Peace Running Wild:
Political Organization in a Global Environment

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What they could do with round here is a good war. What else can you expect with peace running wild all over the place? You know what the trouble with peace is? No organization.¹

Playwright Bertolt Brecht, who included this insight in his 1941 play *Mother Courage and her Children*, suggests an important relationship between international affairs and domestic political organization. Nearly sixty years after Brecht wrote, however, the opposite dynamic seems to hold: the end of the cold War has brought with it an explosive growth in international organizations as well as more dense interrelationships between domestic and international political organizations. Globalizing processes have encouraged some analysts, furthermore, to question the privileged place that international relations scholars afford a particular organizational form, the nation-state.² Indeed, notwithstanding Brecht’s plays, considerable organization seems to have resulted from peace running wild. This growth in the number of political organizations begs an important theoretical question: how do "environmental" or "structural" changes such as the end of bipolarity affect the extent and shape of the political organization in international politics? While organizational theories of different traditions offer some insights into the interrelationships between organizations and their environments, it is unclear what leverage economic and sociological perspectives can bring to bear on the effects of globalization on national and international organizations.

This paper argues that political organizations have some important characteristics that call for a broader unit of analysis than international relations theorists have used in the past. Many political organizations are highly dispersed with multiple agents acting in parallel, exhibit multiple levels of organization, and have a remarkable capacity to adapt and anticipate.³ Like biological life, political organizations often evolve to occupy niches, an insight of population ecology perspectives on organization.⁴ Indeed, political organizations seem to interact reciprocally with their "environments" much the same way that animals do, in ways that eventually change both. This dialectic interaction remains, however, largely outside the treatment of traditional organizational theory. This arises in part from the varied treatment of the environment as either cause or effect: sociologists and economists

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disagree on what the "environment" is. Economists, who see the firm as the principal form of organization, tend to view the "environment" as the market, in which the enforcement of contracts is unproblematic. In a different tradition, sociologists argue that an organization’s "environment" includes not only the material rewards and sanctions typical of any environment but includes social factors arising from the interaction of a population of organizations. Similar to sociologists, anthropological perspectives argue that organizations respond to the material environment but simultaneously construct it through cultural processes. This last argument implies that the environment both shapes the form of, and is shaped by, organizations. In short, these three traditions see the environment as different variables: to economists, the environment is an independent variable that shapes the firm as dependent variable, while sociologists and anthropologists view the environment as both a dependent and independent variable. It forges the form of organizations, and in turn is shaped by the interaction of a population of organizations. While these different emphases flow logically from each perspective’s chosen unit of analyses, it remains unclear what understandings sociology and economics can contribute to political science’s understanding of political organization, particularly in international relations.

This is further complicated by the argument that political organizations differs from other organizations in important ways. Terry Moe for one argues that political organizations tend to be coercive.5 Because there is no exogenous legal authority to enforce political bargains, furthermore, political actors often deliberately separate administrative and political functions of an organization. Rather than being designed to be efficient, actors design their organizations to hedge against political uncertainty, a design which leads to a loss of efficiency: "Political organizations, because they arise out of public authority, are designed in part to fail."6 To these criticisms one might also argue that political organizations today face a highly dynamic environment due in part to globalizing processes. Several scholars have argued that globalizing processes have blurred our analytical boundaries between the organization known as the nation-state and its environment. Jan Aart Scholte defines globalization as "processes whereby social relations acquire relatively placeless, distanceless and borderless qualities. In other words, it marks a shift away from the territorialis geography that has figured centrally in the modern social order."7 This shift toward placeless and distanceless social relations raises questions about whether the nation-state remains an important or even useful organization for international relations scholars to analyze. Indeed, several scholars have criticized international relations’ ontological

focus on the nation-state. Roland Robertson argues that the nation-state is a historically unique and contingent social construction that is only one of several competing forms of social organization.\(^8\) Robertson’s critique closely parallels John Gerard Ruggie’s cogent analysis of neorealism’s inability either to explain changes in the differentiation among nation-states or to account for the possibility for new organizational forms in international relations.\(^9\) These criticisms suggest that globalization causes changes in political organizations that our focus on the nation-state tends to obscure. In short, political organizations today exist in a highly dynamic world of changing constituencies and demands. Political organizations therefore differ in important ways from other forms of organization. Does this in turn imply that political organizations have a qualitatively different relationship to their environment?

While the answer is not evident, the interrelationship of environment and political organizations is important theoretically for several reasons. Foremost is the question of the unit of analysis. If political organizations both shape and are shaped by their environment, then one cannot understand important issues like the form of an organization or organizational failure independent of the organization’s environmental context. This implies that theorists need to adopt both a more holistic unit of analysis—the organization-environment unit—and longitudinal analysis to assess reciprocal effects among variables. Second, because political organizations may differ from other organizational forms, political scientists cannot merely assume that the environmental effects about which sociologists and economists theorize will have the equivalent effects on political organizations. The environment as cause and effect remains underspecified in international relations theory.

International relations scholars need to disentangle the environment problem of organizational theory if we are to understand the problematic organizational form of the sovereign state in a globalizing environment.\(^10\) The term "globalization" itself suggests a changed environment, but is this dynamic a product of interstate behavior, an influence of such behavior, or both? International relations theorists seem to disagree. While individual scholars may not use the term "environment," taken together their works suggest that the role of the "environment"—or "structures" or "institutions"—is of central theoretical importance. The first question is what do sociologists, economists, and political scientists

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10. For instance see Robertson, pp. 15–30.
mean by the "environment"? The next section of the paper answers this question by reviewing the different treatments of this question. The paper then discusses how the nation-state, as a unique form, simultaneously faces and constructs unique environmental constraints and opportunities. It concludes with the argument from structuration theory that political organizations and their environments are mutually constitutive, a process which theorists of political organization need to investigate more rigorously. International relations theorists cannot understand the nation-state in isolation from its globalizing environment, nor can we understand the process of globalization without reference to the changing form of nation-states and their constituent political organizations.

**Economic and Sociological Perspectives on Organization: What Is the "Environment"?**

Terry Moe argues that "political scientists all recognize that administration is inseparably bound up with politics, but their theories do not reflect this and never have. Politics is understood in one way, organization in another."¹¹ Political scientists have contributed too little to organizational theory, a field that traditionally sociologists and economists have dominated. These two disciplines bring very different assumptions and perspectives to the problem of the interrelationship of organizations and their environments. To understand the "environment," therefore, one must begin with the works of sociologists and economists.

**Economic Explanations of Organization and the Environment**

To economists who theorize about organizations, the "environment" usually means the market. Economic perspectives on organization have grown out of the puzzle of the firm: if perfect markets are efficient, why do firms exist? Why are some forms of transaction internalized within an organization rather than exchanged in a free market? Ronald Coase’s seminal article argues that the organizational form of the firm emerges when the price mechanism fails to coordinate efficiently the contracting between factors of production. The firm therefore minimizes the risks and costs of short-term contracts between those factors.¹² In a similar tradition, Oliver Williamson argues that firms arise because they minimize the transaction costs associated, first, with large investments in transaction-specific assets and,

second, the bounded rationality of individuals.¹³ Likewise Alchian and Demsetz argue the firm exists to minimize the shirking associated with "team work," or labor that by its nature makes difficult the measurement of the marginal productivity of labor.¹⁴ Finally, some economists argue that firms are organized to minimize the information asymmetries associated with agency relationships.¹⁵ In sum, the common thread of economic theories of organization is that the organization known as the "firm" exists to solve market imperfections arising from contracting uncertainty, transaction costs, and information asymmetries.

These costs, uncertainties and information asymmetries are characteristics of the "environment" known as the market. The imperfections of the market explain the emergence of organization: in this sense, the environment provides incentives and sanctions that shape the form of organization and, in turn, makes firms efficient. But this hypothesized relationship of organizations and the environment rests upon three assumptions that may not hold for the organization of political behavior. First, the economists’ emphasis on contracting suggests that organizations are voluntary. As we shall see, this is an assumption with which sociologists disagree, as would many political scientists. Second, economic theories of organization tend to assume that contracts are enforced. In political organizations, by contrast, and particularly in international relations, there may exist no exogenous authority to enforce bargains and agreements. Third, economic theories of organization tend to explain organizations as a functional response to market failures. As is common with functional theories, they fail to explain why some Pareto-efficient forms of organization develop and yet others do not. This indeterminacy is particularly a problem in political organizations which cannot rely upon the exogenous enforcement of agreements. Stephen Krasner has argued, for instance, that to explain why some Pareto-efficient agreements occur while other equally efficient agreements do not, one must understand the relative distribution of capabilities among actors.¹⁶

This set of assumed environmental effects may not be applicable to our understanding of political organizations. Whereas economists assume voluntary participation in organizations,

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international relations theorists must cautiously consider this assumption. While some forms of international organizations clearly are voluntary—such as the new emphasis on "coalitions of the willing" in international peacekeeping forces—traditional forms of political organization like citizenship clearly are not voluntary. Likewise, the problematic enforcement of contracts in an anarchic international system has been a staple of international relations theory. Finally, the functionalism inherent in economic treatments of organization tends to overlook important socially valued goods, such as prestige and identity, that may have particular importance in international organizations. This suggests that economic treatments of organization may have limited application to international relations.

Sociological Explanations of Organization and the Environment

Sociologists offer a different perspective on the relationship between organizations and the environment. Max Weber argues that a particular form of organization, the bureaucracy, is a product of the modern state. Bureaucracies exist to facilitate the "plutocratic" redistribution of power by subordinating the administrative functions of the state to purely objective, nonparticularistic considerations—values and norms which are modern. Toward this goal, Weber argues that bureaucratization requires the concentration of social power in order to combat the discriminatory effects of social differentiation. Bureaucracies reflect in this sense the egalitarianism of the modern state that arose in response to the privileges of the medieval aristocracy. Nevertheless, Weber argues that since bureaucracies rely upon credentialed experts, they disguise the control exercised by bourgeois bureaucratic elite. Bureaucracies therefore are a coercive form of social power because they disguise particularism as technical, bureaucratic rules.\textsuperscript{17} Modern sociologists like Charles Perrow share this perspective of organizations as social power.\textsuperscript{18} Yet Perrow expands on Weber and identifies the important role of the environment in molding the form of organizations:

\ldots organizations may not be the product of technology and a structure adapted to it, ruled over by a few people who use them as tools. They may be things that take on a life of their own—organic entities or "natural systems" in their own right, going their own way and generating leaders who follow that way.\textsuperscript{19}

\textsuperscript{19} Perrow, p. 156.
Together Weber and Perrow provide two definitions of the "environment." One is the environment as social relations among individuals. Perrow and Weber both argue that bureaucratic organizations control social interactions among individuals, thus constructing a micro-level social environment. The second is the environment as social relations among organizations themselves. Organizations "take on a life of their own" and produce leaders and workers who in turn perpetuate the organization’s survival. In other words, the "environment" is a product of organizational behavior rather than a mere constraint on it. The environment is a dependent variable, an effect caused by organizations.

Sociologists also recognize the reciprocal effects of the environment upon organizations. The new institutionalism emphasizes that the environment provides not only material incentives (as economists argue) but social ones as well. For instance, John W. Meyer and Brian Rowan argue that organizational form arises from both technical and normative incentives. Organizations adopt similar or identical forms—a process known as isomorphism—because (1) that form is technically efficient; and (2) "organizations structurally reflect socially constructed reality" by becoming "sensitive to and employ[ing] external criteria of worth" and legitimacy.20 For this reason:

organizational success depends on factors other than efficient coordination and control of productive activities. Independent of their productive efficiency, organizations which exist in highly elaborated institutional environments gain the legitimacy and resources needed to survive. In part this depends on environmental processes and on the capacities of given organizational leadership to mold these processes. In part it depends on the ability of given organizations to conform to, and become legitimated by, environmental institutions.21

The very meaning of the word "institution" suggests the reciprocal influence of organization and environment. Lynne Zucker argues that institutions are highly developed and robust norms that resist change; they are "the process by which individual actors transmit what is socially defined as real, and at the same time, at any point in the process the meaning of an act can be defined as a more or less taken-for-granted part of this social reality."22 These arguments demonstrate that the new institutionalism understands the "environment" to be socially constructed but simultaneously influential on an organization’s form. While they agree with economic perspectives that the environment shapes the form

21. Meyer and Rowan, p. 53
of organizations, they agree only in part with the emphasis on technical efficiency and optimality; the institutional and normative environment is as important, if not more so, in shaping organizations. The environment is both cause and effect.

As with the economic perspectives on organization, sociological perspectives contain some important implications for the study of political organization. First, due to the reciprocal influence of organizations and environments, many sociologists take populations of organizations to be the unit of analysis. DiMaggio and Powell for instance argue that the proper unit of analysis is an organizational field: "organizations in a structured field... respond to an environment that consists of other organizations responding to their environment, which consists of organizations responding to an environment of organizations’ responses." 23 Similarly, Scott and Meyer argue that the proper unit of analysis is societal sectors which are "defined to include all organizations within a society supplying a given type of product or service together with their associated organizational sets: suppliers, financiers, regulators, and so forth." 24 These suggested units of analysis share an important recognition of the reciprocal relationship between organizations and environment; they evolve and change together. For this reason, sociologists argue that one cannot disentangle analytically organizations from environment; it becomes futile to argue about where the "organization" ends and the "environment" begins. One can distinguish sociological from economic conceptions of the "environment," furthermore, by their treatment of organizational "membership" and the importance of the material environment. Sociologists such as Weber and Perrow disagree with economists by arguing that organizations are coercive rather than voluntary. This arises in part from the emphasis on the normative rather than material environment. Unlike the economic world in which an exogenous agent enforces agreements, in the social world enforcement arises (at least in part) through social processes: norms violators lack legitimacy. For this reason social legitimation is important both within and among organizations. To Weber, legitimacy within bureaucracies is a powerful source of coercive power. To the new institutionalists like Meyer and Rowan, legitimacy explains organizational form.

While economists and sociologists have strikingly different conceptions of the "environment," neither seems appropriate for understanding the complex relationship between political organizations

in a globalizing world. Moe’s insights into the differences between political organizations and other forms suggest two important hypotheses about international organizations in this dynamic environment. First, although these organizations are proliferating, we would expect them to be inefficient if not designed to fail outright. Second, we would also expect that as their environment changes these organizations will evolve but will not necessarily become more efficient. These insights lead us to expect that globalizing processes will create a dense but inefficient network of international organizations. How can international relations scholars test these hypotheses?

Globalization and the Adaptation of Political Organizations

Globalizing processes highlight the different and sometimes contradictory ways that international relations theory tends to treat the problematic relationship between organizations and the environment. One theoretical approach, represented by the different traditions of neorealism and structural Marxism, treats the environment as a "structure." This tradition explains the environment much like economic theories of organization do: as an independent variable that explains the organization and behavior of states. Recent theoretical challenges to these structural approaches criticize this causal relationship; rather than the environment as an independent variable, constructivists borrow from sociologists to argue that states themselves construct their environment. In the constructivist approach, then, the environment is a dependent variable, the effect of the organization known as the state as well as the cause of the state’s organizational form. International relations theory is moving beyond these traditions of unidirectional causality; the next challenge for theorists is to develop methods that account for these reciprocal processes.

The Environment as an Independent Variable: Structural Theories

Structural theories of international relations attempt to explain the organization of states and their behavior as a product of a structure that is "free of the attributes and the interactions of units."25 Kenneth Waltz assumes that international structures are independent of states for explicit theoretical reasons:

Definitions of structure must leave aside, or abstract from, the characteristic units, their behavior, and their interactions. Why must those obvious important matters be omitted? They

must be omitted so that we can distinguish between variables at the level of the units and variables at the level of the system. The problem is to develop theoretically useful concepts to replace the vague and varying system notions that are customarily employed—notions such as the environment, situation, context, and milieu.  

Waltz therefore explicitly defines "structures" in a way that is designed to isolate their causal significance. In Waltz’s theory, the structure of international relations is characterized by its ordering principles (hierarchical and centralized versus anarchic and decentralized), the differentiation of units, and the distribution of capabilities among units. By assumption, then, Waltz’s structural theory rejects the possibility of reciprocal effects between the international structure and its constituent units, nation-states. To assume otherwise is to risk "vague and varying" conceptions of the "environment," a word that he singles out as having little theoretical meaning. The neorealist tradition that Waltz fathered therefore explicitly constructs structures as independent variables and chooses not to investigate the factors that may affect them. The genesis and change of structures, or the internal constitution and organization of states, are by assumption of no theoretical importance to neorealists.

Structural Marxism likewise explains the organization of the state as a product of structures, albeit different ones than neorealists look at. The two most important structures are classes and the state. Structural Marxists argue that these structures are causally connected—the underlying class structure explains the organization and behavior of the state. Bourgeois interests capture the state and use it to prevent an otherwise inevitable proletariat revolution. Class structures also have explanatory significance in international relations; world systems theorists like Immanuel Wallerstein explain the organization of the international system in terms of the underlying class relations between capital and labor. In this sense, like neorealism, structural Marxists seek to explain the organization of the state and the international system in terms of robust structures—classes and states—that are theoretically independent of their constituent units.

While neorealism and structural Marxism make fundamentally different assumptions about causal structures and the international system, they treat the "environment" similarly: it is a structure or set of structures that is independent of its constituent units. While this is an assumption that cannot be

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27. See Waltz, chapter five.
falsified, it is an assumption that weakens the explanatory power of structural theories. Philip Cerny argues that structural theories suffer from an inability to explain the origins and maintenance of structures, leading to a theoretical bias toward equilibrium conditions. Structural theories therefore suffer from an inability to explain changes in organizational form, whether the organization be the nation-state or the international system. This leads to a second common shortcoming of structural theories: they tend toward reification of structures. Because structural theorists take structures as unproblematic and have little interest in their genesis, they tend to assume a robustness of structures that lacks any theoretical specification. To Cerny’s criticisms one must add John Gerard Ruggie’s criticism of Waltz: structural theorists tend to conflate "structural" attributes with unit-level ones. Ruggie argues, for instance, that although Waltz asserts that the differentiation of states is a characteristic of the structure of international relations, in fact the differentiation of states is a historically contingent attribute of the states themselves. Structural theories therefore suffer from a static bias, a tendency toward the reification of structures, and the conflation of structures with unit-level characteristics.

In their treatment of structures, neorealism and structural Marxism treat structures much like the economic tradition of organizational theory treats the market. Like the marketplace, structures constrain nation-states by rewarding some actions and sanctioning others. These functional imperatives of structures may explain the organizational form of states, but like all functional arguments, structural theories cannot explain why some forms of organization emerge while other, equally efficient forms do not. This treatment of structures as an independent variable assumes that structures arise independent of their constituent units, much like economists assume that markets exist and function independent of firms. Some international relations theorists have challenged these assumptions, however.

Reciprocal Influence of Organization and Environment: Structuration Theory

Alexander Wendt has offered a cogent criticism structural theories of international relations. Echoing Ruggie’s critique of Waltz, Wendt argues that neorealism and Immanuel Wallerstein’s world systems theory cannot understand the structure of international relations without reference to their constituent units:

[Each approach] precludes an explanation of the essential properties of their respective primitive units. This inability leads to assumptions about primitive units that are without theoretical foundation, a move which in turn undermines the theories’ explanations of state action in the international system.\footnote{31}

To understand both state behavior and the influence of the international structure, Wendt argues that one must first analyze how state behavior produces and reproduces the very structures that neorealists argue causes such behavior. Rather than anarchy producing state behavior, states produce an anarchic structure.\footnote{32} In other words, if one assumes that structures are the "environment," the environment itself is problematic since it is produced by the behavior of its constituent units. In this view, the environment is the dependent variable: much like oligopolistic firms that coordinate their behavior to structure their market, states develop and follow rules that structure their environment.

Some theorists argue that the production of the environment occurs both at the international and domestic level. Constructivists seek to explain how social and ideational processes produce political "institutions," a term which assumes the sociological meaning that Zucker provides: a robust, embedded set of norms and rules that states accept as a taken-for-granted part of social reality. States themselves provide the normative meaning for these institutions, and hence can redefine that meaning. For instance, Robert Jackson explains the process of decolonization as the product of conflicting institutionalized values and beliefs; the emergence of an anti-colonial normative framework produced a change in the international structure.\footnote{33} Jackson suggests that ideas are refracted through "sticky" or robust institutions, which in turn construct the international structure; both ideational and structural processes therefore have explanatory significance. Similarly, anthropologist James Ferguson has argued that the "development conceptual apparatus" and its misguided conception of "lesser developed" nation-states ironically has imbued those states with the very social and developmental attributes about which the conceptual apparatus erroneously theorized. In this sense, interstate social processes produce an environment that did not exist a priori.\footnote{34} These social constructions in turn may take on a robustness and causal


significance independent of their initial conditions. In general, then, constructivist treatments of the international system explain its structure and institutions as the product of processes among nation-states themselves. This implies that nation-states and their citizens produce the very environment that structural theorists use to explain state the organization of the nation-state. If so, the structuralist argument becomes tautological: it explains state behavior as a product of itself through the intervening (and arguably epiphenomenal) variable of structures.

Depending upon one’s definition of the "environment," it is both the product of the social interaction among states as well as an explanation for the organization of the nation-state. To capture these mutually constitutive process, scholars like Alexander Wendt and Philip Cerny have argued that political science should borrow structuration theory from sociology. First proposed by Anthony Giddens, structuration theory argues that structures do not exist independently of the actions and agents they govern. Structuration is the process of the mutual constitution of structures and agents, a "process of continuing interaction between agent and structures, in which structures which generally are constraining can also change and be changed in certain conditions."35 In other words, structuration captures the social processes that constructivists explore while acknowledging the constraining effects that institutionalists emphasize. In this approach, the environment is both a cause and an effect of political organization.

Two theorists in particular demonstrate sensitivity to the mutually constitutive effects of the environment and political organization that structuration theory identifies. Sociologist John Meyer argues that social processes explain not only the production of international institutions and structures but the organizational form of states themselves. Meyer develops the concept of isomorphism as an explanation for the convergence of the political and social institutions of different states around a common organizational form. He explains this convergence as the consequence of a social process between states: "modern nation-states are constituted and constructed as ultimately similar actors under exogenous universalistic and rationalized cultural models."36 This universally shared model of the "state" ascribes norms, status and expectations to states that governments seek to replicate as a demonstration of their legitimacy. Isomorphism and isomorphic change are one consequence of this process. But two others are important as well. First, "centers of world discourse," or epistemic communities of transnational social and political thinkers, transfuse norms and models of statehood to

35. Cerny, p. xi.
nation-states. Second, nations-states adapt to and change in response to exogenous, socially constructed models rather than endogenous, politically demanded economic and social needs. Global networks of media, technology and finance facilitate the transmission and construction of these models of statehood, furthermore. Meyer’s concept of isomorphism turns the organization of the state inside out: rather than being organized in response to domestic pressures and needs, the state organizes in response to the pressures of the global social environment. This conception nevertheless challenges the effects of the international system that structuralists use: normative sanctions and rewards, rather than material ones, cause the convergence around common organizational forms within the nation-state. In Meyer’s conception, then, the structuration process is purely a sociological one of the construction, maintenance, and reconstruction of normative structures.

Philip Cerny explicitly adopts structuration theory but differs from Meyer’s conception of the effects of the environment on political organization. Cerny acknowledges the importance of interstate processes for the maintenance of the state’s institutions and organizational form: "a state’s relations with other states have historically had a mutually reinforcing effect on state structures." But Cerny’s work also demonstrates greater sensitivity to the rigidities of institutions that in turn constrain both states and the agents within them:

The architecture of politics, then, represents neither an ‘orthodox structure’ (nor a function of such structures); nor is it simply an ‘aggregation of interests’ or of individual choices in a market-type context. Rather it is constituted by and through the outcome of myriad historical ‘accidents,’ which create structures of constraints and opportunities. These sets of constraints and opportunities in effect form structured fields of action upon and within which agents make choices.

This analysis reflects the robustness of normative structures that new institutionalists have identified. Political structuration therefore consists both of the process of the mutual constitution of the environment and organizational form on the one hand, and of the institutional robustness that slows the process through which organizations are deconstructed and reconstructed on the other. One might argue that such institutional robustness may explain the "equilibrium" conditions in which the organizational

37. For a discussion of the technoscape, mediascape and finescapes, see Arjun Appadurai, Modernity at Large: Cultural Dimensions of Globalization (Minneapolis: University of Minnesota Press, 1997) chapter 2.
40. Cerny, p. 223.
form of the state remains relatively unchanged. The state is historically contingent and yet paradoxically is locked in its organizational form.\textsuperscript{41} To understand this paradox, Cerny argues one needs to conceive of the organization called the "state" as a set of interactive processes within the state itself as well as among many states. This conception of the state implies that the proper unit of analysis for international relations is a relational unit between the variables of political organizations and their globalizing environment (or alternatively, between "agents" and "structures").

Structuration theory acknowledges the reciprocal effects of the environment and the organization of political life. In this respect, it comes closest to sociological conceptions of organizational theory. Nevertheless, Philip Cerny’s nuanced conception of the process of structuration incorporates the findings of the new institutionalists that "structures" or "institutions" become rigid once they are constructed. For this reason, political organizations depend upon their historical path of development. Cerny notes that:

Structures arise from non-replicable, unique mixtures of historical accident, coincidence, precedents (reinterpreted and refashioned in new circumstances), and design. Once established, however, structural patterns tend, in a probabilistic fashion, to be reproduced, whether because of biases built into the structures themselves, or the expectation held by agents, or the linkages built into structural fields. They build into coherent processes of development.\textsuperscript{42}

Agents construct their rule environment through processes that constructivists have identified. In turn social actors (whether citizens or states) behave as if the structures are real, providing them with an "objectivity" that is socially constructed. The structures become linked, however, to other structures, creating a "coherent process of development" in which structures sustain and perpetuate each other. These rigidities explain why structural theorists (perhaps reasonably) assume that structures are static and unproblematic while constructivists see structures as dynamic. In short, the environment is both a dependent and independent variable. These correlations among variables suggest, however, that structuration theorists must develop new research methods.


\textsuperscript{42} Cerny, p. 27.
Conclusions: Methodological Challenges for International Relations Theory

Structuration theory poses obvious methodological problems that must be solved before international relations theorists can investigate empirically the process of structuration in a globalizing world. Because "organizations" and "environments" each are both dependent and independent variables, traditional linear regression techniques will explain very little of the dynamics of globalization that we observe. Regression can account for interactive effects among the dependent and independent variable only through corrections for serial correlation. This technique has two problems, however. First, corrections for serial correlation assume that the dependent variable is correlated only with itself; structuration suggests, however, that a time-lagged variable that corrects for serial correlation may in fact be correlated with other independent variables. That is to say, one could hypothetically observe and measure "structures" over time and develop a model in which a time-lagged structure variable is an independent variable. This structural variable may be highly correlated, however, with our observations of "organizations." Second, regression techniques assume that linear, additive processes occur between variables. Regression cannot explain nonlinear dynamics among variables, nor can it explain the discontinuous nodes in data that are of most interest—such as organizational lock-in or, conversely, times of rapid organizational change. In short, traditional political science uses empirical techniques that assume linearity and equilibrium. But sometimes social phenomena do not regress to the mean—organizations like the nation-state become constant, to the point that additive or subtractive processes will not alter their form.43 That is to say, a "dependent" variable may cease to depend upon explanatory variables.

To understand the reciprocal effects of political organization and environments, international relations scholars need to embrace two methodologies. The first is longitudinal analysis that is sensitive to "breakpoint" changes, which may be defined as those points in time at which "parameter values pass beyond some threshold and shift exponentially."44 Zucker for one argues that because institutionalization is a process, research methods need to be sensitive to the dynamics of cultural production, transmission, maintenance and resistance to change.45 For these reasons our methods must be attuned to path dependent processes through which political organizations become locked into their form. Longitudinal analysis presents its own problems, however. Because the processes through which states have produced

45. Zucker, p. 87.
the international system (and the international system has reproduced nation-states) have been underway for centuries, political scientists have obvious empirical barriers to understanding the "initial" conditions of the system (though by definition such initial conditions will merely reflect the assumption as to when the reciprocal constitutive processes began). Likewise, the empirical measurement of these processes through time faces barriers both to the collection and coding of historical information and the simple fact that these processes evolve slowly. A longitudinal analysis requires a research project of such scope that it may exceed the life span of researchers.

An alternative methodology may be computer simulations. Complexity theorists have used computer simulations to demonstrate reciprocal effects among variables and path-dependent processes in a diverse range of biological and social processes. Robert Axelrod has used computer simulations to show, for instance, how agents produce norms that become robust and constrain behavior. Computer simulation allows the theorist to accelerate time processes in order to observe structuration processes in silico. While this technique is no substitute for empirical observation, it is arguably no different than physicists who posit the existence of unobserved quarks in order to explain subatomic dynamics. These deductive methods may provide us with clues for subsequent empirical investigations of reciprocal effects between political organizations and their globalizing environment. Already, the natural and physical sciences have used computer models of complex adaptive processes to understand the complex interactive effects among actor-environment units, whether they are neural networks or epidemiological patterns.

All this suggests that the methods of international relations have yet to catch up to its theorizing about political organization and globalization. Structuration theorists have developed a sophisticated approach to the agent-structure problem that Wendt brought to our attention. Structuration theory avoids the reification and tautologies of structural theorists, who merely assume the existence of structures. It emphasizes, however, the important constraining effects of the structured environment. In this respect, structuration theory represents an important synthesis of existing approaches to the interaction of the environment and the organization of political life. To observe the interactive processes of structuration, however, international relations scholars need to develop new techniques that are commensurate with

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its theories. If it can do so, we may finally make a contribution to organizational theory, rather than simply borrowing from it.
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