers, perhaps out of a perceived need for predictable control, still take such contingencies into account in the hope that such an institutional order would, on balance, turn out to be beneficial to them *down the road.*

Yet states' control over multilateral institutions, especially consequential ones, is seldom unchallenged and always mitigated by other factors as these institutions, as well as the constellation of forces that first put them in place, evolve through time. Here the temporal properties of institutions come into play. Making a friendly amendment to the Padgett-Powell formulation on emergence, time and organizations examined earlier,[174] it can be argued that in snap shots over a short time horizon, the causal influence of particular actors tends to overshadow that of institutionalized relations, while in the long run, enduring institutional environments exert a greater influence on particular actors. Furthermore, shifts in the international distribution of

[173] See, e.g., Ikenberry, "The Rise of China and the Future of the West: Can the Liberal System Survive?"; Johnston, *Social States: China in International Institutions, 1980-2000*; David M. Lampton, *Same Bed, Different Dreams: Managing U.S.-China Relations, 1989-2000* (Berkeley, CA: University of California Press, 2001), Ch.4; Margaret M. Pearson, "The Major Multilateral Economic Institutions Engage China," in *Engaging China: The Management of an Emerging Power*, ed. A. Johnston and R. Ross (London: Routledge, 1999); Margaret M. Pearson, "Trade Policy and Regulatory Politics: China's WTO Implementation in Comparative Perspective," in *China's Reforms and International Political Economy*, ed. D. Zweig and Z. Chen (London: Routledge, 2007).
[174] Padgett and Powell, "The Problem of Emergence," 3.

power, changes in the missions and agendas of the institutions themselves, unintended consequences due to the complexity of the institutional arrangements and of their environments, and external challenges to their authority and legitimacy come to mind as forces that can drive a wedge between state design purposes and institutional practice, indirectly making institutions less reducible to, and relatively autonomous from, the conditions of their design.[175] That international institutions are presumed, with good reason, to be causally efficacious in some respects, especially when their effects are projected into the future, gives context to why states try to shape institutional design even though conscious design does not necessarily translate into intended consequences, especially with the passage of time.[176] If NATO's original object was, as General Lord Ismay put it, "to keep the Russians out, the Americans in, and the Germans down,"[177] then the Germans, back in the 1950s, might not have thought it possible that their troops would be asked to take on assignments in the Middle East and in Central Asia. Other member states similarly might not have

[175] This is examined further in Chapter Five, under "emergence through time." For the relationship between power distribution and institutional forms, see Gilpin, *War and Change in World Politics*; Ikenberry, *After Victory: Institutions, Strategic Restraint, and the Rebuilding of Order after Major Wars*; Ikenberry, *Liberal Leviathan: The Origins, Crisis, and Transformation of the American World Order*. Changes in the missions and agendas of the institutions themselves, as well as external challenges, come to mind. For changes in institutional missions and agendas, see, e.g., Barnett, "Evolution without Progress? Humanitarianism in a World of Hurt." Examples of external challenges include anti- or alter-globalization (i.e., alternative globalization) movements. See, e.g., Michael Hardt, "Two Faces of Apocalypse: A Letter from Copenhagen," *Polygraph* 22 (2010).

[176] See, e.g., Gruber, *Ruling the World: Power Politics and the Rise of Supranational Institutions*; Ikenberry, *After Victory: Institutions, Strategic Restraint, and the Rebuilding of Order after Major Wars*; Ikenberry, *Liberal Leviathan: The Origins, Crisis, and Transformation of the American World Order*; Johnston, *Social States: China in International Institutions, 1980-2000*. On unintended consequences and complexity, see Jervis, *System Effects: Complexity in Political and Social Life*, Ch.2.

[177] As quoted in Geoffrey Wheatcroft, "Who Needs NATO?" *The New York Times*, 15 June 2011.

imagined that they would be engaging in missions that seem far removed from the original design purpose of the NATO: essentially as a military alliance against the Soviet Union.

Institutional power, as Barnett and Duvall have suggested, is necessary but insufficient for understanding institutions of global governance. That powers that are rising within an institutional order laid down by other powers may become willing stakeholders of that order or system suggest that not only does self-binding or hegemony not need to resort to overt force, it can exchange some benefits in return for the acquiescence of the subject of institutionalized control; these material benefits, combined with identities and discourses produced distally, make the social reproduction of the constituted institutional order itself possible. The productive power of liberal ideological underpinnings of institutional orders can supplement and reinforce any institutional power that multilateral governance institutions may hold.[178]

Social distance also plays a key role in what Keohane, Macedo, and Moravcsik call a constitutional conception of multilateral governance.[179] The emergent approach can learn from, and at the same time contribute to, their incorporation of the Madisonian concept of spatial organization and its impact on

[178] Barnett and Duvall, "Power in International Politics." Robert Cox, "Multilateralism and World Order," *Review of International Studies* 18 (1992).

[179] Keohane, Macedo, and Moravcsik, "Democracy-Enhancing Multilateralism." Keohane, Macedo, and Moravcsik, "Constitutional Democracy and World Politics." Gartzke and Naoi's critique adopts the abbreviation MLOs ("multilateral organizations") to describe Keohane, Macedo, and Moravcsik's original, broader conception of "multilateral institutions." Keohane, Macedo, and Moravcsik later use the term MLOs as well, without jettisoning the more broadly defined term. I prefer this term to the narrower MLOs, but I think the latter is fine as far as it goes, i.e., if it is occasionally used as a shorthand.

politics into institutional analysis. These scholars take a contrarian stance against what they take to be the received view about global governance institutions, namely, that such institutions sidestep national political processes, inhibit transparency, and restrict popular participation at the global level for already democratic member states. They argue instead that popular participation is not necessarily the sole or even the most important value of a democratic polity, but that it has to be weighted against other values such as the protection of minority rights and the curtailment of special interests, i.e., factions inimical to the global public interest. "Limiting popular participation," they argue, "can often help make democratic systems more broadly representative."[180] The crucial analytical step here is to extend to the global level the famous argument in *The Federalist No.10* about how a large polity with diverse interests can best combat special interests and safeguard the public good. They quote Madison at length on this key point:

> Extend the sphere, and you take in a greater variety of parties and interests; you make it less probable that a majority of the whole will have a common motive to invade the rights of other citizens; or if such a common motive exists, it will be more difficult for all who feel it to discover their own strength, and to act in unison with each other.[181]

By taking the "extended republic" concept global, Keohane, Macedo, and Moravcsik are using a familiar argument in the service of a less familiar position about the supposedly *positive* aspects of the largest and most "faceless" of political spheres—

[180] Keohane, Macedo, and Moravcsik, "Constitutional Democracy and World Politics," 601.
[181] Madison as quoted in Keohane, Macedo, and Moravcsik, "Democracy-Enhancing Multilateralism," 6-7. See also Keohane, Macedo, and Moravcsik, "Constitutional Democracy and World Politics," 601.

multilateral institutions on a global scale. In doing so, they have drastically lengthened the social distance between domestic publics and multilateral governance institutions, a cause for worry for many scholars, politicians, and people alike. Despite, or rather because of, the great spatial expansiveness and jurisdictional scope of multilateral institutions and the corresponding loss of direct participation, they argue that these properties can compensate by making government more attentive to minority and individual rights. Such a notion of multilateralism can, as they put it, be "more genuinely reflective of the interests or good of the public as a whole, and in these ways enhance democracy."[182]

In short, Keohane, Macedo, and Moravcsik are suggesting that there are no inherent reasons to think that domestic arrangements are necessarily more democratic than global ones, that social distance does not lead automatically to unaccountability or less *representation* even though it does lead to reduced direct *participation*, and that, by implication, multilateralism is downward causal in the regulative sense that has been already been discussed. But there are important temporal dimensions as well, because they define democracy as "*the ability of the people as a whole to govern itself, on due reflection, over the long run*."[183] While this is not a particularly precise definition, it does suggest that Keohane, Macedo, and Moravcsik believe that it is within the ontological structure of multilateral institutions to not only be causally efficacious but also, more particularly, be capable of steering member states in the

[182] Keohane, Macedo, and Moravcsik, "Democracy-Enhancing Multilateralism," 9.
[183] Keohane, Macedo, and Moravcsik, "Democracy-Enhancing Multilateralism," 6. Emphasis added.

direction of enhanced political deliberation and better representation of global *and* national publics. Their formulation has the merit of taking into account at least two important aspects about time, which the emergent approach endorses.[184] One is that larger entities and institutions *tend* to have longer time horizons, which is also consistent with the discussion of time horizons and "emergence through time" in Chapter Three and Section 5.4, above. Institutional life spans are non-Gaussian when juxtaposed to human life spans:[185] they can be short, but also potentially indefinite. The other aspect is the recognition that scholars "should not view specific institutions simply at one point in time or in isolation [and that] it is often impossible to assess the effects of particular multilateral regimes without looking at their 'life cycles.'"[186] As argued in Sections 3.5 and 5.4, the size and structural organization of institutions impart to them different temporal properties and propensities, so Keohane, Macedo, and Moravcsik's latest contribution to institutional analysis seems to come a little bit closer to the emergent view in identifying, implicitly for them, the relationship between reductionism and what type of explanation is made possible and ruled out. Having said that, doubts still linger as to whether they or other international relations scholars would move further away from the near-automatic equation of

[184] On the temporal properties of liberal democratic systems, see also Scheuerman, *Liberal Democracy and the Social Acceleration of Time*.
[185] Griffiths and Tenenbaum, "Optimal Predictions in Everyday Cognition," 768.
[186] Keohane, Macedo, and Moravcsik, "Constitutional Democracy and World Politics," 604. See also Pierson, "Big, Slow-Moving, and Invisible: Macrosocial Processes in the Study of Comparative Politics."; Pierson, *Politics in Time: History, Institutions, and Analysis*. See also references on cycles in Section 5.4.

microfoundationalist research with explanatory progress.[187] This issue is important because, as discussed before, the focus on the micro-level, while it should not be lightly dismissed, often turns into a regrettable neglect of causes and effects that have longer time horizons or are socially distant. There also tends to be a concomitant focus on causes that are spatially and temporally proximate to outcomes.[188] If Keohane, Macedo, and Moravcsik's innovative approach to global institutional governance is ultimately a form of downward regulatory influence that multilateral institutions possess, then the foundations of their constitutional theory can benefit from an engagement with downward causation made possible by emergent second-order entities already discussed at length in earlier chapters. That can potentially lead to a truly "second-image-reversed"[189] account of causally efficacious multilateralism, democracy-enhancing or otherwise.[190]

Insofar as the conceptual extension of the jurisdictional sphere of multilateral institutions is concerned, it seems pertinent to ask (paraphrasing Moe's focus on the relationship between power and institutions): who constitutes the relevant public here?[191] Moe has argued that it is critical to identify in any institutional arrangement

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[187] See Chapters Two and Three.
[188] See a discussion in John Gerring, "The Mechanistic Worldview: Thinking inside the Box," *British Journal of Political Science* 38 (2007); Pierson, "Big, Slow-Moving, and Invisible: Macrosocial Processes in the Study of Comparative Politics," 203; Pierson, *Politics in Time: History, Institutions, and Analysis*. Barnett and Duvall, "Power in International Politics." See also Section 3.5.
[189] Peter Gourevitch, "The Second Image Reversed: The International Sources of Domestic Politics," *International Organization* 32 (1978).
[190] For a critique of Keohane, Macedo, and Moravcsik's theory, see Gartzke and Naoi, "Multilateralism and Democracy."
[191] Moe, "Power and Political Institutions."

the institutional insiders who are the power holders who, through political institutions, can impose their will on the whole "relevant population." This is a highly relevant question that is not often asked by those working within the broader rationalist institutionalist genre.[192] However, the emergent approach already goes beyond Moe's important intervention on behalf of bringing power into institutional analysis, as it enjoins international relations scholars to look beyond the relatively restricted set of institutional insiders in order to capture the multilayered entanglement of institutions with states and other environments, as well as the non-local production of institutional effects.[193] These factors make it impractical, but even more importantly, incomplete to look at a restricted set of veto players and power brokers inside or behind the institutions. The "insiders" may well be located outside of the institutions and they may be insiders only in an abstract sense.

5.7 Conclusion

This chapter, building on threads from earlier chapters and developing new ones, has analyzed some of the key emergent properties of international institutions. These properties, grouped under the broad rubrics of organizational complexity, emergence through time, and functional non-localizability, are possessed by enduring institutions

[192] Moe's own work is an important exception. See also Knight, *Institutions and Social Conflict*.
[193] See, e.g., Epstein, "When Local Models Fail."; Wimsatt, "Aggregativity: Reductive Heuristic for Finding Emergence."

and by us only distally, and in proxy rather than directly. The organization of institutions, i.e., their structural arrangement and organizing logic, generates these properties which are not reducible to individual human beings or groups. Without denying human agency, a step that is both unnecessary and unhelpful, the emergent approach recognizes these properties, while eschewing the impulse to anthropomorphize second-order entities, including institutions and states.

The emergent properties of international institutions—and this chapter has not ruled out others—render international institutions resistant to reductive research strategies. The chapter has also examined the issue of multilateral governance institutions, suggesting ways in which the emergent approach can contribute to and complement some of the conceptual underpinnings of institutional multilateralism.[194] An emergent approach underscores the non-obvious connection between social distance and relative autonomy, the necessity to analyze the non-local production of outcomes, as well as a more historical, long-term view with respect to institutional evolution and effects.

[194] Though it does not necessarily subscribe to aspects of the *substantive* content of the type of multilateralism that Keohane, Macedo, and Moravcsik advocate.

CHAPTER SIX

INTERNATIONAL INSTITUTIONS AND SOCIAL EMERGENCE: CONCLUSIONS AND IMPLICATIONS

This study has two main thrusts: one has to do with tackling a puzzling quandary where growing empirical studies of international institutions have overstretched their theoretical foundations, leading to discrepancies between theory and empirics; the other is about the critique of reductionism in various forms and the concomitant defense of social emergence, with particular focus on international institutions. As this dissertation has endeavored to show, if international institutions are reduced to the conditions of their crafting, contracting, or composition, they become useful tools, pliant subcontractors, legal fictions or projections of anthropomorphic fantasies. These conceptualizations about the nature of institutions all impinge on institutional explanation, i.e., explanation that invokes institutions as key factors in political analysis. It is undeniable that states and other groups do try to shape and mold institutions in their own images, according to their own interests, and to various ends. It is also uncontroversial that institutions may undertake tasks and perform functions assigned by their designers, or that they are composed, in the final analysis, of human beings through organized collective intermediaries, in a kind of second-order constitution. These approaches all contain elements that lend them a measure of

Table 6.1 Approaches to Institutional Ontology & Their Implications for Explanation

Approaches to Internat'l Institutions	Institutional Ontology: What Are Institutions?	Explanatory Implications for Institutional Autonomy and Effects	Notes
Functional	Tools, Instruments	(1) No autonomy; effects are epiphenomenal. (2) Useful for addressing coordination, cooperation, collective action problems, and political market failures. (3) Useful for norm- or identity-based strategic social construction.	Most agree that institutions are useful tools, but that raises the question of whether they have institutional autonomy and whether those effects are institutional effects.
Contractual	Agents, Trustees, Subcontractors	Agency slack and preference heterogeneity underwrite autonomy, which renders institutional effects independent (institutionalists who draw on principal-agent theory).	Principals' monitoring of agent behavior, recontracting power, revocable grants of authority, and selection of agents severely limit institutional autonomy and the scope of independent effects.
Corporate	Unitary Actors, Legal Persons, Bureaucratic or Organizational Actors, "Superorganic" People	If institutions, like states, are also actors of various kinds, or even "people," then they, too, should have identities, interests, preferences apart from those of their designers, and can be theorized accordingly.	This is an important philosophical and legal defense of state and institutional agency and autonomy, but it marries causal powers to being human-like when this move is superfluous and misleading.
Emergent	Configurations, Constellations, Ensembles, Environments, Networks	Autonomy and causal powers are properties of institutions at the emergent, constituted level and not at the constituent levels even though some design, composition, or contracting conditions may be entailed. Analysis of effects should focus on the emergent level.	It does not deny *a priori* that institutions could in part be instruments or subcontractors, but it holds that a theory of causally efficacious institutions should be based on emergence from, and irreducibility to, the conditions of their crafting and contracting.[1]

[1] For the functional view, see, e.g., Robert Axelrod and Robert O. Keohane, "Achieving Cooperation under Anarchy: Strategies and Institutions," *World Politics* 38 (1985); Robert O. Keohane, *After*

credence, but their ontological stances, if pursued to their logical conclusions, would often erode institutional autonomy to such an extent that institutions become epiphenomena, or they might lead to improbable conclusions about the real personhood of states or institutions. If international institutions are simply useful instruments or subcontractors with tasks meted out to them, their autonomy, even in a relative sense, is greatly circumscribed. If they are actors existing only in

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Hegemony: Cooperation and Discord in the World Political Economy (Princeton: Princeton University Press, 1984); Lisa L. Martin and Beth A. Simmons, "Theories and Empirical Studies of International Institutions," *International Organization* 52 (1998). For the contractual view, see, e.g., Karen J. Alter, "Agents or Trustees? International Courts in Their Political Context," *European Journal of International Relations* 14 (2008); Darren Hawkins, David Lake, Daniel Nielson and Michael Tierney, eds., *Delegation and Agency in International Organizations* (Cambridge: Cambridge University Press, 2006); Robert O. Keohane and Lisa L. Martin, "Institutional Theory as a Research Program," in *Progress in International Relations Theory: Appraising the Field*, ed. C. Elman and F.M. Elman (Cambridge, Mass.: MIT Press, 2003); Beth A. Simmons and Lisa L. Martin, "International Organizations and Institutions," in *Handbook of International Relations*, ed. W. Carlsnaes, T. Risse, and B. Simmons (London: Sage, 2002). For the corporate view (in the legal fiction/instrumentalist sense), see, e.g., Jan Dejnozka, *Corporate Entity* (2007); Ernst H. Kantorowicz, *The King's Two Bodies: A Study in Mediaeval Political Theology* (Princeton, NJ: Princeton University Press, 1997 [1957]); Arnold Wolfers, *Discord and Collaboration: Essays on International Politics* (Baltimore: Johns Hopkins University Press, 1962), Ch.1. For the corporate view in the superorganic sense, see Alexander Wendt, *Social Theory of International Politics* (Cambridge: Cambridge University Press, 1999), Ch.5; Alexander Wendt, "The State as Person in International Theory," *Review of International Studies* 30 (2004). For institutional configurations, ensembles, social environments and so on, see, e.g., Dave Elder-Vass, "Integrating Institutional, Relational and Embodied Structure: An Emergentist Perspective," *The British Journal of Sociology* 59 (2008); Emilie M. Hafner-Burton, Miles Kahler, and Alexander H. Montgomery, "Network Analysis for International Relations," *International Organization* 63 (2009); Bob Jessop, *State Theory: Putting the Capitalist State in Its Place* (Cambridge: Polity Press, 1990); Alastair Iain Johnston, *Social States: China in International Institutions, 1980-2000* (Princeton: Princeton University Press, 2008); Alastair Iain Johnston, "Treating International Institutions as Social Environments," *International Studies Quarterly* 45 (2001); Dimitri Landa, "Rational Choice as Social Norms," *Journal of Theoretical Politics* 18 (2006); David Pak Yue Leon, "Reductionism, Emergence, and Explanation in International Relations Theory," in *Scientific Realism and International Relations*, ed. J. Joseph and C. Wight (New York & Basingstoke, UK: Palgrave Macmillan, 2010); Daniel Nexon, "Relationalism and New Systems Theory," in *New Systems Theories of World Politics*, ed. M. Albert, L.-E. Cederman, A. Wendt (New York and Basingstoke, UK: Palgrave Macmillan, 2010). Note that while these works are grouped according to a schema for analytical purposes in this study, some of the authors may not see things in this way. The "Notes" column contains my own observations and arguments in regard to these approaches.

contemplation of law and devoid of real existence, their causal effects are a wonder to be explained. But if they are real people, the argument begins to border on the absurd. The explanatory consequences of these ontological conceptualizations are not particularly palatable provided that the causal status of institutions and institutional effects is to be maintained.

How, then, can state power and interests in institutional design, the contractual entanglements of states and institutions, and the human or social origins of institutional composition be reconciled with a view that international institutions are causally consequential? The key, this study has argued, lies in the *social emergence of international institutions*. This argument has multiple parts, built over the course of several chapters, but with some simplification it can be summarized thus: if international institutions are to have any causal influence at all, this influence belongs, in spatial terms, to the structural organization of components, units, and people at the *constituted* level, and cannot be reduced to the *constituent* levels in isolation. Temporally, considerations of institutional evolution and endurance have a role in lessening the analytical dependence on designing and delegating conditions to illuminate institutional outcomes and effects. The flipside of indefinite institutional continuity, far from necessarily signifying stasis, is that there can be more time for new interests and distributive consequences to develop, for different constituent elements to cycle in and out, for differential growth and decline, and for the disjunctive tempos of social organizational levels and entities to bump up against one

another, much like overlapping ripples. These can herald unintended changes and consequences beyond the range of design planning. The complexity inherent in the multiply-realizable nature of institutional arrangements through the configuration and re-configuration of identities, interests, competencies, agendas, and social tempos at multiple levels over time is such that it becomes difficult to countenance any direct correspondence between the initial conditions of design, delegation, and composition on the one hand, and international institutions and their effects on the other hand. Rather than looking for the microfoundations of relative institutional autonomy, it becomes desirable and indeed necessary to articulate social explanation in terms that are congruent with the emergent properties and characteristics of international institutions.

These are threads that were tied together and expanded in Chapters Four and Five, but some of their articulations and justifications can be found in earlier chapters. In reconceptualizing international institutions in terms of social emergence, this study first situated, in Chapter Two, the field of international relations within a standard ordering of the sciences, ranging from the so-called higher-level or special sciences of economics, sociology, and politics, down to individual psychology and neuroscience, and to microphysics. This is *not* to concede that the higher-level sciences can be reduced to the lower-level sciences—the kernel of the unity-of-science program.[2] On

[2] Paul Oppenheim and Hilary Putnam, "Unity of Science as a Working Hypothesis," in *Minnesota Studies in the Philosophy of Science*, ed. H. Feigl and G. Maxwell (Minneapolis: University of Minnesota Press, 1958). A classic defense of the ordering of the sciences, but also of the irreducibility

the contrary, this chapter provided an examination of the reductive ontological and analytical background presuppositions in segments of contemporary international relations research, and offered a sustained critique of forms of reductionism. To borrow the rather colorful phrase of two scholars on a different subject, reductionism can be seen as "a large grey oyster of misunderstanding carrying an important pearl of truth,"[3] and that pearl is the importance of human agency and of the lived experience.[4] None of these, however, is denied by the present work. In fact, it helps to underscore the emergence of consciousness and choice from—and irreducibility to—physical matter because each organizational level contains properties and powers that cannot be readily explained by reference to the lower level(s). In the same vein, the reductionist research strategy at the level of the international was contextualized, and its deeper philosophical roots traced and rejected, paving the way for the study of emergent complex systems in the social world. In some ways, this is also a more general argument against the usurpation of the social, albeit not for reasons of intellectual turf protection, but rather on the principled ground of the irreducibility of the social.

The critical appraisal of reductionism was followed, in Chapter Three, by a positive argument in favor of theorizing social emergence in international relations.

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of the higher-level sciences to the lower-level ones, is in P. W. Anderson, "More Is Different: Broken Symmetry and the Nature of the Hierarchical Structure of Science," *Science* 177 (1972).

[3] Richard N. Langlois and László Csontos, "Optimization, Rule-Following, and the Methodology of Situational Analysis," in *Rationality, Institutions, and Economic Methodology*, ed. U. Mäki, B. Gustafsson, and C. Knudsen (London: Routledge, 1993), 113.

[4] If we are talking about intertheoretic reduction, then this may not apply.

As Chapter Three showed, the subject matter, social categories, phenomena, and units and levels of analysis in the field of international relations are eminently amenable to philosophical scrutiny and theoretical analysis in terms of emergence, complexity, and organization in social systems. Second-order entities and systems, of which states and international institutions are instances, are characterized by their organizational distance from individual human beings who typically serve as primary building blocks in the social world, presenting, *inter alia*, the problem of grappling with their ontological abstraction and its analytical implications. Forms of reductionism are understandably concerned about second-order entities, but research on emergence and complexity in science, philosophy, and segments of the wider social sciences has shown that there is nothing mysterious about analyzing higher-level emergent properties and entities in non-reductive terms. Indeed, emergence is an indispensable framework for making sense of many macro-level social and natural phenomena.

Building on currents within and beyond disciplinary confines, but still very much engaging with and motivated by peculiar problems in international relations, Chapters Three to Five moved from the more general position of defending social emergence and drawing inspiration from parallel debates in a plethora of disciplines, to the position of tackling the problems arising from institutional endogeneity. Institutional endogeneity, it will be recalled, is a situation in which the more instrumental institutions are in performing functions for states under anarchy, the less

autonomous and causally consequential they become. This paradoxical situation, noted in recent years by even some leading institutionalist scholars themselves, compromises the empirical advances made in the study of international institutions and, as Chapter Four showed, this quandary is in need of a fundamental and theoretical, rather than a strictly empirical, resolution. Functional, contractual, corporate, and finally, emergent approaches to international institutions were examined in this connection. The explanatory implications of these approaches are governed in large part by their respective ontologies of institutions. A simplified table summarizing the connections between ontological positions and explanatory consequences can be found in Table 6.1. Since the organizing schema for these approaches is ontological and analytical in nature, it crosses established theoretical demarcations in international relations. This allows scholars of international institutions to rethink the perhaps unexpected affinities and differences that the usual theoretical labels, while still useful for organizing research, may obscure.

An emergent view of international institutions need not lead to the complete abandonment of extant theoretical insights. Some insights will, however, likely require reconstruction and reinterpretation in order to maintain the causal status of institutions and institutional effects: a strong functionalism that leaves little room for institutional autonomy is untenable, but a weaker version that indicates the functions institutions can perform without making them central to institutional ontology has no quarrel from social emergence. Similarly, insights from institutional design and

delegation, if shorn of their narrower individualist conception of rationality and their reduction of complex state-institution entanglements to bilateral local contracts, can be reinterpreted in ways that highlight the multiply-realizable nature of institutional forms under different design conditions. With respect to corporate approaches, the notion that institutions are causal entities can and should be reaffirmed, but without resorting to anthropomorphic formulations. International institutions, as organized social forms, endure through time and extend in space, acquiring capacities and powers derived from their structural integrity so long as they are functioning as going concerns. Turning the standard anthropomorphic view of second-order entities on its head, the emergent approach argues that institutions are unlike human beings in being able to navigate, mitigate, and in some ways even transcend the very real spatial-temporal limits that individuals confront.

In emphasizing institutions' emergence from, and irreducibility to, circumstances surrounding their crafting, contracting, and constitution, therefore, the emergent approach not only challenges the logics of existing approaches to institutions, it also complements and furthers their search for a proper basis for the view that international institutions can matter in their own right, and that claims about their relative autonomy and causal efficacy are sound. Without a reasoned defense of such a causal view of social forms, however, there can be no secure foundation for the study of international institutions, whether empirical or theoretical.

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