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Introduction: Systems Theorizing in IR

Mathias Albert and Lars-Erik Cederman

Systems theorizing about world politics has fallen on hard times. The decline is especially striking in view of the almost hegemonic position enjoyed by systemic theories in International Relations (IR) scholarship in the 1980s, when their rivalries dominated the field's discourse (as in the neorealist-neoliberal debate), and even 'reductionists' felt compelled to situate their work in relation to a systems-theoretic baseline (Baldwin 1993; Keohane 1986).

However, much has changed since the 1980s, both in IR theory and on the ground in world politics. On the theory side, the growing dominance of rationalist theorizing has highlighted micro as opposed to macro processes (Lake and Powell 1999a); the literature on democratic peace has shown that the attributes of states are of decisive importance for the nature of international politics (Russett 1993); constructivist critiques of neorealism have argued that many of its claims are historically contingent rather than universal (Ruggie 1993); and post-modernism has contributed to an intellectual climate sceptical of any and all 'meta-narratives' (see Lyotard 1979).

And on the ground at least two changes have called systemic theorizing into question: the end of the Cold War, perhaps the most important change in international politics in 50 years, which no systems theory predicted and which was precipitated largely by domestic changes within the Soviet Union, as well as the growing importance of non-state actors in world politics, which did not fit neatly into the state-centric systems theories that dominated the field before. For these and other reasons the fashion today in IR is decidedly toward micro- or unit-level theorizing with some scholars even calling for folding IR into comparative politics. Systems theory, it seems, is 'all washed up'.

Notwithstanding these theoretical and empirical changes, however, in another sense the move away from systems theorizing is surprising, since the need for it has if anything grown. Economic globalization continues to deepen; global warming seems to be increasing; terrorism has become transnational in scope; the proliferation of weapons of mass destruction is

2 *Conceptual Overview*

now widely seen as an issue of universal collective security; the globalization of mass media and culture is increasingly creating a world society; and in response to such challenges the states system itself has shown increasing coherence in the form of deepening global governance, notwithstanding the recent conflict over the Iraq War. In short, the world system is more a single 'system' than ever before, the structure and dynamics of which only a truly systemic perspective can fully grasp.

In addition to these changes in the real world, there have been intellectual developments elsewhere in the social sciences that point toward the possibility of renovating systemic theorizing in IR, rather than just dusting off old theories and putting them back on the shelf. In this context, different forms of systems-theorizing present themselves, ranging from quite far-reaching reformulations of more traditional systems approaches in IR to the adoption of newer approaches which up to now remained largely beyond the purview of the discipline. We are thinking here in particular of traditional theories, such as in the context of 'English School' and international society studies, re-readings of theoretical agendas by means of 'relational thinking', inspections of the uses of various forms of 'complexity theory', innovations in macro-modelling techniques, both in terms of equation- and agent-based modelling, and what is more or less an import of sociological theories of (world) society to IR in the case of sociological neoinstitutionalism or 'modern systems theory'. While the different approaches vary considerably in terms of theoretical sophistication and complexity as well as in terms of how easily they can be 'translated to' or merged into established discourses of IR theory, taken together they do reflect an increasing propensity within IR to (again) deal with systems theorizing.

By way of introduction, the present chapter in the following will proceed in three steps. The next section will briefly inspect a number of systems theoretical research traditions in the discipline in order to demonstrate both their status and uses in the development of the field. Rather than provide a full-fledged historical overview, the main thrust of the argument here is that while IR indeed professes a rich tradition of systems theorizing, particularly in the 1960s, systems theoretical approaches became increasingly concentrated in structural realism as but one systems theoretical tradition beginning in the 1970s. In the following section, we then consider how rationalistic theorizing has tended to dominate the current IR literature and how this has triggered a shift away from systemic theorizing. The historical survey of systems approaches and the micro-theoretic reaction then serves as the background for the discussion of the following section which attempts to more closely establish what is meant by 'systems theorizing' in the present context and what is gained from adopting such a perspective. What constitutes a 'systems theory' in IR is in the end a question open for debate, yet we will seek to establish some signposts in this respect. The final section of this chapter will identify where the following chapters stand in

relation to these signposts, outlining some difficulties and promises in this respect.

Before doing so, however, a few remarks on the history of the present book are in order to situate its individual contributions. The current volume might at first seem to be guilty for what could appear to be a degree of incoherence between its contributions not entirely unusual for edited books. However, in its current appearance it is the result of a number of deliberate choices which need to be made explicit. The following chapters are based on a selection of contributions which originally were made at two consecutive workshops held at the Mershon Center of Ohio State University in Columbus and at the Institute for World Society Studies at Bielefeld University. The purpose of these workshops was to scan the current field of IR and see what 'new' kinds of *macro*-theories are on offer (in addition to more established approaches such as structural realism or world systems theory). However, it was quite intriguing to witness that although an explicit reference was made to the macro-level in both the invitation to and the title of the aforementioned workshops, most participants either in writing or in their oral comments at these events kept addressing the issues discussed in terms of *systems* theorizing. Needless to say, not all of the contributions fall into the category of any kind of systems theory in the narrower sense. Some do, some relate to, some criticize systems theory; some are primarily interested in explaining change in the *international system* and not necessarily in systems theory (that is, sticking more to the original 'macro' idea), but quite interestingly could not escape relating to systems theorizing either, in this sense reflecting and hopefully correcting the somewhat odd situation in IR theory that much thought about the international systems has been spent in sheer ignorance of systems theorizing.

If there is a 'uniting bond' behind the chapters of this volume, it is their shared anti-individualist methodology (although Wendt's chapter provides an interesting twist in somehow reinserting individualism into anti-individualism). They are, however, by and large not contributions about methodology, but contributions which address the issue of whether and to what degree various forms of systems theorizing help us to understand change in contemporary world affairs. It is in this sense that they commonly seek to explore the ways in which IR as a field continues a lively tradition of systems theorizing, which has to varying degrees characterized its theoretical evolution at least since the 1950s.

International relations as a tradition of 'systems-theorizing'

If the geographic scale covered by a specific form of social relations is used as a benchmark, then any theory of IR almost by definition constitutes a systems theory, even if it were purely focused on the rational choices made by individual actors as its prime analytical tool. This of course is not the

usual understanding of what a systems theory is about, which has usually more to do with the level of analysis on which a theory operates rather than with the geographic scale and scope of the subject studied.

Meanwhile, however, it can be noted that traditions of systems-theorizing in IR mostly stem from the adaptation of cybernetic and systems theories to the social sciences. While much merit goes to Kenneth Waltz's (1959) doctoral dissertation on *Man, the State, and War* in raising awareness for the possibility to distinguish an analytical dimension of the international system, the first more systematic attempt to introduce systemic theorizing *specifically* for the purpose of analyzing international politics was provided by the 1957 publication of Morton Kaplan's *System and Process in International Relations*.¹ In this book, Kaplan identifies the international system as a social system of action, constituted by the observable regularities among its variables. Yet Kaplan does not unequivocally opt for the 'systems-level' in his analysis. Rather, he argues that only in international systems with a high number of participating actors does the international system acquire a life of its own in that interaction patterns become so complex that single political actors or systems can no longer force their preferences through against the international system.

In contrast to Kaplan, it was not until Karl W. Deutsch's work, and particularly with *The Nerves of Government* (Deutsch 1966), that more advanced cybernetic approaches were applied to the study of politics and international relations and that these were conceptualized as primarily *systems of communication and information* in what amounted to an early 'communicative turn' in IR (see Albert, Kessler and Stetter 2008). Deutsch provides a sophisticated account of social systems as systems consisting of networked communication and information. Learning systems constitute the most advanced form of social systems in that they can autonomously change their goals in processes of complex learning based on self-regulating communicative feedback loops with highly complex systems being able to develop a system consciousness, understood as an ensemble of feedback loops. For Deutsch, the *political system* of society has the particular function of allowing society to regulate itself and ensure its ability to learn.

While most IR theoretical debates, at least since the mid-1970s, largely abstained from theorizing building on the cybernetic or systems-theoretical approach, it arguably nonetheless had an impact which left more than marginal traces in general IR theory. Thus, for example, Deutsch's (1966) conceptualization of power as the 'ability to afford not to learn' introduces a notion of power as a basically relational and contextual property of social systems; his insight that governing appears 'less as a problem of power and somewhat more is a problem of steering' (ibid.: XXVII) could arguably be seen as a forerunner to contemporary conceptualizations of global governance (with and without government); and his criticism of thinking about complex social systems in terms of equilibria criticizes the

notion of the international system as a power equilibrium before such a notion was systematically introduced on the system level in IR literature.²

The many traces left by the systems theoretical thought of Deutsch and others notwithstanding, however, its *programmatically* impact on the mainstream IR theoretical literature gradually faded away. In its stead, Kenneth Waltz's (1979) *Theory of International Politics* ushered in a particular approach to systemic theorizing in IR that came to dominate the discipline during the succeeding two decades. The Waltzian version of structural realism is so familiar that it needs no introduction. Inspired by microeconomic analogies, Waltz proposes a systemic perspective that centers on a narrow notion of anarchic structure in international life that stands in stark contrast to the 'hierarchy' of domestic politics. The theory is fundamentally structural, because Waltz believes that international outcomes result from systemic constraints rather than from domestic factors: 'The structure of a system acts as a constraining and disposing force, and because it does so systems theories explain and predict continuity within a system. A systems theory shows why changes at the unit level produce less change of outcomes than one would expect in the absence of systemic constraints' (Waltz 1979: 69). Clearly, the Waltzian notion of structural equilibrium is fundamentally conservative, because it highlights the stabilizing influence of systemic constraints as opposed to theories that assume structural change and dialectical transformations drive history (see, for example, Gilpin 1981).

Waltz's relatively sparse and static notion of structure has been thoroughly criticized in more recent book-length attempts to build systemic theories. Buzan, Jones and Little (1993) develop an extended version of Waltzian neorealism that broadens the notion of structure to encompass historically relevant ordering principles beyond anarchy. Less ambitiously, Jervis (1997) catalogues a series of mistakes that results from ignoring systems effects, such as positive feedback and historical contingencies, but stops short of constructing a comprehensive theoretical alternative to Waltz's perspective. Offering precisely such an alternative theory, Wendt (1999) also uses neorealism as a point of departure. Based on a thorough engagement with Waltz's meta-theoretical principles, his perspective rejects the materialist approach to structure by stressing the need to consider the influence of ideational constructs such as different 'cultures of anarchy'. While fundamentally systemic in its commitment to top-down causation, however, Wendt's theory refrains from endogenizing the state and limits itself to considering micro-level mechanisms of identity formation rather than opening the full analytical scope to systemic processes.

The new micro-theoretic consensus

Despite these valuable, if only partially complete, attempts to go beyond Waltz's systems theory, most IR scholars have vacated the field of systemic

theorizing and the development of social theory of world politics more generally. As already hinted at above, Waltz's insistence that domestic politics be immaterial to theorizing about world politics became increasingly untenable in view of the changes that brought about the end of the Cold War (Katzenstein, Keohane and Krasner 1998). In addition, many scholars felt that the increasingly abstract debate between neorealists and neoliberals was not bringing the field forward. Often labeled 'paradigm fatigue', there was an increasing dissatisfaction with the sweeping and empirically sketchy nature of the claims advanced in the debate as well as a desire for more precisely developed theoretical arguments supported by models.

To a large extent, rational-choice theorizing addresses these problems head on. If neorealist theory dominated the intellectual agenda in the 1980s, by the end of the 1990s, the 'strategic choice' approach, based on methods inspired by microeconomics, ascended to a central position in the field (Lake and Powell 1999b). While game theory became the main tool of theory-builders, empirical analysis was conducted increasingly with statistical tools.

The adoption of these methods carried with it important advantages. For one, the gap between IR and comparative politics could more easily be bridged based on the assumptions of the political economy literature (see Lake 2003). This opened an avenue for a pooling of intellectual resources which promised to integrate the intellectual efforts in political science, thus breaking the relative isolation of IR theory from the rest of the discipline.

For all the advantages associated with the precision of rationalistic scholarship and the convergence of the research agendas of IR and comparative politics, these developments have come at a significant cost. Rather than constituting a new wave of *international* political economy, the trend could perhaps be better characterized as *comparative* political economy. While it is to be welcomed that the new literature rejects Waltz's narrow construal of systemic theorizing by routinely factoring in domestic-level influences in the analysis, the center of attention has gradually shifted away from the 'larger picture'. In this sense, the search for rationalistic 'micro-foundations' risks throwing the baby out with the bathwater.

Wedded to methodological individualism, rationalist scholars subscribe to an analytical, rather than to a synthetic or holistic, approach. The analyst attempts to cut up social reality into convenient 'boxes', which are then analyzed separately. According to this 'partial equilibrium perspective', the hope is that the findings will add up un-problematically (Lake and Powell 1999b: 17). This logic implies that researchers should proceed by isolating single theoretical dimensions and then tease out their effects *ceteris paribus*.

Interestingly enough, constructivist scholarship has also experienced a similar shift of focus to micro-level issues, at least in its 'moderate' and empirically applied guises. Some of the first explicitly constructivist studies in IR engaged in a vivid debate about the agent-structure problem, and

came to the conclusion that neither the micro nor the macro level should be privileged (Wendt 1987; Dessler 1989). More recently, however, a number of 'moderate' constructivists argue that this research tradition needs to pay more attention to agency (for example, Checkel 1998). Studies of this type tend to address empirically testable research questions covering foreign policy decisions. This research is often framed in close relation to the research agendas of mainstream researchers who rely on rationalistic approaches, although with a broader scope of independent variables that includes cultural and identity-related aspects. As discussed by Adler (2002), topics of this kind consist of diffusion and learning (Finnemore and Sikkink 1998), socialization (Schimmelfennig 2003), social communication and persuasion (Risse 2000) and institutionalization (Ruggie 1998).

Another important problem follows directly from this limitation of social complexity. Owing to the methodological demands of rational-choice theory and quantitative methods, mainstream researchers subscribing to the micro-theoretic paradigm have to make strong assumptions about temporal and spatial dependence. While it is possible to construct games with repeated interactions, most game-theoretic analyses assume a very limited temporal scope compatible with the individual actors' decision-making horizons. Moreover, the important role played by the notion of equilibrium in game-theoretic models limits the analytical scope to deviations from such constellations. Changes can be studied, but typically through externally imposed parameter adjustments in comparative statics analysis rather than as endogenous processes involving inherent dynamics (Snidal 2002).

Similarly, quantitative methods also reduce analytical flexibility as regards temporal dependency. In their simplest variants, regression models assume that all observations are independent of each other in both time and space, a strong assumption that precludes historical dependencies. By and large, the researcher is advised to avoid analyzing endogeneity directly (King, Keohane and Verba 1994) or considering counterfactual scenarios that stray too far from the historical path (King and Zeng 2007). However, time series and duration analysis allow for temporal interaction effects, albeit within very narrow constraints based on well-specified lag structures that may not capture historical contingency (Pierson 2004). On the whole, the methodological demands of contemporary political science research has come to drastically reduce the complexity of researchers' agendas, both in social and temporal terms.

The case for systems theories of world politics

This book presents systems theories that partly challenge and partly complement the dominant micro-theoretic literature described in the previous section. According to our understanding, *systems theories strive to account for large-scale social forms by uncovering their structural logic and the processes that*

(re)generate them. In this sense, systems-level theorizing helps us understand phenomena in world politics in terms of a more wide-ranging historical and geographic context than is usually the case in today's IR theorizing.

This definition of systems theory calls for further clarification in several respects. First, following Simmel's original notion, social forms encompass a broadly construed category that includes behavioral interactions, relational and organizational structures, as well as cultural constructs and identity configurations (Cederman 2005). Second, the focus on process explanations typically implies the search for causal mechanisms. Instead of a mere search for 'micro foundations' (Hedström and Swedberg 1998), systems theorizing presupposes mechanisms which do not merely operate bottom-up but that also feature a top-down logic. Third, it should be noted that our definition goes well beyond what is usually implied by 'systems-level' theories in IR. In particular, systems theorizing entails more than merely plugging systemic variables in to micro-level models (cf. Fearon 1998). Fourth, systems theory is an ambitious form of theory that implies that explanation is couched within a larger set of social relations. Other systems theories, however, are more modest in that they refrain from offering general interpretations of social events in favor of identifying and comparing mechanisms within processes of less general scope (Tilly 1995; Elster 2007). In these cases, the goal is to account for specific outcomes in time and space based on historically unique concatenations of mechanisms rather than classifying them as instances of universally operating processes.

It should be noted that the understanding of systems theories used here can accommodate quite a variety of approaches. However, based on the definition given above, they all share a common substantive interest in an international or world system (or society) and thus an (albeit not exclusive) interest in what is usually referred to as *macro*-level phenomena as well as an understanding that processes on the systemic level cannot be reduced to the properties and interactions of parts of the system (see also next section). Against this background, they however also differ significantly as to some of the specific understandings of what a 'system' is, with the approaches drawing on the works of the German sociologist Niklas Luhmann being the ones with the closest link to the cybernetic systems theoretical tradition in the natural and social sciences in a narrower sense.

As does any other family of theories, systems theorizing carries with it analytical costs as well. By definition, theories and models aspiring to capture systemic phenomena need to be *more complex* to stretch over a larger explanatory scope. Before engaging in ambitious and complex systems-theoretic projects, it is therefore necessary to consider the gains of this type of analysis. What is the value added of systems theorizing in IR?

Capturing social complexity

Perhaps the most important advantage of systemic approaches is that they allow us to grasp social complexity explicitly in ways that elude micro-based

studies. Despite the hopes of the adherents of a covering-law perspective, it is often misleading to craft explanations of international politics based on decontextualized, isolated social units. In fact, it can even be claimed that political science as a whole has undergone a 'decontextual revolution' (Pierson 2004). In contrast to this dominant perspective, the basic claim of systems theory coincides with that of the older tradition of world-system analysis: 'to ignore this external context is to miss the most important determinants of political and economic structures. In crucial respects, all social units are constituted from the outside in' (Collins 1999: 6).

Whereas conventional rational-choice models limit the scope to a small number of exogenous actors locked into a fixed and simple bargaining situation, systems-theoretic analysis is capable of capturing the entire international system or large parts thereof, including complex interaction topologies that are determined by explicit social interactions that may engender and transform the key actors. Systems theories can thus help us bridge the gap between rationalist micro-level postulates and corresponding macro proxies (for example, Sambanis 2004). Rather than merely postulating micro-level mechanisms that somehow add up to empirically observed patterns, the approaches of this book introduce explicit relational constellations that help situate social actors in their proper historical and institutional context.

Social network theory serves as a major source of inspiration for these analytical efforts. The analysis of large social systems with many actors cannot treat social interaction patterns as if they were fixed and given. Instead of reducing complexity by treating social interactions as if they were equally likely across the board, systems theories engage the issue of who interacts with whom and for what reasons (Watts 2003). Analytical theories of boundary formation (Abbott 2001) and organizational complexity (Miller and Page 2007, Chapter 11) can also contribute to efforts at contextualizing agency in world politics (see Albert, Jacobson and Lapid 2001; Kahler 2009).

Beyond their contribution to relational and organization analysis in general, systems-theoretic approaches to world politics render visible an important type of social phenomenon that is hard, or even impossible, to discern at lower levels of aggregation, namely emergent effects. While notoriously difficult to pin down (Sawyer 2002), emergence usually refers to the fundamental irreducibility of complex systems to their constitutive parts (Cederman 1997). The failure of reductionism in such settings often relates to the non-linearity of the systemic interconnections, something that implies that the whole is literally more (or less) than the sum of the parts (Simon 1981).

Simple forms of emergence may be compatible with methodological individualism, but as illustrated by Durkheim's non-reductionist social theory, there is also a deeper sense of emergence that relies on 'downward' causation (Sawyer 2002). In this case, emergent social phenomena acquire a causal impact and cannot even in principle be reduced to laws and mechanisms

operating at the micro level. In a careful conceptual analysis, Crutchfield (1994) calls this type of emergence 'intrinsic' because it presupposes that novelty be detected and acted upon by the systems' agents. Thus, this deeply constructivist notion of emergence requires that the actors themselves contribute to transforming the rules of the game through the introduction of new abstract concepts and principles such as sovereignty and national self-determination (Hinsley 1986).

While seldom made explicit, accounts of emergence can quite frequently be found at least implicitly in the vast literature on globalization and global governance. In fact, quite often when globalization is described as something 'genuinely new', what is referred to are emergent properties of a system. In this sense, the inquiry into emergent structures could be said to have been at the core of the agenda on globalization research from its very beginning. Most prominent in this respect have been studies of the global financial system that has been characterized as a self-referential system which cannot be reduced to the sum of international monetary transactions, is characterized by the evolution of its own symbolic media, and which most visibly is prone to all the 'unexpected' twists and turns of complex, non-linear systems (see Willke 2007). Yet the idea that the global system is increasingly characterized by new and 'emerging' structures has also found its way into numerous other issue areas, for example the study of war and military strategy, even leading Richard Betts (2000) to ask whether strategy is an 'illusion' under the conditions of complexity and non-linearity.

Steering, political or not, is of course all but impossible: it happens all the time (Luhmann 1989). The question is not whether steering can or should happen, but how it can be successful under conditions of non-linearity. It seems clear in this respect that theories and conceptions of steering need to be much more complex in themselves in comparison to approaches operating on the inherent assumption of the possibility of (linear) control and that thus studying global governance not only raises conceptual, but also empirical challenges in that already analytically complex approaches to the steering of complex social systems must be questioned and possibly adapted to and reformulated in their application to newly emergent structures in global society.

The difficulty of doing so becomes even more clear if the consequences of complexity for thinking in terms of 'levels' are taken into account. While emergent levels and structures are a distinct feature of complex systems, it is next to impossible to represent them according to an image of clearly separate system levels. Many contributions have emphasized that 'the local' and 'the global', as well as a 'regional' or a 'nation-state'-level in between, are inextricably linked in many ways. Complexity theory radicalizes this insight in that it becomes almost impossible to analytically isolate distinct system levels. This is not to deny that there are such distinct levels, yet they are related to each other in relations not of exclusive, but of inclusive hierarchy.

Inclusive hierarchy means that single system elements can be addressed by and be part of different system levels at the same time without this leading to a conflict. Different levels of 'statehood', for example in the European Union, would be a case in point.

Almost by definition, such an understanding also challenges the common understanding of the social world as being textured according to the distinction between *micro*- and *macro*-level phenomena. Although still sticking to this distinction, its fragility has been convincingly demonstrated in a recent analysis by Karin Knorr-Cetina, in which she argues that the 'new terrorist societies' 'illustrate the emergence of global microstructures; of forms of connectivity that combine global reach with microstructural mechanisms that instantiate self-organizing principles and patterns' (Knorr-Cetina 2005: 214). The at first seemingly paradoxical notion of 'global microstructures' here only becomes understandable if the 'micro' is read not as referring to (local) geographical scale, but to 'principles of connectivity and association' (Knorr-Cetina 2005: 231, footnote 4). In other words, this means that micro-structures, with specific means of (self-) coordination on a global scale can influence macro-structures without themselves relying on systems-level organizing principles, thus in the end blurring the distinction between 'micro' and 'macro' as meaningful analytical distinctions.

Capturing temporal complexity

We have argued that systems theory offers an important counterweight to the decontextualization of social life that dominates the contemporary political science literature. In addition, the perspectives covered in this book help the analyst capture temporal complexity that is normally swept under the rug by conventional approaches. Indeed, the main goal of the micro-theoretic approaches is to derive an equilibrium that can be used for empirical validation. Thus, rational-choice theory assumes that history is 'efficient' in the sense proposed by March and Olsen (1998: 314): 'The presumption is that political bargains adjust quickly and in a necessary way to exogenous changes, and changes in orders are explained as stemming from exogenous changes in interests and resources.' As we have argued above, this is also an accurate description of Waltzian neorealism, which stresses negative rather than positive feedback. Clearly, Waltz (1979) interprets systems theory narrowly as being geared toward homeostatic equilibria.

By embracing an explicit non-equilibrium perspective, the systemic approaches considered in this book are not bound by any preconceived existence of historical endpoints or stable, unchanging casual forces. If an equilibrium results, this should be the result of the analysis rather than a pre-theoretic assumption. The systems perspective thus allows theory to embrace complex historical dependencies. In doing so, the systems-theoretic tradition draws on what could be called 'sociological process theory', which has deep roots in social theory (Cederman 2005). Pioneered by Simmel and

Mead, this perspective privileges processes over fixed substances. Languages, social structures, norms and conventions are created through 'societal production, according to which all these phenomena emerge in interactions among men' (Simmel quoted in Wolff 1950: 13). While the influence of process theory was keenly felt in American sociology in the early decades of the twentieth century, mainstream sociology went off in a very different direction, largely under the influence of Parson's static theorizing (Levine 1991). However, the process-theoretic heritage is kept alive and well by contemporary sociologists under various headings, such as 'relationism' (Emirbayer 1997), 'structuration' (Giddens 1979), a 'morphogenetic' perspective (Archer 1995) or the 'Chicago School' (Abbott 2001). If Parsons inspired Waltz, systems theorists writing about political phenomena are more likely to find inspiration in the process-theoretic tradition (Tilly 1995).

Historical sociology is another literature that is broadly compatible with systems theory. In his introduction to a volume dedicated to the application of such approaches to world politics, Hobden (2002) argues that historical sociology usefully problematizes otherwise reified social units, such as the state, and counters ahistorical isomorphic backward projections of modern conditions throughout world-historical time. As soon as the assumption of immutable and general causal laws is dropped, complex temporal effects can be explicitly analyzed. From studies of complex systems, it is well known that positive feedback effects makes history fork in radically different directions as a consequence of small variations in the initial conditions. Such conditions conspire to make prediction extremely hard, but by no means excludes systematic search for the historically specific mechanisms that generated the outcome in question (Pierson 2004). Explanations of the diffusion of conflict and revolutions fall into this category (for example, Kuran 1991).

Inspired by historical sociology, a process-theoretic worldview also highlights the relevance of long-term processes, in contrast to the relatively immediate impact of the independent variables that mainstream researchers rely on. Freed from the constraints of individual decision-making horizons, and units of observation defined as 'country years', systems theorizing entertains the possibility of simultaneous causal influence at different time scales, including the *longue durée* (Braudel 1980). As vividly illustrated by Pierson (2004), slow-moving causal processes such as demographic trends, democratization, nationalism and cultural change influence contemporary politics in fundamental ways.

If interpreted in a fundamentally dynamic sense rather than as Waltz's post-hoc justification of given assumptions, evolutionary theory offers important clues as to how institutional innovation occurs. Spruyt's (1994) historically informed explanation of the rise of the territorial state in early modern Europe remains one of the most prominent examples of evolutionary applications to world politics. However, the IR literature includes

other important attempts to use evolutionary theory to account for major historical change (Thompson 2001).

Overview of the chapters

The purpose of this book is to chart the territories of ‘new’ forms of systems theorizing in IR. Of course, novelty does not necessarily refer to the recent introduction of many of the theoretical ideas used in the following chapters — quite to the contrary: many of the ‘new’ systems theories build on established bodies of theory in other disciplines — most notably sociology — which are read in an IR context. However, as should become clear from reading through the contributions to this volume, this results in all but the (sometimes quite fashionable) simple ‘import’ of theories and key thinkers from other disciplines to the field of IR. Quite the contrary, it is through exposure with the task of explaining change in world politics that many of the key concepts from other disciplines referred to are indeed challenged as to their applicability over a wide range of social systemic phenomena — the results in the following chapters range from disciplinary readings of other theories, through interdisciplinary encounters, to some examples of trans-disciplinary engagement where one would be hard-pressed to clearly point to disciplinary identities.

While the contributions in this book are an attempt to chart ‘new’ forms of systems theorizing, it goes without saying that this exercise necessarily includes numerous references to ‘older’ such forms. However, despite their continuing rich contributions in this respect, for reasons of space we had to leave out what could be seen as continuations of longer-established traditions of systems-theorizing in the field, ranging from modifications of structural realist thought on the one hand to various forms of theorizing in the tradition of world systems theory on the other.

The contributions to this volume are grouped into three main parts. Preceding these sections is a contribution by Oliver Kessler and Friedrich Kratochwil that belongs to the current introductory part and deals with some of the basic vices and virtues of systems theorizing in the discipline. Structured around four debates about systems theory, the chapter contextualizes the current approaches against the backdrop of previous IR theorizing at the systemic level. Starting with the famous level-of-analysis debate in the 1960s, the authors trace how IR scholars’ attention shifted to the agent-structure debate in the late 1980s from a more fundamental controversy pitting individualistic against sociological approaches, and ending with the recent exchanges surrounding the notion of globalization.

That the contribution by Kessler and Kratochwil in their dealing with rather general issues of systems theorizing quite often refers to the works of the German sociologist Niklas Luhmann and questions raised in his work is not without coincidence. Luhmann, though still not received widely in the

English-speaking sociological world, arguably provides not only the most advanced and comprehensive version of systems theory in the social sciences, yet also one which quite naturally seems to be quite suited to IR as it is a theory which starts from world society as its basic frame of reference.

The second part of the book thus assembles two contributions which seek to inspect the scope and the possible uses of 'Modern' Systems Theory in the Luhmannian tradition. Going beyond earlier attempts to discuss the possibilities and limits of Luhmannian systems theorizing in and for IR (see Albert and Hilkermeier 2004), Mathias Albert in his contribution argues that taking serious systems thought in IR requires an overhaul of basic analytical and conceptual categories. This refers first and foremost to the fact that modern systems theory abolishes the idea of systems being constituted by units and by the interaction between these units, an idea almost intrinsic to most IR theories. However, it is argued that the ensuing 'communicative turn' and the reconfiguration of social theory as a theory of world society, rather than remaining a meta-theoretical exercise, carries immediate consequences for how basic issues and concepts in IR theory are conceptualized. Thus, for example, it is argued that from the perspective of systems theory it might make perfect sense to rejuvenate debates about and analyze the contemporary state of the world polity in terms of a world state — yet stripped of the normative associations of the term attached to it in political philosophical debates.

Hans-Martin Jaeger also uses parts of Luhmannian systems theorizing, namely an analysis of the relation between social structure and semantics, and argues how it can be combined with prominent forms of discourse analysis in a fruitful manner. He illustrates this approach using the example of how the semantics of globalization and international governance are established during the 'first age of globalization' (post-World War I) and the beginning of its second age (marked by the end of the Cold War and a recasting of the United Nations). Building bridges to later contributions in this volume, Jaeger argues that indeed systems theoretical approaches on the one hand, and world-polity ('Stanford School') as well as English School approaches on the other share many commonalities. However, Jaeger argues that despite its comparative strengths, one of the big remaining shortcomings of modern systems theory is its inability 'to accommodate action-theoretical frameworks, other than in demonstrating their limitations or conditions of possibility' (Jaeger in this volume).

In some sense addressing this issue, but particularly also to demonstrate that systems-theorizing is by no means co-terminous with systems theory in the Luhmannian tradition, the third part, Process-Theoretical Approaches, contains three chapters introducing different strands of systems-theorizing which are fairly removed from Luhmannian theory and its Parsonian precursors. Daniel Nexon discusses how to draw on relational theorizing in sociology as a way to rejuvenate IR theorizing. Inspired by the social theory

of Norbert Elias and Charles Tilly, among others, relational thinking encourages a fundamental thinking of social reality as a set of dynamic relations rather than fixed substances. Based on illustrations drawn from IR theory, Nexon contrasts the relational perspective to conventional approaches that are based on essentialized actors, such as rational choice, or on relatively immobile structures, such as traditional systems theory. Rather than reifying actors or structures, the 'relational turn' allows the analyst to endogenize both systems and boundaries as processes.

Following up the relational perspective, Lars-Erik Cederman turns to complexity theory in order to capture fundamental types of change in world politics. Especially where macro shifts imply transformations of specific units, such as the rise and fall of great powers, or even actor types, as exemplified by the emergence of the territorial state, conventional perspectives are hard pressed to offer conceptual guidance. Based on an explicit comparison with micro-economic approaches, Cederman argues in favor of complexity theory because it offers a fundamentally holistic interpretation of world politics based on non-equilibrium theory and generative epistemology and with the capacity to endogenize actors' boundaries and identities. Supported by agent-based modeling and various statistical techniques, complexity theory can be used to regenerate empirical macro patterns, including war and state sizes as well as the emergence of new types of actors in world politics.

Bear Braumoeller argues that a closely related modeling tradition can be used to support systems theorizing of world politics, namely equation-based dynamic modeling. Arguing that this approach holds quite a bit of promise for IR theorists because of its ability to integrate agentic and structural factors, Braumoeller stresses its demand of clear explication of causal relationships, its utility as a formal modeling enterprise capable of deriving conclusions from theoretical premises, and its capacity to test the hypotheses so generated on historical data. The chapter then goes on to illustrate these arguments with examples from an ongoing attempt to apply dynamic modeling techniques to systemic theory in IR.

The fourth part of this book — to which with varying degrees of legitimacy some of the chapters in the preceding two parts could have been added as well — demonstrates that what holds systems-theoretical approaches of quite different theoretical backgrounds together is their interest in, as well as their ability to conceptualize, global politics in the context of 'Long-range Historical Processes'. Although all of the examples of systems-theorizing assembled in this book are about capturing both social and temporal complexity, the contributions in the third section are particularly focused on specific instances of long-term historical change.

In this context, the inclusion of a chapter on what is a rather 'established' approach in IR theory — the 'English School' — may at first seem to be a bit out of order with other 'new' forms of systems-theorizing in IR. As Barry Buzan convincingly demonstrates in his contribution, however,

the contemporary, structural (as opposed to normative) form of the English School — through its conceptualizations of the evolution of international society through its primary institutions (for example, war, international law) — has not only considerably developed the classical English School texts further. Rather, it also is an approach which has many possible points of contact with other systems theories (in the IR disciplinary sense of the word) and which forces open a number of important sociological issues (such as on the idea of ‘second-order societies’). Buzan emphasizes a number of possible benefits to be gained particularly from a better understanding of the formation and evolution of primary institutions in international society, among them to ‘provide theoretical foundations on the basis of which to (re)write international history’ (Buzan in this volume).

While Buzan debates some of the ways in which English School thought could both enrich other approaches, including the world-polity approach of the Stanford School, George Thomas as one of the proponents of this approach provides an account of how historical-cum-sociological systems-theoretical approaches are characterized by an ongoing competition between differentiation and rationalization as two ‘meta-narratives’. Although in the end he argues that the two are not irreconcilable, Thomas establishes a case for rationalization to be seen as analytically prior to functional differentiation. Using the study of religions as an example, he argues that the rationalization meta-narrative, employed as a sensitizing concept, helps to identify clashing narratives as well as sources and focal points of conflict: ‘In the study of nation–state authority and actorhood it underscores the embedded, constructed and reactive nature of the modern state’ (Thomas in this volume).

In contrast to the contributions by Buzan and Thomas, the final chapter of this part relies on quantitative methods in order to study a particular long-range historical process. Andreas Wimmer and Brian Min offer an institutionalist model of war according to which the diffusion of new institutional forms of the state is itself a major cause for war. The rise of empires and later the global spread of the nation-state are the most important processes of institutional diffusion in the modern age. Wimmer and Min analyze a new global dataset that records the outbreak of war on fixed geographical territories from 1816 to 2001, independent of the political entity in control of a territory in a specific year. Analysis of this dataset demonstrates that wars are much more likely during periods of institutional diffusion. This is an important argument, because the international relations literature on warfare usually takes the independent nation-state as the self-evident unit of analysis and largely excludes other political types from consideration.

In a concluding chapter, Alexander Wendt calls into question a basic premise of systems theorizing, that the international system is an emergent phenomenon that cannot be reduced to its elements. Noting the roots of this assumption in the ontology of classical physics, in which reality consists of

physical objects at different levels of aggregation, Wendt points out that the international system is unlike other classical objects because it cannot be seen, touched, or heard. To clarify what kind of 'object' the system is, therefore, he first argues that a classical ontology is a poor starting point because it cannot explain consciousness or meaning. An alternative starting point is provided by quantum panpsychism, which hypothesizes that consciousness is a macroscopic quantum mechanical phenomenon. This leads to a view of the brain as a holographic projector entangled non-locally with its surroundings through the medium of light, and to a view of society as similarly entangling human beings non-locally through the medium of language — language is like light. The upshot is a radically 'flat' ontology in which the only real objects of social science are individuals. States, international systems and the other familiar 'levels' of IR scholarship refer to mere virtual or holographic realities, structures of quantum potentiality which are only actualized in the practices of individuals within whom these structures are enfolded. This raises important questions about the focus of IR scholarship on states and other corporate actors, and suggests a new research agenda for systemic IR theory designed to 'bring individuals back in'.

The present volume will have achieved its purpose if it can help to stimulate discussions about the uses and prospects as well as the limitations of various kinds of systems theories of world politics. As should be clear from this introduction and the following chapters, however, the idea is not to advance a single version of systems theory, but rather to assess its possibilities by drawing on a range of such theories from quite different intellectual and disciplinary traditions.

Notes

1. This overview partly draws on Albert and Walter (2005: 97ff).
2. It should also be noted at this point that particularly one other powerful tradition which emerges in the form of world systems theory conceptualizes the world as a single *system* in the sense of but one comprehensive political-economic system, yet does not take up themes from *systems theory* in the tradition of Deutsch and others; see Wallerstein (1974).

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