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Systems, levels, and structural theory: Waltz's theory is *not* a systemic theory (and why that matters for International Relations today)

Jack Donnelly
University of Denver, USA

Abstract

Most in International Relations today, whatever their view of structural realism, would agree with Robert Jervis that Waltz's theory is "the most truly systemic of our theories of international politics." I argue that it is, in fact, the antithesis. Waltz, despite his systemic starting point, produced an analytic theory. Waltz's redefinition of a system as "composed of a structure and of interacting units" replaced the "systemic" understanding of a system as parts of particular types related in particular ways to make a whole with emergent properties with an analytic model of characterless units interacting with one another and with a reified structure. Waltz, I argue, was led to this stunning reversal by his application of: a levels and units frame; a reified conception of structure; a mistaken exclusion of the attributes of units that make them parts of the system; a vision of systems as derivative constraints on otherwise more or less autonomous units; and certain peculiar ideas about the nature of theory. In the final section, I argue that "relationalism" today is not merely reviving, but extending, "systemic" approaches in International Relations and is now poised to make the sort of transformative contribution that Waltz promised but did not deliver.

Keywords

Foundational theory, international society, international system, metatheory, state system, structure

Corresponding author:
Jack Donnelly, Josef Korbel School of International Studies, University of Denver, 2201 South Gaylord Street, Denver, Colorado, 80208, USA.
Email: jdonnell@du.edu

Introduction

Most in International Relations (IR) today, whatever their view of structural realism, would agree with Robert Jervis that Kenneth Waltz's theory is "the most truly systemic of our theories of international politics."[1] I argue that Waltz, despite his systemic starting point, produced a thoroughly analytic theory.

Some readers, I am sure, will already be thinking "Certainly we don't need *still another* critical article on Waltz." In this case, I believe, there are three reasons that we do — or at least that what follows does not beat a dead horse.

First, I consider neither the substance of structural realism nor Waltz's accounts of the elements of structure or the effects of anarchy. (These topics have, indeed, been "done to death.") Rather, stressing Waltz's goal of "conceiving of political systems in ways compatible with usages in systems theory,"[2] I focus narrowly on his conceptions of systems, structures, and systemic or structural theory, which remain widely accepted across the discipline.

Second, although many of my particular points have been made before,[3] the predominant view is that Waltz's "basic conception of structure offers a solid foundation"[4] that can be relatively easily corrected through more or less extensive amendments, modifications, elaborations, or refinements.[5] I argue, however, that it is radically defective and can only lead to analytic (not systemic) theories and explanations.

Third, how we understand Waltzian structural theory has important implications for IR today. Taking structural realism as the exemplar of a systemic theory impeded the development of truly systemic approaches. Over the past two decades, though, substantial new bodies of systemic research have emerged — under the label of relationalism. Furthermore, relationalism, I argue, is today (finally) poised to realize Waltz's promise to "bring off the Copernican revolution that others have called for"[6] by embedding systemic research at the heart of IR.

After sketching Waltz's case for systemic approaches, I demonstrate and explain his move to analytic theory, illustrate the difference that a systemic perspective makes, and reframe relationalism as systems theory for a new generation.

Systems and assemblages

The *Oxford English Dictionary* defines a system as "a group or set of related or associated things perceived or thought of as a unity or complex whole." As Waltz put it, a system is "a set of interacting units"[7] in which "the organization of units affects their behavior and their interactions."[8]

Such organization or arrangement produces "system effects," including, most notably, "emergent" phenomena.[9] "A whole can have properties (or powers) … that would not be possessed by its parts if they were not organised as a group into the form of this particular kind of whole."[10] The whole is greater than — more accurately, different from — the sum of its parts.

Most other definitions similarly see a system as "an assembly of elements related in an organized whole."[11] As Jervis puts it in *System Effects*, which is widely considered the best book on systems in IR, "interconnections and emergent properties define systems."[12]

Waltz, using standard "systems theory" terminology, distinguished "systemic" and "analytic" approaches to explanation. In "analytic" approaches, "the whole is understood by studying its elements … disjoined and understood in their simplicity."[13] Breaking things down into, and then focusing intensively on, smaller and simpler pieces often provides powerful and valuable knowledge.

If the object of inquiry, though, has emergent properties arising from the arrangement of its elements, "then one cannot predict outcomes or understand them merely by knowing the characteristics, purposes, and interactions of the system's units."[14] "Systemic" approaches are required to comprehend "system effects."

Systems come in many types. Here, I identify two — organisms and assemblages — which I illustrate with human beings and families of human beings.

"Assemblages" are systems in which the elements are related "extrinsically," in the sense that those elements retain a certain separateness or separability.[15] For example, an archeological assemblage — "an associated set of contemporary artefacts that can be considered as a single unit"[16] — is the product of "extrinsic" "logics" of deposition, preservation, excavation, and analysis. The assembled whole has a character and meanings distinct from its constituent elements. Those elements, however, retain some separate identity or (at least partial) separability.

The parts of an organism, in sharp contrast, are related "intrinsically." For example, a human heart can be a part of only one kind of whole.[17] It *is* a human heart — nothing more, nothing less.

An assemblage frame is especially useful for social systems, in which individuals and groups usually retain considerable separateness.[18] A family, for example, is "more than" the sum of its members. Family members, however, are also "more than" just parts of a family. Similarly, not only are states systems more than the sum of their parts, but states are more than just parts of international systems.

A structure and interacting units

"A system is composed of a structure and of interacting units."[19] This formulation, which Waltz employed in developing his theory, made three subtle but crucial changes to the understanding of systems as sets of elements organized into wholes.

First, the past participle "structured" has been replaced by the noun "a structure" — raising concerns of reification. And Waltz regularly did present "the structure" as a "thing."

"A systems approach is required only if the structure of the system and its interacting units mutually affect each other."[20] A systems theory shows "how structures and units interact and affect each other."[21] "Structure [i]s a force that shapes and shoves the units."[22] The arrangement of a system's parts has become something that acts upon or interacts with those parts.[23]

Second, elements of particular types have been replaced by characterless "units." Such abstract analytic constructs, however, cannot be parts of systems. You can't make a stopwatch out of a barrel of monkeys. And you can't make a system of any sort from "thingies."

Third, the organization or arrangement of elements has been replaced by their interaction. Waltz rightly criticized his predecessors for "fail[ing] to distinguish the interaction of units from their arrangement."[24] As he insightfully observed:

> "relation" is used to mean both the interaction of units and the *positions* they occupy.… To define a structure requires ignoring how units … interact … and concentrating on how they *stand in relation* to one another (how they are *arranged* or *positioned*).[25]

This distinction between actions and interactions, on the one hand, and relations, on the other hand, is central to contemporary "relationalism"[26] (to which we will return later). Waltz regularly employed it.[27] Ultimately, though, he theorized not relations between elements of systems, but interactions of units (with one another and with a reified structure).

Perhaps most strikingly, Waltz presented systems and their structures as constraints on otherwise more or less autonomous actors. "Structure designates a set of constraining conditions."[28] A systems theory "describes the constraints that arise from the system."[29] Waltz even argued that we should think of structure "as simply a constraint."[30]

Social structures, however, also enable, permit, authorize, and justify — even constitute. Although, for example, families often appear constraining to their (partly separable) members, they are not primarily, let alone essentially, constraints on the actions and interactions of individuals.

In social assemblages, "units" do retain a certain degree of autonomy. To focus on this, though, is to consider them as something other than parts of a system, as disassembled entities — which is an analytic (not systemic) approach.

As Robert Powell accurately notes, Waltz "decomposed [systems] into units and constraints" and assumed "that we can usefully conceive of the actors or units in a system as separate and distinct from the constraints that define the strategic setting in which the units interact."[31] Everything in this account screams "analytic." Nevertheless, Powell, again nicely paraphrasing Waltz, argues that "fixing the units' attributes and varying the constraints facing the units comprise the fundamental conceptual experiment underlying *systemic* explanations."[32] In fact, however, separating units and constraints and looking separately at the impact of constraints on decomposed assumed-to-be-fixed units produces analytic explanations.[33]

Waltz, I am arguing, produced not the systemic theory of international politics that he promised but just another analytic theory of (things that he called) "international systems."

Levels and variables

Part of the explanation of this stunning reversal lies in Waltz's application of the levels of analysis framework that he first sketched in *Man, the State and War*.[34]

The system/structural level

Levels, identified by characteristic types of entities, mark qualitative differences in complexity,[35] organization,[36] spatial scale,[37] or social aggregation.[38] Thus understood, an international system has multiple levels. As Waltz put it, "at one level, a system consists

of a structure.… At another level, *the system consists of* interacting units. The aim of systems theory is to show how the two levels operate and interact."[39]

This formulation, whatever its problems, at least treats "the unit level" as a level *of the system* — as it must be if "a system is composed of a structure and of interacting units."[40] Waltz, however, rather than pursue such a reading,[41] created *a* (singular) system level.

"Any approach or theory, if it is rightly termed 'systemic,' must show how the systems level, or structure, is distinct from the level of interacting units."[42] *Only* structure is "on the system level." The parts of the system have been consigned to a level that, somehow, is *not* a system level.

Levels of causation and (independent and dependent) variables

This construction arises from the practice — begun by Waltz and still adopted across most of the discipline — of treating levels of organization, complexity, or aggregation as levels of *causation*. In this framing, "level of analysis" refers to "the level at which causes are located,"[43] or what Hans Mouritzen nicely calls the explanatory level.[44] "Unit of analysis" indicates "the 'thing' to be studied,"[45] where the "effect" (*explanandum*) is to be found — which may be on the same or a different level of organization as the cause (*explanans*).

This account was developed, and is most "naturally" employed, to organize and keep distinct the wide range of independent variables (causes, *explanantia*) encountered in IR. This, however, involves an analytic, not systemic, approach to explanation.

Waltz (quite conventionally) defined variables as "concepts that can take different values."[46] Accepting for the sake of argument that systems are composed of variables,[47] systemic variables are neither independent nor dependent. They are *inter*dependent; systemically interrelated.

Independent and dependent variables,[48] by contrast, must be not merely separate, but *un*related. (Otherwise, they are neither independent nor (merely) dependent.) Independent-variable analysis brackets or breaks the interconnections (relations) that make systems systems.

As Buzan, Jones, and Little put it, levels involve "distinct elements of causality."[49] "Each level must identify a major source of impact on behavior, and thus an explanation for events, that is distinct from other major sources."[50] Explanations based on distinct elements, however, are analytic (not systemic).

Jervis's *System Effects* strikingly illustrates IR's unthinking acceptance of Waltz's independent-variable levels-of-causation account. In the 90 pages of the first two chapters, which offer a wide-ranging survey of systems and systems effects, Jervis refers only once to levels.[51] Furthermore, his sole reference to independent and dependent variables indicates that the distinction is "problematic" in systems[52] — as is labeling "one set of elements 'causes' and [the] other 'effects.'"[53]

When he turns in Chapter 3 to "Systems Theories of International Politics," though, Jervis not only adopts Waltz's levels language[54] but "naturally" pairs it with an analytic focus on independent and dependent variables.[55] In fact, despite having stressed that in systems "the impact of one variable … depends on others"[56] — that variables are *not* independent or (merely) dependent — Jervis organizes "systems theories" of international politics "by whether the dependent variables, the independent variables, or both are on the system level."[57]

Waltzian levels of causation are used to disassemble the system and then look, separately, at how those disjointed things, understood as independent and dependent variables, influence one another. They really are levels *of analysis*.

The unit level

The particular way that Waltz specified political levels further encouraged an analytic approach. Waltz's original individual–state–system formulation, whatever its difficulties, at least leaves us with parts of particular types (states) assembled into (states) systems. His further "simplification" into system and unit levels,[58] however, lumps together everything except "the system" (or "the structure"[59]) into a vast, undifferentiated domain.

No relation, though, applies to (all) "units."[60] In particular, "units" in states systems do *not* stand in relations of anarchy. Sovereign states do, but individuals and non-state actors, who are also "on the unit level," do not. "The unit level" is an analytic construct that precludes even specifying systemic relations.

The difference a systemic perspective makes

Before proceeding with my critique, I pause in this section to offer hints of an answer to the "So what?" question. A truly systemic approach, I argue, would be, as Waltz appreciated, "revolutionary"[61] in providing knowledge of a distinctive type about otherwise inaccessible phenomena. Consider a few examples that build on the preceding discussion (Those who prefer to continue with the critique of Waltz may prefer to skip this section or come back to it later.)

Systems of structured relations

Systems, as Waltz nicely observed, "shape and shove" actors.[62] He only addressed "shaping," though, through the interactional (rather than relational)[63] mechanisms of "selection" and "emulation."[64] We cannot, however, fully comprehend actors or their actions if we ignore *systemic/relational* "shaping."

Allies, for example, are not (symmetrically) constrained autonomous actors. Their assembly into an alliance (system) gives them particular roles, rights, and responsibilities. Their structured relations (re)constitute some of their interests — perhaps even their identities — and transform many of their interactions (both with one another and with some others). How allies behave and why, as well as the significance of their behavior, are shaped by their being parts of an alliance (system).

More broadly, members of states *systems* are differentiated actors, parts of particular types (arranged in particular ways). States and non-state actors stand in relations of legal super- and subordination. Furthermore, different kinds of states (and non-state actors) have different systemically constituted interests. Consider, for example, sovereign territorial states, dynastic composite states, and imperial core–periphery assemblages.

Structured relations also "shove" actors in distinctive ways. Their behavior is not merely constrained (by the instrumental imperatives of self-help and a particular distribution of capabilities), but *regulated*, in the strong, ordinary language sense of

controlled, governed, or directed. For example, states systems regulate the use of force. Rules and institutions typically govern agreements, communication, and certain types of cooperation. Moreover, states that infringe rules, norms, and expectations are subject to sanctions (of varying sorts, with varied effects). Such vital features of the structure of international systems are inaccessible to an analytic approach — which ignores ("abstracts from") what makes systems systems (and significant), namely, the structured relations of elements assembled into a whole.

Levels of organization

Replacing the analytic frame of levels of causation with the systemic frame of emergent levels of organization, aggregation, or complexity provides a very different example of the difference a systemic perspective makes.

A common "systems view of the world,"[65] which I will adopt here, sees "the world" as composed of things of certain sorts, related in particular ways, to produce things of other sorts[66] — layered systems of systems of systems. Particular arrangements of particular subatomic particles produce atoms; atoms arranged in particular ways produce chemical elements; elements assembled … Each level is characterized by certain kinds of emergent, irreducible entities and processes. It is also associated with particular knowledge practices.

This suggests understanding IR not as a discipline that studies systems with a particular ordering principle, which may operate at various levels of social aggregation, but as a discipline that studies systems at the highest level of social or political assembly. Compare Justin Rosenberg's understanding of "the international" as "that dimension of social reality which arises specifically from the coexistence within it of more than one society."[67]

A levels-of-organization framing also suggests that each level is especially closely associated with the level from which it emerges and that emerges out of it. This explains not only the ubiquitous utility of micro–macro framings but also why deeper levels tend to be *less* relevant to explaining higher-level phenomena. For example, when considering states in IR, we regularly drop down to sub-national groups and *social* psychology but much less frequently to individual psychology and very rarely to biology, let alone chemistry or physics.

Finally, it should go without saying that the individual–state–system frame is in no way privileged. Quite the contrary, failing to recognize any level between individuals and states is deeply problematic. Furthermore, no three-level frame can come close to comprehending the level structure of, for example, globalization, the contemporary European regional systems, or high medieval Christendom. Levels of organization are "in the world" — more levels of being than levels of analysis. We should therefore approach them empirically, without analytic presuppositions.

The agent–structure problem

Seeing "the things of the world" as layered systems of systems of systems also suggests a solution to the agent–structure problem. More precisely, it pre-empts the "problem."[68]

"Agents" are not "things" like bicycles and baboons — entities/systems of a particular type (composed of entities/systems of particular lower-level types). "Agent" identifies a feature, analytically taken out of context, possessed by a great variety of types of things, ranging from bits of computer code and individual human beings to families, firms, churches, and states. There is no reason to imagine that "agents" share anything beyond their capacity for agency.

"Structures" also, as we saw earlier, are not things. "The agent–structure problem" is thus, at best, a conceptual, *not an ontological*, problem. Or, to treat it as an ontological problem is to analytically separate and reify agents and structures — thus creating "a problem" to which there can be no empirical resolution (because there are no such things in the world).

Some might find the preceding paragraphs obtusely overly literal. What is *really* at stake, they might argue, is the relationship between agents of a particular type (e.g. human beings or states) and the higher-level systems of which they are parts. Thus formulated, though, there is no problem because *levels of organization do not imply ontological, causal, or chronological priority*.

Each organizationally differentiated level, because of its irreducibility, has the same ontological status. The world is *organizationally layered* but, as Manuel DeLanda puts it, *ontologically flat*.[69] "The whole is immanent not transcendent."[70] It "exists alongside the parts in the same ontological plane."[71] Large complex entities such as international systems are no less (or more) real than the simpler elements of which they are composed — which are no less (or more) real than …

Every entity, at least from the atomic to the galactic levels, is simultaneously (and essentially) both a whole and a part. The framing "whole" adopts the perspective of a particular level. "Parts" provides a view from a higher level.

This is equally true of states — which are both wholes (assembled from individuals and groups) and parts (of states systems) — and individual human beings. Individuals, as Stephan Fuchs nicely puts it, "are not essences and natural kinds … but result from relations and constructions;"[72] they are "outcomes, not sources or origins, of society."[73] Moreover, "persons," as Harrison White argues, are assemblages of identities,[74] complex structures that are also agents (which, in turn, are parts of larger structures, some of which are also agents). Even at the biological level, "each human is an assemblage composed not only of somatic cells but also of many symbiotic species" in the microbiome.[75]

Turning to causality or chronology, whether the whole or the parts "came first" is an empirical question — or, more frequently, a question that makes little sense. In assembled social systems, individuals and groups — parts and wholes — mutually co-constitute *and recurrently reconstitute* one another. To start the story at any particular point, either with "agents" or "structures," is an arbitrary analytic decision.[76]

Although social actors typically retain a persistent, even continuous, biographical identity, the substance of their identity — *what* they "are" — changes, often dramatically. Consider "France" at hundred-year intervals in either direction from the ascension of Francis I in 1515 or a woman who moves to a new continent, adopts a new religion, enters a new profession, joins a new political party, and becomes a fanatical amateur hockey player.

To take an IR example, polities in 15th- and 16th-century Christendom were not states, in the "modern" sense of the term, and they did not interact in a states system. Over a long period — from, say, the end of the Italian Wars (1559) to the end of the Napoleonic wars (1815) — what ultimately became modern states and what ultimately became the modern states system recursively shaped and reshaped one another, ultimately producing the states-in-a-states-system assemblage that we call the modern international system.

Like other parts and wholes, individuals and groups — and groups of lesser and greater complexity or aggregation — are essentially interconnected entities located on irreducible but interlinked levels of organization. Nothing more. Nothing less. No "problem."

Structural theory

Returning to tracing Waltz's route to analytic theory, I argue that he was also led in this direction by his conception of structural theory. This section focuses on the adjective structural.[77] The next section looks at the noun theory.

Reduction, analysis, and inside-out explanations

Waltz accompanied his redefinition of a system (as a structure and interacting units) with a reformulation of the distinction between analytic and systemic approaches as "reductionist" and "structural."

Reductionist approaches, in a strong and literal sense, "reduce" *A* to *x* by explaining *A*, more or less completely, by *x*. (The *Oxford English Dictionary* defines "reductionism" as "describing or explaining a complex (esp. mental, social, or biological) phenomenon in terms of relatively simple or fundamental concepts, especially when this is said to provide a sufficient description or explanation.") Because states systems are not reducible to states and individuals, a strong reductionist program cannot succeed in IR.

Waltz, however, usually used "reductionism" *in a weaker sense of his own devising* to indicate explanations of international phenomena that (merely) invoke unit-level causes.[78] By scrupulously eschewing such "inside-out" explanations, as he sometimes (more accurately) called them,[79] Waltz avoided one type of analytic theory.

He did so, though, by dismembering the system into "units" and "the structure," understood as separate things, on separate levels, that interact. From these disarticulated pieces, he produced an "outside-in" theory that was *"structural" but analytic* (not systemic). A system is "more than" the sum of its parts. It can never be understood *systemically* by looking (only) at the parts — any parts, even "the structure."

"Systemic" is a matter of perspective

Waltz rightly insisted that "theories are reductionist [analytic] or systemic, not according to what they deal with, but according to how they arrange their materials."[80] *Systemic theory is a matter of perspective* not subject matter.

It simply is not true, as J. David Singer claimed in his seminal article on levels of analysis, that "*for the purposes of systemic analysis* … the observer may choose to focus

upon the parts or upon the whole, upon the components or upon the system."[81] This confuses "systemic analysis" with "analyses of systems;" systemic (rather than analytic) theories with theories *of* systems.

Wendt — surprisingly similarly — claims that a theory is systemic "when it makes the international system the dependent variable … [or] the independent variable."[82] Were we to adopt this understanding, Waltz's critique of "reductionist" theories (of systems) would be incoherent. We would also need another language to capture the distinction between approaches that examine wholes and those that consider parts separately.

Both inside-out and outside-in explanations are equally (although differently) analytic. Neither considers "the system" *as a system* or "the units" *as parts of a system*. Analytic explanations, it should be emphasized, regularly produce valuable knowledge, even about systems. They are problematic only when (mis)represented as systemic or as everything necessary to understand "the system." Such misrepresentations were, indeed, a serious problem when Waltz wrote *Theory of International Politics*.

While combating them, though, Waltz, I am suggesting, developed a virtual phobia of explanations that (even/merely) reference a system's elements. Furthermore, by confusing "structural" and "reductionist" with systemic and analytic approaches, Waltz obscured the fact that his theory, although "structural" and (weakly) "non-reductionist," was analytic (not systemic).

"Units" and "the system" in systemic theories

This error was facilitated by the fact that in depicting the structures of international systems, we should, indeed, "leav[e] aside questions about the kinds of political leaders, social and economic institutions, and ideological commitments states may have."[83] The reason, though, is not that these are attributes of units. Rather, *those* attributes are "unit-level attributes," in the Waltzian sense that their causes are located "on the unit level."

Other attributes (e.g. statehood), however, are "system-level attributes;" their causes are "on the system level." *These* attributes are structural — matters of the organization of the system's elements — and thus must be included in any *systemic* theory of international politics.

To "abstract from every attribute of states except their capabilities,"[84] as Waltz claimed a systemic theory must, is to treat states as if they were neither states nor parts of a system. This makes systemic theory impossible.[85]

Conversely, a systemic theory cannot refer only to "the system," *understood as something separate or separable from the elements that compose it*. Talk of "how much the system affects the units,"[86] like talk of "the effects of structure on interacting units,"[87] evidences an analytic perspective — and a very odd analytic perspective at that.

Systems exist only through or in the arrangement of their constituent elements. Although the parts of an assemblage may have a separate existence, the whole does not. A "states system" that is separate from, rather than composed of, states is no more an international system than a "family" without members is a family or a "human body" without organs is a human body. Or, to imagine such a "thing" is to adopt an analytic perspective.

Structural *theory*

Waltz, who emphasized developing a *theory* of international politics,[88] was also led towards an analytic approach by certain understandings of theory.[89]

Separation and simplification

It may be true that "theory isolates one realm from all others in order to deal with it intellectually."[90] Isolating *an object of inquiry*, however, risks dividing a systemic whole into separate parts. Furthermore, when an isolating approach is applied *within* a system, as Waltz did, the result is an analytic explanation.

For example, Waltz claimed that theoretical simplification demands "isolation" and "aggregation, which requires lumping disparate elements together."[91] These are archetypical analytic methods.

Although simplification is essential to theory, Waltz's aesthetic preference for elegance,[92] pushed him to excess. Going well beyond the fact that theories do not aim for detailed descriptive accuracy, Waltz claimed not only that theoretical simplifications are inaccurate, unrealistic, or untrue,[93] but that they produce "brazenly false" depictions that convey "a false impression of the world."[94]

Fruitful simplifications, however, are *not* fundamentally wrong. Quite the contrary, although incomplete, they are accurate, as far as they go. ("I have grey hair" is true.) They become "false" only if presented (or taken) as complete depictions.

Waltz aimed to explain, not just describe or predict; to say why, not just what.[95] Theories, he argued, aim to "lay bare the essential elements in play and indicate the necessary relations of cause and interdependency — or suggest where to look for them."[96] They "concentrate on central tendencies, and … single out the strongest propelling forces."[97] "Theories indicate what is connected with what and how the connection is made. They convey a sense of how things work."[98] Success at such tasks requires essential (if simplified) descriptive accuracy.

Furthermore, *structural* theories necessarily make descriptive claims. A structural explanation asserts that a system *is* arranged in particular ways and that *that* arrangement explains the phenomena in question. As Waltz put it, "structurally we can *describe* and understand the pressures states are subject to."[99] A fundamentally inaccurate structural explanation is just plain wrong — or, at best, analytic (and merely predictive, not explanatory).[100]

Waltz nicely described systems as "both complex and organized."[101] However, Waltzian anarchic international orders, "structured" simply by anarchy and polarity,[102] are neither complex nor organized. Their systemic character — their organized complexity — has been "simplified" away.

The model of classical physics

These tendencies were reinforced by Waltz's belief that social science should emulate natural science as represented by classical physics.[103] An elegant theory, Waltz argued, lies "at an extreme remove from reality; think of physics."[104] He repeatedly appealed to

the example of Newton.[105] Furthermore, his claim that "natural scientists look for simplicities: elemental units and elegant theories about them"[106] fits physics but not, for example, paleontology, ecology, and large parts of biology.

Classical physics, however, is a *terrible* model for systemic theories. As Waltz himself noted, "the analytic method [is] pre-eminently the method of classical physics."[107] Waltz, I am suggesting, implicitly chose "science," as he understood it, over systems.

Causal analysis and structural theory

Waltz's conception of explanatory theory as causal theory, understood in a particular "Humean" way,[108] also led to an analytic approach. To identify "a real causal connection," Waltz argued, involves establishing "the relation between an independent and a dependent variable."[109] This, though, as we saw earlier,[110] produces analytic (not systemic) explanations.

Waltz also claimed that theoretical explanations "of course … require an 'other things being equal' stipulation."[111] *Ceteris paribus* clauses, however, analytically separate elements. Jervis thus highlights "the perils of using the ceteris paribus assumption" when systems are involved[112] — because in systems, other things *cannot* be held constant or equal.

Theory of International Politics does contain hints of a systemic understanding of explanation. For example, the reference to "relations of cause and interdependency"[113] appreciates the difference between independent-variable "causal" analysis and the "interdependency" of "variables" in systemic explanations. Similarly, Waltz described theory as "about connections and causes,"[114] and in identifying the kinds of questions posed by theories, included both "What causes what?" and "How does it all hang together?"[115]

All these passages, however, are in Chapter 1's introductory discussion of theory. In developing structural theory, Waltz focused narrowly on causes[116] understood analytically, losing sight of the connections, interdependencies, and relations that make things hang together in particular (systemic) ways. Waltz, I am suggesting, ended up replacing system effects with structural-level causes.

The scope and character of systemic international theory

Structures "cause" things "non-causally" — if "a real causal connection" involves relations of independent and dependent variables. Systems studied systemically require distinctive kinds of social-scientific practice.

For example, systemic international theories will not apply to (almost) all international systems. "International systems" is more like "mammals" than "primates." The taxon encompasses diverse types of systems that share not a common structure, but certain "defining" *analytic* features — in Waltz's account, anarchy and a distribution of capabilities (which no more define the structure of international systems than hair, milk glands, a jaw made of a single bone, three bones in the middle ear, and a neocortex define the structure of mammals).

Systemic IR will thus look less like (classical) Physics than Ecology or Biology; more like Comparative Politics than (neo-classical micro-)Economics. The IR equivalent of

area specialists will study particular types of international systems that have characteristic emergent phenomena. The equivalent of comparativists will look across types.

For both of these purposes, we will need a much better account of the elements of international political structures[117] — so that we can actually identify the types of structural relations that make different kinds of international systems what they are. Furthermore, without denigrating the importance of widely shared analytical features, systemic approaches will tend to emphasize difference between types of systems.

In addition, we should not expect a systemic theory to explain, directly or alone, behavior. This is not, however, because systemic explanations are, as Waltz put it, "indeterminate predictions"[118] or incomplete causal explanations. Systemic approaches study different things, differently, to produce different kinds of knowledge. They provide (often rather determinate) accounts of how actors of particular types have been relationally shaped and shoved in ways that structure their interactions and condition their action by, for example, generating interests and identities, creating dispositions and expectations, shaping incentive structures, setting parameters, and establishing practices.

States, systems, and environments

Waltz's analytic theory also arose from viewing systems "individualistically," from the perspective of their parts ("units," states) — to whom international systems often do appear as external constraints. For example, the language of "internal" and "external" politics and relations makes sense in inside-out (and outside-in) accounts. However, Waltz retained this statist formulation[119] in his ostensibly "systemic" theory — where "inside" and "outside" should refer to the system (not states).

Or, consider "anarchy." In a states system, authority is decentralized — not, as Waltz claimed, absent.[120] Authority *in the system* is allocated to (sovereign) states, which have not only recognized rights to govern their territories and subjects but also international rights and obligations. Waltz, however, seeing like a state, saw only the absence of a government/state.

Consider also Waltz's claim that international political systems are "individualist in origin."[121] From a systemic point of view, this is either false or incoherent. Wholes and parts are interdependent. How systems emerge is an empirical question. And, in fact, *pace* Waltz, the *ex nihilo* creation of international systems is historically rare.

Similarly, even if we accept Wendt's argument that "states (individuals) are ontologically prior to the states system (society)"[122] — thus rejecting my argument that the world is organizationally layered but ontologically flat — it does not follow that "states systems emerge from the interaction of preexisting units."[123] This, at best, confuses ontology with chronology or causality.

How a system in fact emerged is an empirical (not ontological, conceptual, or theoretical) question — as are whether "units" are "preexisting" and whether "preexisting" units are reconstituted by membership in a states system. *Some* thing may have existed previously, but not necessarily "the same thing." Moreover, that "something" almost certainly existed within (and was to some degree shaped by) broader structures.[124]

Furthermore, although it is usually true that, as Waltz went on to argue, international systems are "spontaneously generated, and unintended,"[125] that is equally true of states

("units"). Furthermore, states are, presumably, just as "individualist in origin" as the larger systems of which they are a part. This individualist story, at best, ignores the no-less-important systemic shaping of agents/parts.

An analytic individualistic/statist perspective even led Waltz to abandon the fundamental distinction between a system and "the environment," understood as that which is outside a system. ("The most fundamental act of systems theory … [is] distinguishing it [the system] from its environment."[126]) Consider the difference between members of species displaced by a massive fire into a new environment and those occupying established niches in that ecosystem.

Systems are, at best, misleadingly described as environments. A family, for example, is not the environment of its members,[127] but the complex entity of which they are members. Conversely, the international system does not come close to exhausting the environment in which states interact.

Nonetheless, Waltz wrote of "the environment of states' action, or the structure of their system" and, using his favorite economic analogy, of "a market as the firms' environment."[128] More generally, external constraints are environmental (not systemic); they produce environmental effects (not system effects).

Looking at the world through the eyes of states, Waltz saw "the international system" as little more than a constraining environment or context of interaction. Everything that is not inside the state is, indiscriminately, outside. Any real systems in this story are national, not international.

Structural realism and structural theory

Finally, I want to suggest that Waltz abandoned a systemic approach because it was merely a means to the end of a realist theory that avoided "reductionism." It was no slip of the tongue when, later in his career, Waltz regularly referred to structural realism simply as "structural theory."[129] This (con)fusion of the substantively neutral idea of structural theory with the substantive theory of structural realism, although not intentionally duplicitous, was not accidental. It also helps to explain Waltz's abandonment of systemic theory.

Man, the State, and War had, for Waltz, established that anarchy explained some central features of international relations. Systems thinking simply promised a more rigorous formulation of this substantive insight. Although Chapter VI of *Man, the State, and War* contained hints of *Theory of International Politics*'s idea of structure,[130] it did not use systems concepts.[131] These were a later, instrumental addition that was ultimately subordinated to Waltz's persistent focus on levels and anarchy.

Waltz wanted to get to anarchy. He worked backwards to an account of international political structures that would lead there. And when he reached that "starting point," he simply stopped. I cannot think of any other way to explain how such a careful theorist with such a passion (and reputation) for rigor could so completely mangle a systems theory of international politics. He simply had no real interest in a systemic theory.

This reading is supported by the fact that Waltz offered no argument, or even a citation to earlier work in any discipline, for the assertion that social or political structures are defined by an ordering principle, functional differentiation, and the distribution of

capabilities.[132] This account is cobbled together to get to structural realism. Therefore, it is not surprising that it is hard to find anything even close it in any other social science discipline[133] — because, I am suggesting, it cannot even begin to describe the structure of social or political systems (which seems to have been of no intrinsic interest to Waltz).

Waltz's account of international political structures, however, did allow him to make anarchy the master explanatory variable in an outside-in theory. That was enough for a "theory of international politics." Furthermore, the fact that the theory addressed "the international system" and operated "at the system level" helped to hide from Waltz, and from those who have followed him, its analytic nature.

Waltz, systems, and the relational turn in IR

Systemic theory is not "better" (or "worse") than independent-variable causal theory either in general or in outside-in "structural" theories in particular. It does, however, promise insights into parts of the world that are inaccessible to analytic theories. This suggests returning to Waltz's initial vision of systemic explanation — and this time around (finally!) really doing it right.

Systems and relations

Theory of International Politics reinvigorated, and created a considerable demand for, systemic international theory. Although that "market" in the 1980s and 1990s was engrossed by structural realism (which I have argued is an analytic theory), over the past two decades increasingly interesting and fruitful bodies of truly systemic IR have emerged. The most common label today for this broad approach is "relationalism."[134]

Relationalists typically oppose their perspective to "substantialism"[135] or "essentialism,"[136] which see the nature of the things of the world as principally a matter of what they are made of. Analytic approaches have promise in studying substances and essences. For features of the world that arise from the organization of elements, however, we need, as Waltz emphasized, systemic approaches that focus on *relations* (in Waltz's strong, positional sense[137]).

In a relational world, "things" are (nothing more or less than) "stuff" of certain sorts related in certain ways — or, in the language I used earlier, layered systems of systems of systems. In sharp contrast to Waltz's narrow structuralism, relationalism adopts an open pluralistic approach to systemic/relational research.

Among contemporary relational programs, a systems frame has been retained in "modern systems theory"[138] and "complexity theory."[139] Networks and fields, however, are more common relational frames.

"Field theory is a more or less coherent approach in the social sciences whose essence is the explanation of regularities in individual action by recourse to position vis-à-vis others."[140] Or, as Waltz put it, "interactions within a field have properties different from those they would have if they occurred outside of it."[141] Pierre Bourdieu's frame of social fields (linked to capital and *habitus*) has been widely employed across the social sciences.[142] In Sociology and Political Science there is also a substantial literature on "strategic action fields."[143]

Networks similarly emphasize patterns of linkages (relations), producing radically positional/relational accounts of structure. One popular approach employs the techniques of "social network analysis," focusing on structures of connections between "nodes."[144] Another looks at networks as a distinctive organizational form (usually distinguished from (anarchic) markets and (hierarchical) organizations).[145] Networks, variously conceptualized, have also become an important object of investigation in IR.[146]

All of these approaches are "systemic" in the conventional sense of the term. Furthermore, although wholes–parts and relations–substances frames map imperfectly onto one another, they provide complementary accounts of the world that reject analytic, substantialist, and essentialist approaches.

Relationalism and systemic thinking

Finally, I conclude with a further illustration of the difference that a systemic perspective makes, arguing for a systemic understanding of relationalism — and warning against a Waltz-like reversion to analytic approaches to relations.

Relationalism emphasizes that the things of the world are not pre-existing or unconstructed; that there are no things without relations. However, there are no relations without relata either. The idea of a relation that does not actually relate "things" is, if not incoherent, a peculiar analytic construct.

Nexon, however, argues that "relations should be treated, either analytically or ontologically, as prior to either individual agents or aggregate structures."[147] Similarly, Jackson and Nexon, in their seminal article "Relations before states,"[148] claim that "relations precede (in a logical, if not always in a temporal, sense) the very existence of the units doing the relating."[149] This analytically separates relations from relata and strips any actual relating from "relations."

States do presuppose a states system of which they are a part. A states system, however, presupposes states that compose it. *Neither* "comes first" — or even exists without the other.

As Jackson and Nexon put it earlier in their article, "descriptions of an object as a 'substance' and descriptions of that object as a 'bundle of processes and relations' are complementary, in that neither exhaust[s] the object itself."[150] *All* the entities and institutions of the social world are both substantial and relational. States and states systems alike are both substantial and relational "things" — as are "more material" things like guns and rocks.

Relationalism rightly aims to rebalance IR, which has overemphasized substances and analytic variables. And in practice, relationalists typically emphasize relations without denying the importance of substances/relata, treating relationalism as a methodology (not an ontology[151]).

Relationalism today is thus poised to make the major, even revolutionary, "systemic" contributions that Waltz promised (but that structural realism failed to deliver). Relationalism is the systems theory for a new generation. Or, if this sounds too "systemist," non-analytic and anti-essentialist approaches are, under the banner of relationalism, *finally* carving out an important place for themselves in today's increasingly pluralistic IR.

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Notes

1. Jervis (1997: 124).
2. Waltz (1979: 40). Therefore, I also do not address Waltz's relationship to Durkheim or structural functionalism. Excellent discussions can be found in Ruggie (1983: 261–262, 264, 269, 281–282ff.), Barkdull (1995), Sampson (2002), and Goddard and Nexon (2005).
3. See, especially, Ruggie (1983), Ashley (1984), Wendt (1987, 1999), Buzan et al. (1993: chs 2, 3), Jervis (1997: ch. 3), Goddard and Nexon (2005), and Wight (2006: esp. ch. 4).
4. Buzan et al. (1993: 6).
5. See Ruggie (1983: 273), Keohane (1986: 162, 193–194), James (1993), Walt (1988: 281), and Schweller (1997).
6. Waltz (1979: 13).
7. Waltz (1979: 40; cf. Waltz, 1979: 55). Waltz immediately went on to distinguish a set from "a mere collection." Compare Bunge (1979: 3–5), distinguishing a system from an aggregate, and Buzan et al. (1993: 29).
8. Waltz (1979: 39).
9. Jervis (1997: 12–17) cites much of the classic literature on emergence (see also Bunge, 2003: chs 1–3, 5; Holland, 1998; Humphreys, 2016).
10. Elder-Vass (2007: 28).
11. Flood and Carson (1993: 7). The principal exception is "modern systems theory", which defines systems instead by the distinction between system and environment. ("A system *is* the difference between system and environment" (Luhmann, 2013 [2002]: 44, emphasis in original; cf. Luhmann, 2013 [2002]: 52, 63–64; 1995 [1984]: 5–8, 16–18, 20–23; 2012 [1997]: 43–44, 63–64, 121; in IR, see Albert, 2016: 37, 42–45, 55–56).) Here, however, I retain the wholes–parts frame because it is familiar and useful. Also, so long as the distinction is not seen as ontological, it is philosophically relatively unproblematic. On wholes and parts considered more broadly, see Onuf (1995: 45–52).
12. Jervis (1997: 28; cf. Jervis, 1997: 6).
13. Waltz (1979: 39; cf. Waltz, 1979: 12, 37, 68, 121).
14. Waltz (1979: 39).
15. DeLanda (2016: 2, 10, 11–12). This distinction derives from "assemblage theory" as developed in DeLanda (2006, 2016), which is based on Deleuze and Guattari (1987 [1980]: chs 3, 4). IR applications of varied assemblage frames include Sassen (2008 [2006]), Abrahamsen and Williams (2009), Dittmer (2015), Wilcox (2015: chs 4, 5), and Bueger (2018).
16. *Oxford English Dictionary*.
17. Although not strictly true — imagine a collage of preserved hearts (which, not coincidentally, would be an assemblage) — this is close enough for our purposes here.
18. It also avoids inappropriate "organic" or "holistic" assumptions about systems.
19. Waltz (1979: 79; cf. Waltz, 1979: 80).
20. Waltz (1979: 58; cf. notes 28, 30).
21. Waltz (1979: 100; cf. Waltz, 1979: 40).
22. Waltz (1990: 34).
23. Waltz typically referred to "a structure" or "the structure" (see Waltz, 1979: 40, 43, 45, 46, 49, 57, 58, 69, 72, 73, 74, 78, 79, 80, 82, 87, 90, 91, 92, 94, 95, 97, 99, 105, 106, 108; 1990: 29, 34, 37; 1993: 49, 50, 52, 71; 2000: 5, 8, 10, 20, 39). "Structured" is used only three times

in *Theory of International Politics* (Waltz, 1979: 72 (twice), 88) and never in Waltz (1990, 1993, 2000).
24. Waltz (1979: 56).
25. Waltz (1979: 80, emphasis added; cf. Waltz, 1979: 98).
26. See Emirbayer (1997: 283–287) and Jackson and Nexon (1999: 293–294), which are seminal programmatic works in relational Sociology and IR, respectively.
27. "Structure is sharply distinguished from actions and interactions" (Waltz, 1979: 80; cf. Waltz, 1979: 10, 12, 18, 39 (quoted at n. 8), 41, 42, 57, 62, 65, 66, 69, 70, 71, 72, 78, 79, 81, 89, 99, 100, 110; 1990: 23, 33).
28. Waltz (1979: 73; see also Waltz, 1979: 12, 52, 58, 69, 71, 76, 86, 90, 91, 92, 107, 109, 117, 122; 1990: 36). The index to *Theory of International Politics* includes "Structure, as set of constraining conditions" and "Behavior, patterns derived from structural constraints."
29. Waltz (1979: 118; cf. Waltz, 1979: 57).
30. Waltz (1979: 100).
31. Powell (1994: 317; cf. Powell, 1994: 321).
32. Powell (1994: 317, emphasis added).
33. See also the sections entitled "Reduction, analysis, and inside-out explanations" and "Causal analysis and structural theory."
34. Waltz (1959). Singer (1961) is also seminal. Other important discussions include Moul (1973), Mouritzen (1980), Yurdusev (1993), Buzan (1995), Onuf (1995), and Wight (2006: 102–119).
35. Simon (1962) is a classic statement (cf. Luhmann, 2012 [1997]: 77–83).
36. This framing is common in Biology and Ecology (see, e.g., Campbell, 1990; Odum, 1959: 6, 7; Wimsatt, 2007: 201–226; cf. Bunge, 1960: 399–400, 403–405).
37. Buzan (1995: 204; cf. DeLanda, 2016: 17).
38. Mouritzen (1980: 169).
39. Waltz (1979: 40, emphasis added).
40. Waltz (1979: 80).
41. Compare Wendt's (1999: 143–157ff.) argument that there are two (micro and macro) levels of structure.
42. Waltz (1979: 40). Note the analytic language of distinct elements.
43. Waltz (1979: 19; cf. Buzan, 1995: 199; Wendt, 1999: 8).
44. Mouritzen (1980).
45. Yurdesev (1993: 80).
46. Waltz (1979: 1; cf. Waltz, 1979: 74 n. *; cf. King et al., 1994: 51–52).
47. It seems implausible, though, that the arrangement of variables (concepts), rather than the arrangement of things in the world, produces system effects.
48. On Waltz's linkage of causal analysis with independent and dependent variables, see later, especially note 109.
49. Buzan et al. (1993: 32).
50. Buzan et al. (1993: 33; cf. Buzan, 1995: 204–205).
51. Jervis (1997: 4).
52. Jervis (1997: 58). More generally, he addresses variables (Jervis, 1997: 35–41, 58, 73, 78, 81, 83) principally to emphasize their complex interconnections and nonlinear relations in systems.
53. Jervis (1997: 48; cf. Jervis, 1997: 76–81).
54. Jervis (1997: 92 (twice), 93, 99 (three times), 103 (twice)).
55. Jervis (1997: 92 (three times), 93 (four times), 98, 99 (three times), 107). Also, where

"variable" appears in none of the 22 section headings in Chapters 1 and 2, it is in four of the 11 headings in Chapter 3.

56. Jervis (1997: 91).
57. Jervis (1997: 92).
58. Waltz (1979: 18, 38, 44, 69, passim).
59. In *Theory of International Politics*, Waltz usually spoke of a system(s) level (Waltz, 1979: 37, 38, 39, 40, 41, 42, 43, 44, 45, 47, 48, 49, 50, 53, 56, 57, 65, 66, 68, 69, 71, 78, 79, 99, 100, 145, 202). Only once (Waltz, 1979: 67) did he speak of a structural level. Later, however, that became the norm (see, e.g., Waltz, 1986: 322, 323, 327, 343; 1988: 617, 618, 620; 1993: 49; 2000: 5, 8). Most strikingly, Waltz (1990) referred to the structural level eight times (Waltz, 1990: 29, 33, 34 (three times), 36, 37 (twice)) but never to a system level.
60. In fact, characterless "units" cannot stand in relations — or, if they do, they are no longer characterless "units."
61. See note 6. I have dropped the adjective Copernican, however, because systemic methods are not meant to replace analytic methods — which are not "wrong" (Ptolemaic) but limited in ways that leave important parts of international relations inaccessible.
62. Waltz (1990: 34; 1997: 915; 2000: 24). Actually, Waltz (problematically) attributes this shaping and shoving to (reified) structures.
63. On the distinction between (actions and) interactions and relations, see notes 24–27.
64. Waltz (1979: 76–77, 92, 127–128).
65. Laszlo (1996 [1972]).
66. See, for example, Bunge (1979) and Capra and Luisi (2014). In IR, such an understanding has affinities with Colin Wight's (2006: 102–119) treatment of levels. Compare also Albert (2016: 2, 6–7, 45, 48ff., 71–74, 91–92).
67. Rosenberg (2006: 308; cf. Buzan, 2004: xvii, xviii).
68. Compare White (2008: 15).
69. DeLanda (2006: 28).
70. DeLanda (2006: 13).
71. DeLanda (2016: 12).
72. Fuchs (2001: 16).
73. Fuchs (2001: 64).
74. White (2008: 2, 15, 17, 18, 126–134, 141–142, 156–157, 186, 221).
75. Costello et al. (2012: 1255).
76. Compare Margaret Archer's (1995, 2013) "morphogenetic" theory, in which "agency" and "structure" are cyclically recurrent phases in the life history of social entities.
77. Buzan, Jones, and Little offer a powerful critique of Waltz's narrow structuralism (1993: chs 2, 3) and an insightfully expanded account of the system level (1993: 12, 33–34, 66, 72, 86, 90, 233). Nonetheless, they continue to reify structure and (analytically) separate system and unit levels.
78. Waltz (1979: 18–19, 31, 37, 38, 45, 56, and passim; 1988: 617, 618, 619, 620, 624, 626–627, 628; 1990: 32, 33, 34, 36, 37; 1993: 49; 2000: 5).
79. Waltz (1979: 47, 63, 64, 67; cf. Waltz, 1986: 322).
80. Waltz (1979: 60). Similarly, the distinction between micro and macro theories "is found not in the size of the objects of study, but in the way the objects of study are approached" (Waltz, 1979: 110; cf. Waltz, 1979: 89).
81. Singer (1961: 77, emphasis added).
82. Wendt (1999: 11). Compare Bear Braumoeller's (2012: 13) argument that systemic theories treat *structure* as either a dependent or an independent variable.

83. Waltz (1979: 80).
84. Waltz (1979: 99; cf. Waltz, 1979: 79).
85. In fact, it precludes all but the most deterministic external explanations. "Units" without attributes are inert. Therefore, rather than abstract from all (other) attributes, Waltz (necessarily) assumed certain particular ones. For example, "a balance-of-power theory, properly stated, begins with assumptions about states: They are unitary actors who, at a minimum, seek their own preservation and, at a maximum, drive for universal domination" (Waltz, 1979: 118).
86. Waltz (1979: 57).
87. Waltz (1990: 37; cf. Waltz, 1979: 88, 162, 175).
88. *Theory of International Politics* aimed to "examine theories of international politics," "construct a theory of international politics," and "examine some applications of the theory constructed" (Waltz, 1979: 1).
89. Waever's (2009) careful discussion of Waltz's "theory of theory" never addresses Waltz's claim to present a systemic theory — which is my focus here.
90. Waltz (1979: 8; cf. Waltz, 1979: 10, 89).
91. Waltz (1979: 10).
92. Waltz (1979: 7, 19, 69).
93. Waltz (1979: 3, 5, 7, 8, 32, 36, 45, 46, 65, 88, 89, 91, 115, 117, 119; 1990: 27, 31; 1997: 916).
94. Waltz (1990: 27).
95. Predictions "merely" *describe* (a future state of the world). Waltz thus sharply contrasted explanation with the ability "merely to predict" (Waltz, 1979: 6; cf. Waltz, 1979: 11; 1997: 916). Furthermore, explanation, for Waltz (1979: 5, 6, 11, 68; cf. Waltz, 1997: 913, 914, 916), indicates why. His goal was "to say why the range of expected outcomes falls within certain limits; to say why patterns of behavior recur; to say why events repeat themselves" (Waltz, 1979: 69). "Laws identify invariant or probable associations. Theories show why those associations obtain" (Waltz, 1979: 5; cf. Waltz, 1979: 6).
96. Waltz (1979: 10; cf. Waltz, 1997: 913).
97. Waltz (1979: 68; cf. Waltz, 1979: 8).
98. Waltz (1979: 12).
99. Waltz (1979: 71, emphasis added; cf. Waltz, 1979: 89, 118).
100. Anticipating a common rebuttal, Waltz's account is not, as Patrick Jackson (2011: 114–115, 142–146ff.) claims, a Weberian ideal-type. Waltz never presented it as such. Furthermore, ideal-type analysis is incompatible with Waltz's understanding of "theory of international politics." An analytic construct that actual systems more or less closely approximate is not a *theory* (and does not explain (see note 95)). Also, as ideal-types do not apply to all instances of a class (in this case, all international political systems) — if they did, they would be descriptions, not ideal-types — they cannot ground a theory *of international politics*.
101. Waltz (1979: 12).
102. Waltz (1979: 88–96, 100–101).
103. Onuf (2009: esp. 186–188) offers a rather different, but well-grounded, reading of Waltz as an empiricist/positivist. (I see this as another (not particularly well-integrated) strand in Waltz's understanding of science.) Waever (2009), however, emphasizes that Waltz denied being a positivist and offers a plausible non-positivist reading. If, as Patrick Jackson (2011: 112) suggests, "no book has been as profoundly *misunderstood* as Kenneth N. Waltz's *Theory of International Politics*," that is largely Waltz's own fault. He regularly shifted between incompatible positions – for example: anarchy as absence of a government (Waltz, 1979: 88, 89, 102, 103, 114) and absence of hierarchy (Waltz, 1979: 93, 97, 100, 101, 104, 113, 114, 115, 116); functional differentiation as absent in international systems (Waltz,

1979: 97, 101) and central to great power states systems (Waltz, 1979: ch. 9); abstracting from and assuming particular attributes (see above at notes 84, 85); denying authority in international systems (Waltz, 1979: 104, 112) and assuming sovereignty (Waltz, 1979: 71, 80, 88, 91, 94, 95, 96. 99, 116); insisting that units are structurally equal (Waltz, 1979: 88, 132) and that "the inequality of nations is … the dominant political fact of international life" (Waltz, 1979: 144: cf. Waltz, 1979: 142. 143) — depending on what was required for the purposes of the particular argument he was advancing at the moment.

104. Waltz (1979: 7).
105. Waltz (1979: 3, 5–6, 10, 20, 25, 27).
106. Waltz (1979: 68).
107. Waltz (1979: 39; cf. Waltz, 1979: 12, 19).
108. Kurki (2008) provides a useful IR-focused survey of ways of thinking about causation. See also Cartwright (2004) and, much more extensively, Beebee, Hitchcock, and Menzies (2010).
109. Waltz (1979: 2). This is broadly consistent with the influential account in King, Keohane, and Verba (1994: esp. sections 3.1–3.5).
110. Compare Nuno Monteiro's (2012: 347–351) argument that IR's increasing focus on causal identification and inference has led to a decline in systems thinking.
111. Waltz (1979: 91; cf. Waltz, 1979: 10).
112. Jervis (1997: 76; cf. Jervis, 1997: 43, 59, 69, 73).
113. Waltz (1979: 10; cf. Waltz, 1997: 913).
114. Waltz (1979: 9; cf. Waltz, 1979: 12).
115. Waltz (1979: 8).
116. Waltz repeatedly presented structures as causes (Waltz, 1979: 50, 67, 69, 73 ("in considering structures as causes …"), 74 ("structures are causes"), 78, 87 ("structure operates as a cause"), 90, 107) and titled Chapters 7 and 8 "Structural causes and economic effects" and "Structural causes and military effects."
117. For one suggestion of what that might look like, see Donnelly (2012).
118. Waltz (1979: 124).
119. Waltz (1979: 72, 81, 96, 103, 118, 152; 1990: 36).
120. "Nationally, relations of authority are established. Internationally, only relations of strength result" (Waltz, 1979: 112; cf. Waltz, 1979: 104).
121. Waltz (1979: 91; cf. Waltz, 1979: 89–90).
122. Wendt (1999: 244).
123. Wendt (1999: 244).
124. Compare the last four paragraphs of the section entitled "The agent–structure problem."
125. Waltz (1979: 91).
126. Gougen and Varela (1979: 32). "The concentration of relationships between elements helps us to distinguish a system, with concentrated feedback relationships, from its environment, with which the system shares only input and output relationships" (Flood and Carson, 1993: 8; see also note 11).
127. Or, if it is, it is a pretty dismal excuse for a "real" family.
128. Waltz (1979, 93, 54; cf. Waltz, 1979: 48). Jervis (1997: 16–17, 21, 39, 48, 52, 56, 57–58, 59, 60, and passim) also loses sight of the system–environment distinction. Similarly, David Dessler's (1989: 44) argument that "the job of structural theory is to explain the connections between the conditions of action and action itself" does not distinguish between systemic and environmental "conditions of action." Also, Robert Powell, in passages quoted at notes 31 and 32, reframes structure as "strategic environment" and "constraints."
129. Waltz (1990: 31; 1993: 45, 49, 79; 1997: 913, 914, 915, 916; 2000: 8, 25, 27, 38).

130. "Overlooking the different environments of action leads us to explain by human agency where explanation by socio-political structure is both more accurate and more helpful" (Waltz, 1959: 193; cf. Waltz, 1959: 184–185, 231–232).
131. *Man, the State, and War* used "system" exclusively in a loose ordinary language sense (Waltz, 1959: 160, 184, 200, 208, 209, 210, 217, 218, 219, 220, 231, 232, 237) and did not distinguish systemic and analytic approaches.
132. Waltz (1979: 81–82).
133. Aaron Sampson (2002: 437–440) persuasively argues that Waltz was inspired by S.F. Nadel's (1957) *The Theory of Social Structure*, which Waltz repeatedly cited (Waltz, 1979: 40 n. *, 80, 120–121). Nadel, however, did not use terms even close to Waltz's and Sampson's reconstruction of the parallels requires creatively rereading Nadel through Waltz. In particular, Nadel's "theory of structure depends on his theory of role. It is impossible to have one without the other" (Sampson, 2002: 438). Waltz was inspired by and appropriated certain ideas from Nadel but created a *very* different (asocial, role-less) conception of structure that was uniquely his own. Furthermore, it *has not been widely used anywhere outside of IR* — not even in Political Science, despite the fact that Waltz (1979: 80ff., 88ff.) claimed to have presented a general conception of political structures (not a particular account of international political structures).
134. McCourt (2016: 478–481) provides a useful brief overview (see also Jackson and Nexon, 1999; Nexon, 2010).
135. See Jackson and Nexon (1999: 291–292), Emirbayer (1997: 281), and McCourt (2016: 478–479).
136. Fuchs (2001) provides a particularly powerful version of this framing (see also Emirbayer, 1997: 282, 283, 285, 286, 292, 295 n. 34, 308; Jackson and Nexon, 1999: 293, 295, 300, 301, 307, 321 n. 18; Tilly, 1998: ch. 1, esp. 17–21).
137. See note 25.
138. See, especially, Luhmann (2012 [1997]; 2013 [1997]) and, in IR, Albert (2016).
139. Miller and Page (2007) and Holland (2014) are useful introductions to complexity. IR applications include Bousquet and Curtis (2011), Cudworth and Hobden (2011), Gadinger and Peters (2016), Harrison (2006), and Kavalski (2015) (see also Padgett and Powell, 2012).
140. Martin (2003: 1). Barman (2016) provides a useful brief comparison of leading field approaches.
141. Waltz (1979: 73).
142. See Bourdieu (1994, 1996 [1989]) and Bourdieu and Wacquant (1992: 14–26, 94–115, 228–232; 1993). For IR applications, see Adler-Nissen (2013), Berling (2012), Bueger (2016), Dixon and Tenove (2013), Go (2008), Nexon and Neumann (2018), and Steinmetz (2008).
143. Fligstein and McAdam (2012) is a good introduction.
144. Kadushin (2012) is a useful non-mathematical introduction. Padgett and Powell (2012) operates brilliantly at the intersection of network and complexity approaches.
145. Powell (1990) is the classic work.
146. Andia and Chorev (2017) and Norman (2017) are recent examples of the large literature on transnational advocacy networks that goes back to Keck and Sikkink (1998). Avant and Westerwinter (2016) is a recent collection of network approaches to security issues. Other good (if somewhat arbitrarily chosen) applications include Börzel and Heard-Lauréote (2009), Carpenter (2011), Goddard (2009), MacDonald (2014), Maoz (2011), and Oatley et al. (2013).
147. Nexon (2010: 100).
148. Jackson and Nexon (1999).
149. Jackson and Nexon (1999: 310).
150. Jackson and Nexon (1999: 292). This, I am confident, represents their settled view. That they

contradict it, though, underscores the temptations of an analytic prioritization of relations.

151. Relationalism is, however, compatible with a variety of realist, constructivist, and pragmatist ontologies.

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Author biography

Jack Donnelly is the Andrew Mellon Professor in the Josef Korbel School of International Studies at the University of Denver, USA. He worked extensively on the theory and practice of international human rights before shifting his focus in recent years to structural theories of international relations. This article is part of a larger book project that offers a comprehensive critique of Waltz's theory of international politics.