Panarchy Is What We Make of It:

Why a World State Is Not Inevitable

By

Paul B. Hartzog

Alexander Wendt begins his paper "Why a World State is Inevitable" with the following concise formulation of his intent: "In this article I propose a teleological theory of the 'logic of anarchy' which suggests that a world state is inevitable…" (Wendt, 2003: 1). I offer the following equally concise opposition: In this article I propose a *teleonomic* theory of the 'logic of panarchy' which suggests that a world state is *not* inevitable. I suggest that the stable "state" for this teleonomic process is a global "complex adaptive system," or governance network, in which the "logic of anarchy" gives way to the "logic of panarchy."

It is essential to note that Wendt and I agree on far more than we disagree, but the points on which we disagree are fundamental. The following table serves to illustrate Wendt's key points as well as mine.

Wendt:	**Hartzog:**
Teleologic	Teleonomic
The social is bounded by the state	The state is bounded by the social
Authoritative recognition	Mutual "peer-to-peer" recognition
Totalizing wholes	Complex Adaptive Systems
Hierarchies	Networks
Unity	Diversity
Universalism	Pluralism
Naturalism	Perspectivism
The logic of anarchy	The logic of panarchy

As I proceed, I will juxtapose Wendt's arguments with my own, briefly summarizing his while raising my objections and offering alternative understandings. However, my primary objective in this paper is not just to refute Wendt's propositions. Therefore, in my conclusion I will present a synthesis of my objections to Wendt, and an alternate theory that transcends the limitations inherent in his argument.

First, Wendt presents a justification for the re-introduction of teleologic theorizing into international relations. The need for this defense is driven by the fact that "if there is one thing almost all social scientists today agree on, from the most hardened positivists to the most radical postmodernists, it is that teleological explanations are illegitimate"(Wendt, 2003: 492). Unfortunately, he continues by suggesting that the literature of self-organization theory can be used to justify teleologic theorizing, claiming "self-organization theory hypothesizes that order in nature emerges not only through the mechanism of mutation-selection-retention, but also 'spontaneously' from the channeling of system dynamics by structural boundary conditions toward particular end-states," and therefore "self-organization theory provides a scientific basis for teleological explanation (Wendt, 2003: 492-493)." As I will show, this is either a misunderstanding or a misrepresentation of self-organization theory.

Second, Wendt asks "toward what end-state does the international system move, and by what mechanism does it get there?" and offers three possible end states in the international system: "a pacific federation of republican states, a realist world of nation-states in which war remains legitimate, and a world state"(Wendt, 2003: 493). What is significant is that in each of these there exists

some kind of "nation-state." Wendt overlooks or discounts the possibility of alternative social structures for governance.

Third, following Hegel and Walzer, Wendt argues that "the struggle for recognition between states will have the same outcome as that between individuals, collective identity formation and eventually a state"(Hegel et al., 1977; Walzer, 1986; Wendt, 2003: 493). However, Walzer himself accepts the possibility that because struggles create a demand for state activity, conflict and "devolution" might steady the existing state system (Walzer, 1986). Furthermore, although Wendt recognizes the influence of "the dramatic technological changes of the past century, which are in part caused by the security dilemma and thus endogenous to anarchy (Wendt, 2003: 493)" and cites Deudney on how those changes "have greatly increased… the scale on which it is possible to organize a state (Deudney, 1999)," he fails to acknowledge that other technological changes *have greatly increased the scale on which it is possible to organize without the state* (Rheingold, 2002).

Finally, Wendt treats his paper as a "plausibility probe" for teleological explanation. Wendt's, and my, deep concern for the future of world politics are neither trivial or casual phenomena. The need for systemic, if speculative, inquiry is urgent, if serious looming crises are to be avoided. It is my hope that by providing the possibility for teleonomic instead of teleologic theorizing, I can strengthen the basis for the normative concerns evident in Wendt's work, and prevent his ideas from being dismissed solely on the basis of their teleologic approach.

Thus, the *teleonomic* explanation is presented in the next section. Then, following Wendt's original outline, I shall discuss 1) the state, including the world state, 2) the struggle for *mutual* recognition, and 3) why the struggle within anarchy will *not* culminate in a world state.

Mutual Causation and Teleonomic Explanation

In his next section "Causal Pluralism and Teleologic Explanation" Wendt briefly explores the distinction between causal and constitutive theories, as well as between positivist "explanation" and interpretivist, or hermeneutic, "understanding" (Hollis and Smith, 1991; Ruggie, 1998; Wendt, 1998). He concludes that "the ultimate question here is whether different kinds of causes exist in nature (Wendt, 2003: 495)." In self-organization theory, however, processes and agents are often cocausal. Still, the chicken-and-egg problem exists in many domains. Nonetheless, Wendt's use of "in nature" presupposes an objective nature and thus is essentially positivist.[1]

Grounding his teleologic approach, Wendt refers to Aristotle's four causes – efficient, material, formal, and final – as a way of obtaining a "total understanding of a phenomenon," and rejects "pluralism for pluralism's sake (Wendt, 2003: 495)." Once again, the positivist ontology underlying "total understanding" is evident. Philosophers of science like Feyerabend have resoundingly argued in favor of "pluralism for pluralism's sake"(Feyerabend, 1993). Here it is "final" causality that is "the key element in teleology (Wendt,

2003: 495)." But others have argued that "the problem of teleology has its beginning in Aristotle's classification of causes, one being 'final' cause. All goal-seeking behavior has been classified as 'teleological,' but so have many other phenomena that are not necessarily goal-seeking in nature (Mayr, 1976: 364)." By contrast, teleonomic systems manifest pluralism for pluralism's sake and evolve in so doing.

Teleonomical Explanation

> "Teleological explanations explain by reference to an end or purpose toward which a system is directed (Wendt, 2003: 496)."
>
> "A teleonomic process does not, then, function by virtue of final causes even though it seems as if it were oriented toward the realization of forms, which will appear only at the end of the process. What in fact determines it [i.e. a teleonomic process] are not forms as final causes but the realization of a program, as in a programmed machine whose function seems oriented toward a future state, while it is in fact causally determined by the sequence of states through which the preestablished program makes it pass (Atlan, 1979: 15)."

Teleonomies, like teleologies, can be intentional or non-intentional (i.e. systemic). Following Wendt, I will focus only on the non-intentional grounds, leaving the exploration of intentionality for my conclusion. The primary goal of this section will be to explain *teleonomy* by contrasting it with *teleology* as per Wendt.

For non-intentional teleologic systems, Wendt offers ontogeny as the paradigm case. In living systems, biological development is end-directed but not intentional. Although an embryo does not seek maturity, it will eventually reach adulthood. It is not clear, however, even in biology, that "adulthood" constitutes an end-state. Organisms enter into a "state" of constant adaptation and learning, both physiological and mental. This teleonomic dynamic is very different than an end-state.

First, Mayr informs us that teleonomy "designates the apparent purposefulness of organisms and their characteristics" (Mayr, 1976: 366). Because end-directedness is apparent and not immanent, there has to be some "rule-based" program directing system adaptation. Thus, "a *teleonomic process or behavior is one that owes its goal directedness to the operation of a program*"(Mayr, 1976: 389). Second, it is essential to distinguish between the rules, or program, being enacted, and the source of that program. "A system is capable of performing teleonomic processes because it was programmed to function in this manner. The origin of the program that is responsible for the adaptiveness of the system is an entirely independent matter. It obscures definitions to combine current functioning and history of origin in a single explanation" (Mayr, 1976: 398).

Wendt's suggestion that a "teleological explanation of zebra stripes, for example, would show how they were functional for the differential retention

of zebras in natural selection (Wendt, 2003: 497)" is in fact a *teleonomic* explanation because traits are not selected *for* but *against*. To clarify, if traits were selected *for* then we might have teleological movement *toward* an end state, but since they are selected *against* in response to selection pressures, we instead see a teleonomic process of exploration of possibilities and the resulting exploitation of adaptively useful traits. Wendt notes that "in the savannah camouflage is a criterion of fitness, the consequences of which explain zebra stripes, just as in anarchy an advantage in war may explain states" (Wendt, 2003: 497). But there are no criteria for fitness, only criteria for unfitness. More importantly, fitness itself is a tautology since the only way of knowing which animals are "fit" is to see which survive. Thus, evolution, as anarchy, enacts the "survival of the survivors." But the "culture of anarchy" can change (Wendt, 1999). Therefore, what constitutes "fitness," i.e. what behaviors and agents are selected against, changes over time as contexts change. Furthermore, in two essays – "What, If Anything, Is a Zebra," and "How the Zebra Got Its Stripes" – Stephen Jay Gould exposes not only that the very definition of "zebra" depends on which taxonomy you employ and what criteria you use to link the various zebras to their evolutionary forebears, but also that "zebraness" is a quality expressed in many equines, including horses, who are merely zebras whose stripes and background are the same color (Gould, 1983). The point of this zebraic diversion is that how we *conceive* of a system determines what we *perceive* as relevant information. Defining the international system as a teleology not only creates the relevant agents and their attributes, but also emphasizes some processes and conceals others.

So, because Wendt defines the international system as a single system, he is therefore able to construct a developmental teleology. If, however, the world system is seen not as a single system, but as multitude of overlapping, simultaneously operating systems, then a developmental approach makes little sense. In the second case, the world system functions more like an ecology than an organism, and an approach that is more in keeping with such a complex, adaptive system is more fruitful. The need for appropriate theory, that is left unfulfilled because "as yet, there is no authoritative non-intentional, developmental account of teleological explanation (Wendt, 2003: 498)," is satisfied by non-intentional teleonomic explanation. "Rather than a teleological process, self-organizing systems can be understood as following a teleonomic trajectory tending toward increasing complexity" (Taylor, 2001: 193). In the next two sections we address 1) *how* that trajectory is enacted through the system's adaptive program, and 2) *why* self-organizing systems follow the path that they do.

Inward and Outward Selection Pressures

Wendt describes self-organization theory's bottom-up variant as "how order can emerge in a system as a result of the interactions of elements following

purely local rules (Wendt, 2003: 498)." Order in a system "grows from a bottom-up or 'upward causal' process, without central coordination (Wendt, 2003: 498)." Positive and negative feedback contributes to homeostasis or decoherence, and "when positive feedback effects cross a threshold or 'tipping point' the resulting non-linear dynamics can induce system change (Wendt, 2003: 499)."

It is interesting here that Wendt not only admits that "there is nothing intrinsically teleological about negative and positive feedback," but also understands that "self-organization theorists who focus on such feedback dynamics tend not to see their work as teleological (Wendt, 2003: 499)." He is, in fact, describing teleonomic systems, which use adaptive processes instead of final causation to organize their development. Unfortunately, Wendt discounts the possibility that these systems may describe the development of civilization, historically and in the future. In order to focus more clearly on end-directed systems, Wendt shifts gears to explore "the interaction of self-organization with macro-level boundary conditions exercising downward causation on a system's parts (Wendt, 2003: 499)."

In the top-down model, boundary conditions separate the system from its environment resulting in macro-level processes that exert downward causation on its parts. Wendt cites Waltz's example of balancing under anarchy: system-level processes "select" against states that do not balance, leaving only balancers (Waltz, 1979; Wendt, 2003: 500). System-level process can act on states and non-states alike, though. There is little to suggest that states will be the "survivors" in the coming era. In fact, evidence suggests that we are now operating in a system in which hierarchies are selected against in favor of networks (Arquilla et al., 2001; Hartzog, 2004; Rheingold, 2002).

Causation can be bottom-up or top-down in both teleology and teleonomy. The difference is whether systemic logics are exerted with regard to an "end" or whether they are exerted with regard to a "process." Rather than presenting the system as a hierarchy of levels, an approach which presupposes a single system, we can instead view the "parts" as existing within a network of overlapping structures, much like overlapping circles drawn on a piece of paper. In this view, teleonomy is the combined set of operational parameters that gets used by a system as it adapts to multiple selection pressures. Furthermore, because boundaries [circles], define "inside" and "outside," teleonomic systems are both inwardly and outwardly adaptive. Inward causation begins with a response to events exogenous to the system's boundaries and mediated by the system's "sensory inputs." Outward causation begins with a response to events endogenous to the system's boundaries that perturb its state. "The translation of programs into teleonomic behavior is greatly affected both by sensory inputs and by internal physiological… states" (Mayr, 1976: 395).

Complex Adaptive Systems and the Logic of Networks

Wendt's next section concerns the role of final causation in providing direction to the forces of upward and downward causation. "Downward causation is biased toward homeostasis and so does not explain change, and self-

organization theory's upward causal focus on non-linear dynamics does not explain their direction" (Wendt, 2003: 501). Unlike downward causation, inward causation *can* be the driver of change in a system when it is responding to pressure from elsewhere in the system. In such a case, the parts may create an outward causal bias towards homeostasis, the opposite of Wendt's systemic logic. Furthermore, not only is the need for an explanation of "direction" an ontological assumption about the system itself, but if it exists, direction can be explained by numerous factors both endogenous and exogenous to the system's boundaries. Direction in teleonomic systems, in particular, is provided by the system's inherent logic as it responds and adapts to these exogenous and endogenous factors. Nonetheless, just as it is the interaction of all three processes – upward, downward, and forward – that constitutes teleology (Wendt, 2003: 501), so, too, it is the interaction of outward, inward, and adaptive processes that constitutes teleonomy.

To make his point, Wendt borrows four "attractors," situating the world state as a fixed-point attractor. Wendt's description of attractors derives from dynamical systems theory, but his oversimplification must be clarified by the following essential points:(Kauffman, 1993: 175-179)

- The typical representation of a dynamic system is a multidimensional *state space* which shows *all* of the potential states the system can occupy.
- A succession of states in this state space constitutes a trajectory.
- Trajectories *may or may not* lead to a basin of attraction which culminates in one of the four attractor states.
- Not all systems even have attractors.
- Many systems have multiple attractors.

Wendt ignores these distinctions, thus overly simplifies the diversity of complex systems. In complex systems "*the different attractors constitute the total number of alternative long-term behaviors of the system*"(Kauffman, 1993: 177). The behavior of complex systems is more accurately describes as teleonomic than teleologic, because the "program" may be stated in a rule-based way, such as "avoid condition X," rather than "move toward a predefined end state." In fact, "this, crudely, is how one might view a dynamical system with multiple attractors: such as cultural evolution, with attractors equivalent to bands, tribes, chiefdoms, and states"(Lewin, 1999: 21), to which I would add another entry: panarchy.

There is a plethora of literature on complex adaptive systems, and it would be impossible to summarize it all here.[2] What I will briefly cover are the main arguments presented from my previous paper "21st Century Governance as a Complex Adaptive System" (Hartzog, 2004). The term "complex" refers to the regularity and the density of interactions between the system and its parts. The term "adaptive" refers to the fact that parts and whole evolve in response to their environment and each other.

Cederman defines a complex adaptive system as "an adaptive network exhibiting aggregate properties that emerge from the local interaction among many agents mutually constituting their own environment" (Cederman, 1997: 50).

Cederman's definition is useful because it contains within it the key to why global effects are only now being seen. Communicative technologies are redefining what constitutes a 'local' interaction. "To maintain clarity with respect to the important distinction between spatial and contextual proximities, henceforth I shall refer to the former as *local phenomena* and to the latter as *localized phenomena* (suggesting they have to be contextually redefined in order to become proximate)"(Rosenau, 2003: 88). Axelrod and Cohen, too, suggest that because complexity is "rooted in patterns of interaction among agents, then we might expect systems to exhibit increasingly complex dynamics when changes occur that *intensify* interaction among their elements. This, of course, is exactly what the Information Revolution is doing: reducing the barriers to interaction among processes that were previously isolated from each other in time or space" (Axelrod and Cohen, 1999: 26). John Holland describes complex adaptive systems as sources of "perpetual novelty" and thus provides us with our first glimpse into the need for adaptive, and not totalizing, governance (Holland, 1995). "All these complex systems have somehow acquired the ability to bring order and chaos into a special kind of balance. This balance point… [is] often called *the edge of chaos*…. The edge of chaos is the constantly shifting battle zone between stagnation and anarchy…" (Waldrop, 1992: 11-12). Per Bak has termed this zone "self-organized criticality" (Bak, 1996: 22-48).

The operative pathway for Rosenau's "localization" is a network of interactions. Networks exhibit the same logics as complex adaptive systems. Stuart Kauffman tells us, "a network can be thought of as a complex dynamical system, and is likely to have many such attractors" (Lewin, 1999: 27). A lower threshold exists where a network has too *little* connectivity, as well as an upper threshold where the network exhibits too *much* connectivity. Too little connectivity threatens network integrity, whereas too much connectivity inhibits flexibility. The system must be connected enough to be a "system," but open enough to adapt to endogenous and exogenous factors. Networks that exist between order and randomness are called "small world" networks, and Duncan Watts urges that the study of network properties and dynamics is essential to understanding our "connected age" (Watts, 1999; Watts, 2003). Axelrod and Cohen suggest that networks can learn to explore and exploit the governance landscape between the two extremes (Axelrod and Cohen, 1999). As the regularity, intensity, and density of interactions at all levels in the world system increases, the system exhibits the characteristics of a complex adaptive system. Therefore, a theory of governance that adopts a "complex adaptive systems (CAS) approach " is likely to provide better explanation and understanding (Cederman, 1997: 19-54; Rosenau, 2003).

The essential point of all this is that complex adaptive systems and networks manifest an immanent teleonomic logic that results in a perpetual disequilibrium, or self-organized critical, state that is poised "on the edge of chaos" between too much order and too little. Insofar as a hierarchy – and I include the state among those – occupies the position of "too much order" because it represses the exploration and exploitation of difference, it cannot satisfy the requirements for a self-organized system.

Finally, Wendt suggests that "by taking war off the agenda, a world state would create capacities for collective action that its members could never realize in an anarchy (Wendt, 2003: 502)." My counter-proposal is that by taking the state off the agenda, we preserve the possibility of achieving global coordination of cooperation and collective action using networks and communicative technologies without the mediation of a world state.[3]

Falsifying Teleonomic Explanations

Wendt admits to the "hard epistemological problem [of teleology] – how can we know whether a world state is inevitable before the system gets there (Wendt, 2003: 503)?" Wendt, offers three possibilities to overcome this dilemma: the first is the history of the international system; the second is the histories of individual states, and the third is computational modeling. The first possibility suffers from the assumption that because the system proceeds along a certain linear trajectory in the past that it will do so in the future. The presence of thresholds and cascades in complex non-linear systems refutes that assumption. The second possibility fails to allow for the historical contexts in which individual states evolved, such as the differences in available technology then and now. The third possibility, is in fact, not teleological at all. In agent-based computer models, the end state *does not* drive the dynamics of the system; the local rules of the agents do.[4] Convergence these models is a *teleonomic adaptation*, not a *teleologic fulfillment*. In fact, inquiry into teleonomy escapes the epistemological quandary altogether. Because teleonomic systems implement processes that are empirically observable, and *can* be directly examined using agent-based modeling, we need not adopt faith in a compelling "end state" in order to acquire evidence. Although the problems of teleology are expounded in too many sources to cite, I *would* like to borrow and reiterate two salient points from Theda Skocpol's critique of Wallerstein (Skocpol, 1977). The first critique is that the ontological presence of an "end state" severely hinders the ability to collect valid evidence when performing historical analysis. The teleological lens acts as a filter which not only allows some evidence to pass through and rules out other evidence, but also *determines what constitutes possible evidence in the first place*. The second critique is that often in posing an alternative to a given system, the new version imports the deficiencies of the old one in a "mirror image" conundrum. In Wendt's case, he replaces an *international system of states* with a *world state*, but as I have mentioned before, both systems rely on the presence of the state as a source of governance. Because of this focus, we must now turn to the definition of "the state."

Defining the state

Wendt defines the state as the main political group through which individuals have interacted with the world system throughout history. Following Weber, he grounds his definition in four properties: 1) a monopoly on the legitimate use of force, 2)

legitimacy, 3) sovereignty, and 4) corporate agency (Weber et al., 1978; Wendt, 2003: 504-505) However, when he subsequently asserts that he is going to focus on states because they are dominant, he is reifying not only the presence of the state, but also its organizing principle, i.e. a hierarchy of power and the monopoly on coercive force. In effect, he marginalizes alternative methods of organization that have existed throughout history, and is therefore not required to explain them. What is interesting is how state-based theory fails to take into account *whether or not alternative means of governance are available*. By asserting the primacy of force as the criterion for determining "relevant" actors, state-based theories can comfortably ignore the numerous other methods available in anarchical systems, i.e. networks of relations, that can be leveraged to provide order. The international relations literature on cooperation and compliance using sanctions and norms, and in particular regime theory, is highly instructive in this regard (Chayes and Chayes, 1993; Hasenclever et al., 1997; Keohane, 1984; Kratochwil, 1989; Ruggie, 1993a).

In fact, it is illuminating to consider the possibility that using sanctions and norms is a *more advanced method* of providing social governance than force. In such a case, then the state has a monopoly on a mechanism that is *no longer necessary or legitimate*. At this juncture, the world system could be said to be moving from a hierarchical structure wherein states are empowered to use force, to an anarchical network wherein peers are empowered to share the costs social governance. The state in such a system is an ideational construct that is shackled to an outmoded form of behavior. By way of example, consider the following:

> "Bison of the North American Great Plains, for instance, spent thousands of years adapting to their life conditions. One adaptive tactic they invoked was, when threatened, to stand completely still and to frequently display themselves broadside in order to appear as big as possible. This helped to intimidate wolves who were after their calves. Although this trait worked to help deter wolf attacks, when the broader context changed upon the human recolonization of North America, it merely provided gun-wielding white settlers with a big stationary target which was that much easier to hit. This assisted in bringing the bison to near-extinction… (Seegert, 1998)"

The behavior that evolved to provide an adaptive advantage in one context, constituted an adaptive liability when the context changed. The point is illustrative because political science often ignores the contexts in which actions occur, contexts which actively select for and against actors and strategies. The arrival of new actors creates a constantly shifting landscape within which a "we" is constructed. Wendt is correct in explaining that "a stable structure of collective intentionality requires… a shared belief among its members that they constitute a collective identity or 'We', to which they are willing to subordinate their private judgment," but he assumes that there is *only one* 'we' and furthermore that it *is and must be* a state.

Wendt suggests three changes that must occur on the path to a world-state: 1) a universal security community wherein states perceive each other as, if not friends, at least non-combatants, 2) a universal collective security wherein threats to one are responded to as threats to all, and finally 3) a universal supranational

authority to which all territories must submit. Given the state-driven ontology here, it is difficult to extract much that is relevant to a future world of complex adaptive networks. Wendt's formulation is more of a recipe for the formation of a United States of America, than for a multicultural pluralist civic space such as the European Union is attempting.[5]

Nonetheless, I have little argument with the first two propositions which are as necessary for organized groups in a world of networks as they are in a world of states. The third one however raises the grim spectre of totalitarianism insofar as there exists no mechanism by which they system can insure against either repression or ossification. Furthermore, Wendt insists that "as in territorial states today, cooperation with a world state would be mandatory and enforceable (Wendt, 2003: 505). As I have noted already, international cooperation is often already enforceable by "soft" means, but Wendt has in mind here a "hard" definition of enforcement.

Wendt further expounds, "since I have defined the territorial state partly in terms of sovereignty, this would in effect mean that the elements of a world state would no longer be 'states' in a strict sense, but local realizations of a larger state (Wendt, 2003: 505-506)." Wendt has the direction right, but not the substance. What is really at issue is this: as global processes become increasingly effective at managing "cooperation under anarchy (Oye, 1986)" governance is more often achieved in spite of the state rather than because of it. The success of "soft" governance through transnational networks retroactively casts doubt on the necessity of the *already* territorial and local phenomena of states themselves. If we can overcome collective action dilemmas and cooperatively organize without the state, then, to repeat Wendt's original question "what is X [the state] *for*?" (Wendt, 2003: 496). Thus, what emerges is the possibility of globally coordinated cooperation that is locally realized. Global and local instantiations of anarchy are a significant challenge to global and local instantiations of hierarchy (Arquilla et al., 2001; Arquilla et al., 1997). Moreover, the growing problematization of territoriality calls into question the analytical validity of the global/local distinction itself (Rosenau, 2003; Ruggie, 1993b).

Wendt is no stranger to this possibility, in fact, he cites other alternatives to a world-state: "world polity (Ougaard and Higgott, 2002)" or "neo-midievalism (Bull, 2002; Friedrichs, 2001)." However, he claims that "these would be only transitional structures, and that the political development of the system will not end until the subjectivity of all individuals and groups is recognized and protected by a global Weberian state." Here, Wendt muddles up his premise, overlapping a theme of recognition between states with a theme of recognition among individuals and groups. While the longer critique of this statement occurs later in this paper, suffice it to say that for Wendt the state is the carrier of recognition of individuals and groups. Finally, until there exists a global enforcer, Wendt sees the problem of "rogue Great Powers" as intractable. Power violence, he says must be accountable to the system, but again, that accountability is carried by a "state" rather than some other structure.

Wendt's limitation stems from the difference between political science and sociology. Political science tends to view the social as something that occurs within the boundaries of the state. The state is seen as the bounding structure

within which identities and behaviors are constituted. It is the whole of which individuals are a part. Conversely, in sociology the social is seen as the boundary within which states, cities, and other phenomena have arisen. In this framework, states are merely one of many mechanisms available to individuals whose identities and behavior are constituted by their participation in various social structures. The political science lens implies that the rise in global social activity creates a void for world governance that can only be filled by the emergence of a world state. However, the sociological lens offers the possibility that the need for social governance may be filled by states or other simultaneously operating structures.[6]

Finally, Wendt has this to say:

> "A world state might look very different than states today. In particular, it could be much more decentralized, in three respects. First, it would not require its elements to give up local autonomy. Collectivizing organized violence does not mean that culture, economy or local politics must be collectivized; subsidiarity could be the operative principle. Second, it would not require a single UN army. As long as a structure exists that can command and enforce a collective response to threats, a world state could be compatible with the existence of national armies, to which enforcement operations might be sub-contracted (along the lines of NATO perhaps). Finally, it would not even require a world 'government', if by this we mean a unitary body with one leader whose decisions are final.… As long as binding choices can be made, decision-making in a world state could involve broad deliberation in a 'strong' public…. In short, as long as it has a common power, legitimacy, sovereignty and agency we should not prejudge the form a world state might take. The EU is already not far from meeting these requirements on a regional level. Were a 'completed' EU to be globalized it would be a world state" (Wendt, 2003: 506).

Passages like this one are worthy of scrutiny. The *structure* that Wendt is willing to allow in a world-state is clearly a decentralized network, but Wendt retains the basic *process* of coercive power wielded by the state. The problem with this is that the logic of networks and complex adaptive systems is inherently antithetical to the formation of Wendt's state. In my view, a state is incapable of transforming into an anarchical web of interactions without losing its essential character. *Because a state is a hierarchy and a network is an anarchy, a state cannot be a network and a network cannot be a state.* In fact, the entire basis of international relations is the task of "governance without government (Rosenau and Czempiel, 1992; Young, 1999)," and the exploration of that concept seems to have eluded Wendt entirely. To be fair, perhaps Wendt's state is no state, but the very use of the word, steeped as it is in the historical and linguistic implications, is grossly misleading, insofar as it conjures up images of the kinds of hierarchical bureaucracies that current states exemplify.

The Struggle for Recognition

"Historically states have always existed in the plural, and so the emergence of a world state requires the transformation of their identities to a global basis (Wendt, 2003: 507)." Again, by focusing only on states, Wendt assumes two points: 1) that states are the carriers of identity, and 2) that individual identities are state-constituted. Identities are manifold, however, and as Wendt himself has noted, states act in accordance with *multiple* identities (Wendt, 1999) as do individuals (Goffman, 1971). The flux of identity is why states are merely "local equilibria," as Wendt agrees, but then he asserts that "they inhabit a system that is in disequilibrium, the resolution of which leads to a world state (Wendt, 2003: 507)." This is a telling sentence because although Wendt correctly identifies the international system as one in disequilibrium, he incorrectly assumes 1) that it must be resolved, and asserts 2) that resolution equals world-state emergence. As we have already seen, however, a system that is *far from* equilibrium – Prigogine's "dissipative structure" – *maintains its disequilibrium as a complex adaptive system on the edge of chaos*.

Material Competition

In investigating the material forces that may drive world-state formation, he suggests that "just as the risks of the state of nature made it functional for individuals to submit to a common power, changes in the forces of destruction increasingly make it functional for states to do so as well (Wendt, 2003: 508)." Also, Wendt notes the role of technological development as a source of teleo-logic and material dynamics, since states in a Hobbesian security dilemma must continually keep up with each other technologically, i.e. "imitate or die." In addition, he outlines two problems with the material dynamic: 1) the vulnerability of states in anarchy is exaggerated, and 2) governance is, of course, a collective action problem, and submission to a world-state may be collectively rational without being individually rational. It is interesting to note that a plethora of "technologies of cooperation" dramatically lower the threshold for collective action, and networks of transparency that perform monitoring of compliance as well as reputation management transform the "Prisoner's Dilemma" into an "Assurance Game" thus solving the collective action problem.[7] Again, the very forces that Wendt sees as potentially driving world-state formation, in my view, result in an alternative.

Wendt does recognize that "what is missing from the materialist theory of world state formation is an account of identity change. It assumes that actors in the pre-state situation are the same as actors in the post-state – rational, self-interested maximizers (Wendt, 2003: 510)." Here, I prefer the reasoning of Rousseau or Locke. Specifically, Hobbes posited that the individuals occupied a social vacuum in a war of "all against all (Hobbes and Martinich, 2002)." Locke and Rousseau argue that the social precedes the state, and thus provides a context into which the state must be situated (Locke, 1996; Rousseau, 1996a; Rousseau, 1996b).

The Struggle for Recognition

Wendt grounds the struggle for recognition in three concepts: 1) collective identity, or solidarity, 2) the instability of asymmetric recognition, and 3) individual and group recognition (Wendt, 2003: 510-516). I will take these in turn.

Recognition and Difference

First, Wendt insists that "to generate any movement in a structural theory we have to assume that actors want something, so that at the micro-level there must be a goal-seeking (and thus teleological) element (Wendt, 2003: 510)." This is one of Wendt's key errors, as behavior can be either goal-seeking (teleologic) or consequence-avoiding (teleonomic). It is not necessary for a system or agent to know what it wants to embrace, in order to know what it wants to avoid. This is the essential difference between a telos and an explorative mode of being.

Still, Wendt accepts that the "precondition for recognition is a simple fact of difference or alterity (Wendt, 2003: 512)," and that "one becomes a Self, in short, via the Other — subjectivity depends on inter-subjectivity (Wendt, 2003: 512)." His definition of "thin" recognition is merely ontological standing, whereas "thick" recognition "is about being respected for what makes a person special or unique (Wendt, 2003: 512)." Therefore, "struggles for thick recognition are open-ended and never-ending in a way that struggles for thin recognition are not (Wendt, 2003: 512)." All of these are important points; however, he concludes by urging that "what matters to world state formation is only that the struggle for thick recognition be 'domesticated' over time – in the sense of accepting non-violence and the authority of the state…." (Wendt, 2003: 512). There are a number of problems with this kind of "solidarity."

First, it excludes the possibility of thick recognition of an individual or group who opposed the world-state, i.e. whose difference was radical, and thus represented a "radical Other." Second, new forms of difference must continually be interpreted by the only criteria available, that of current distinctions. By elevating an "authority" to the role of the legitimator of "appropriate" difference, a world-state embrces homogeneity, not difference. It defines what differences are *important*, and then legitimates *unimportant* differences under an umbrella of sameness, while still marginalizing any radical Other. Citing Williams, Wendt even states this explicitly: "The starting point for this claim is that by recognizing the status of the Other and accepting the normative constraints on the Self which that implies, one is making the Other part of the Self — she is no longer purely 'Other'. When recognition is reciprocal, therefore, two Selves in effect become one, a 'We' or collective identity (Williams, 1997: 293) – not in their entirety, but with respect to the status at stake in their mutual recognition (Wendt, 2003: 512)." And again, citing Brewer, "two actors cannot recognize each other as different without recognizing that, at some level, they are also the same (Brewer, 1991; Wendt, 2003: 512)."

This is not mutual recognition, it is subsumation. Difference is simply defined away, rather than acknowledged and dealt with. There *is* a crucial role for

recognition in the social, but *does not* consist of developing a collective identity or solidarity. In fact, the essential recognition that is required is one of respecting *manifestly irreconcilable identities*. This means respecting the Other *as* Other, as unknowable and un-subsumable. In "Living with Difference," Charles Taylor makes the essential point: "The crucial idea is that people can also bond not *in spite of*, but *because of difference*. They can sense, that is, that the difference enriches each party, that their lives are narrower and less full when they are alone than when they are in association with each other [emphasis mine]"(Taylor, 1998: 214). In Taylor's version, differences are embraced not because they are irrelevant with respect to some higher level-of-analysis, but because *difference matters* – intrinsically. "Differences erased or forgotten are more dangerous than differences affirmed or revealed (Zachary, 2003: 248)." Thus it is not *solidarity* based on *identity* that is the resolution of the international system, but rather *pluralism* based on *difference*. As Niklas Luhmann points out in Social Systems, "identity is possible only by difference…. The point from which all further investigations in systems theory must begin is therefore not identity but difference (Luhmann, 1995: 177)."

In fact, the whole thrust of postmodern and critical social science can be seen as the revelation of difference *qua* difference. Serious intractable problems of justice and repression are embedded in systems where one perspective is elevated to a privileged status at the expense of other perspectives – where dialogue is replaced by monologue.[1] The historicity of the state can be acknowledged by investigating its postmodern alternatives. Mark Hoffman notes of the various postmodern and normative approaches that "they offer the possibility of new forms of political action, by new political actors within new political spaces which are not confined by the borders of particularist communities, but are not indifferent to them (Hoffman, 1994: 39)." And so we return to "pluralism for pluralism's sake," not to *reach* solidarity, but to *avoid* subsumation.

The Instability of Asymmetric Recognition

Wendt's basic argument that "however, those who are not fully recognized will struggle for it [recognition] as best they can, which makes any social order founded on unequal recognition unstable in the long run" is undeniable. Nor is his reminder, "Hegel argues that recognition based solely on coercion — his example is the master–slave relationship — is ultimately unsatisfying, because the failure to recognize the slave calls the master's own subjectivity into question…. One can only be free if recognized as such, and that recognition is only valuable if it is freely given (Wendt, 2003: 513-514)." Clearly, with such foundations, recognition by the state is asymmetric. For subjects, being *forced* to recognize either Others or the state itself negates the recognition received. For the state, recognition is given only to those who are legitimated and found "worthy" of

[1] For an overview see Brown, Chris. (1994). 'Critical Theory and Postmodernism', In A.J.R. Groom and Margot Light (ed.) *Contemporary International Relations: A Guide to Theory*, 56-68. London, New York: Pinter Publishers.

recognition, while the state is never subject to this test, but is able to demand and enforce recognition of itself.

Nonetheless, I agree with Wendt that desires for recognition, in the long run, undermine systems that do not satisfy them (Wendt, 2003: 514). It is precisely this point that makes a world-state untenable. A world state, indeed any state, offers only asymmetric recognition, but only *mutual (symmetric) recognition* is authentic or sustainable. Admittedly, a small caveat is in order. It may be that *equal* recognition is not required, but only *sufficient* recognition. In this case, a sufficiently recognized entity would be willing to persist in an asymmetric relationship. It is my contention however that successive generations would expand the definition of "sufficient" until parity was achieved.[8]

Individual and Group Recognition

Wendt begins, "within the system as a whole people confront each other not only as individuals but as members of groups, and so the struggle for recognition is mediated by group boundaries…. What groups want is for Others to recognize them, not necessarily to recognize Others (Wendt, 2003: 515-516)." Groups, not just individuals, struggle for recognition. Within and between groups, recognition can be either asymmetric or symmetric. And yet, Wendt makes a connection between Charles Taylor's contention that universalism depends on a recognition of particularism (Taylor, 1998), insisting that "world state formation is not only a cosmopolitan process, but a communitarian one as well (Wendt, 2003: 516)." Again Wendt misses the fact that there exists the possibility of a system of mutual recognition between groups and individuals that need not be mediated by a world state, or any states. Rather, in asserting that "the system has always consisted of autonomous groups which constrain inter-individual struggles across group boundaries, and those groups today are states (Wendt, 2003: 516)" he ignores the fact that transnational networks represent a serious rebuff to the notion that states are capable of mediating individual identity.

The Logic of Panarchy

Wendt clarifies that the struggle for recognition is the "bottom-up" aspect of his argument and that the "logic of anarchy" is the top-down aspect. In articulating this logic, he insists that "all stages short of the world state are unstable" based on the need for an eventual world-state to resolve the struggle for recognition. Because I agree with Wendt's preliminary "stages" before the final "world state" stage, I will not review them in detail. Instead, I will summarize them and respond only to particularly relevant issues. In the final stage, however, not only will I tackle the emergence of a world state, but I will present the alternative as the result of the "logic of panarchy."

Stage One: The System of States

In stage one, the system is constituted by three boundary conditions — the fact of multiple interacting states (individuals are not actors at all here), or simple difference; the absence of any mechanism to enforce cooperation among these states (anarchy); and a mutual belief that they are 'enemies' (Wendt, 2003: 517). Again, Wendt suggests that a "world conqueror" could intercede to impose a world state, thereby avoiding the following stages and leaping to the final stage. The fact, that Wendt allows for this possibility demonstrates that his "world stage," regardless of how it arrives, is essentially the same beast. Wendt does not distinguish between recognition by a conqueror state and recognition by a world state, so we should not either. By contrast, I *do* distinguish between recognition by a world state and recognition by peers.

Stage Two: The Society of States

The second stage is Hedley Bull's "society of states"(Bull, 2002), or a Lockean culture of anarchy (Wendt, 2003). States, having evolved some shared norms and ideas, are the sole mediators of recognition. States recognize other states, but not other states' citizens, and they behave as rivals, if no longer enemies. Nonetheless, the eternal threat of war demands that "individual recognition must be external as well as internal, which requires breaking down its mediation by state boundaries (Wendt, 2003: 519)."

Stage Three: World Society

Wendt's definition of "world society" is in fact somewhat elusive. States are still primary, but they now recognize other states' citizens. This is not a stable end-state because sovereignty is retained by states, an thus the system has no mechanism to deal with agressors, or "rogue states." Wendt offers two solutions, 1) centralized coercion, or 2) decentralized enforcement, both of which rely on an as yet unrealized landscape. The system "progresses" because "actors [states] need a more demanding form of recognition, one that imposes not only negative duties (non-violence) but also positive ones (mutual aid)" (Wendt, 2003: 520). He fails to consider numerous alternatives, however, for example, mutual disarmament, or the influence and "enforcement" generated by non-state actors. Citing Cederman, he does assert that states "that deepen their solidarity will have a better chance of survival than those that do not, suggesting that in the long run they will colonize the system." But Cederman's focus on emergent actors stems from his disapproval of a state-centric international relations, and what he actually says is that the role of other actors has been "obscured" by state-centric theories (Cederman, 1997).

Stage Four: Collective Security

Under collective security states have "a well-developed sense of collective identity with respect to security" (Wendt, 2003: 521). Nonetheless:

> "A collective security system cannot require its elements to continue recognizing each other, in the sense of commanding a legitimate monopoly of force to enforce it. The system is voluntary in a way that a state is not. Strictly speaking, it remains anarchic" (Wendt, 2003: 522).

Beyond the already mentioned fact that enforced recognition is not recognition at all, Wendt also fails to realize the implications of his second point: that they system is a voluntary anarchic network. Besides their fluid anarchical structure, one of the strengths of network and peer-to-peer systems is their ability to leverage the power of voluntarism. Because technologies of cooperation, like peer-to-peer networks, lower the threshold of collective action, voluntary participation becomes not only accessible as a source of cooperation, but in fact becomes a "cornucopia" that is both robust and reliable (Bricklin, 2001; Raymond, 2001; Weber, 2004).

Collective security is unstable because it does not satisfy the desire for recognition. Wendt suggests that recognition, because it is voluntary, is subject to withdrawal. "Recognition that is not enforceable is in the end not really recognition at all, since it depends on the goodwill and choice of the recognizer" (Wendt, 2003: 524). What he implies by this is that enforced recognition is *not* able to be withdrawn, and somehow solves the problem. First this presents the absurdity of infinite regress: who will enforce the enforcer's recognition of Others, ad infinitum. Second, as the histories of revolutions and ethnic cleansings have shown, even institutionalized recognition is subject to withdrawal at any time. Attempting to secure recognition by making it an enforceable obligation only secures the asymmetric basis of totalization and conflict. Even "soft" forms of enforcement such as norms and sanctions cannot reliably prevent withdrawal. What they *can* do is provide the constitutive basis for how actors define their needs and desires in the first place, thus creating an environment where mutual recognition and non-agression are embedded instead of enforced. In my opinion, an embedded recognition can succeed where an enforced one cannot. Regarding enforcement capabilities, Patrick Morgan reminds us that "in a successful pluralistic security community, *no need exists for such a capability*. Indeed, if the capability is needed, then the community does not exist" (Morgan, 1993: 351). Wendt seems to be looking for an answer to the problem of freewill, which as far as we can tell, has been intractable since the beginnings of philosophy.

Stage Five: Panarchy

> "With the transfer of state sovereignty to the global level individual recognition will no longer be mediated by state boundaries, even though as recognized subjects themselves states would retain some individuality (particularism within universalism). Individuals and states alike will have lost the negative freedom to engage in unilateral violence, but

> gained the positive freedom of fully recognized subjectivity. The system will have become itself an 'individual' (Buss, 1987)" (Wendt, 2003: 525)

First, recognition will still be mediated by state boundaries, but it will be mediated by *one* state instead of many. Recalling how complex systems use diversity to identify new directions, a single monolithic state could not possibly fare better than a multi-actor network. Second, it is not clear at all what kind of "individual" is being spoken of here. An actual individual is a complex adaptive system, but the "individual" Buss is suggesting is a totalizing whole.

For example, Wendt suggests that a world-state would be able to prevent secession, but adds that "the ability to prevent secession would ensure temporary security, not recognition." It must be underscored here that "security" in this context means security for the *world state* not necessarily for its citizens. Next, however, Wendt exposes a glaring contradiction to his previous statements, saying "imposing recognition by force is in any case at odds with the basic principle that recognition that is not freely given is not really 'recognition' at all" (Wendt, 2003: 525).[9] It is possible that Wendt is subtlely distinguishing between the imposition of recognition by force and the enforcement of recognition freely given, but I would oppose that distinction on the grounds that recognition "freely given" in an environment that included not only enforcement but subjects' knowledge of that enforcement is not really "freely given" at all.

Finally, rather than defend *why* a world state is a sustainable end-state, Wendt tells us that it is, and then refutes three potential sources of world state instability. The implication is that since these three concerns have been put to rest, the world state is *ipso facto* a stable end-state. My own contention is quite the reverse: Complex systems are "stable" because they are robust and adaptive. Certainly, they are vulnerable to shocks both endogenous and exogenous, but by virtue of their dissipative structure, they are able to deal with shocks by *redistributing stresses periodically throughout the system (Bak, 1996)*.

Wendt allows that "for the logic of anarchy to have an end-state other than a fixed-point attractor, there must be something internal to the system itself that would necessarily induce an eventual collapse, sending it along another developmental path" (Wendt, 2003: 525). Next I will explore the factors that prevent a fixed-point attractor in the world system.

First, addressing Kant's concern about despotism, Wendt says that a world state that only met the criteria for thin recognition could be despotic, but not one that provides thick recognition. He reduces the concern for despotism into one of merely democratic deficit. But it is my contention that because a state is *only capable of thin recognition*, a state is despotic by definition.[10] Thick recognition is only possible between peers. Wendt's only "alternative to a world state… [is] an anarchic world in which territorial states retain their sovereignty" (Wendt, 2003: 526). Again, because Wendt's ontology is one in which the workings of the social require the existence of the state, he fails to see an alternative system in which *individuals and groups* express their "sovereignty" directly without the mediation of any state. This faith in the systemic and normative "success" of the state is further demonstrated in Wendt's belief that "whatever the accountability

problems in a world state might be, they seem far less than those in anarchy" (Wendt, 2003: 526). I cannot disagree more. Hierarchical relationships and institutions cannot solve the problems of transparence, i.e. accurate information. Recently, anarchical, or "peer-production" systems, have proven more effective.[11] Top-down "surveillance" is opposed by bottom-up "sousveillance."[12] Radical transparency such as the kind David Brin explores in The Transparent Society is in the end only possible between peers (Brin, 1998).

The second concern is nationalism. Wendt claims that "the rise of nationalism can actually be seen as evidence for my argument, because it is about the struggle for recognition." Amusingly, I make the same claim. Just as nationalism is a reaction to regionalism or globalism, so localism is a reaction to nationalism, and individualism a reaction to localism. These struggles are best understood as demands for recognition on any level by individuals and groups in opposition to *forces that repress difference*.[13]

The third problem is one that lies at the core of this paper, and Wendt is not blind to it:

> "On the one hand, like today's states I am arguing that a world state would be a subject – a corporate persons or Self. On the other hand, my explanation for the inevitability of a world state assumes that a stable Self depends on mutual recognition of equality with an Other. By assimilating all subjects into one collective identity, a world state would seem to lack such and Other and thus be unstable" (Wendt, 2003: 527).

Wendt's solution is that "internal differentiation allows each to recognize the Other, while incorporating that Other within its own definition of Self" (Wendt, 2003: 527). My objections herein are twofold. First, if by his statement, Wendt means that the Other is subsumed within the larger totality, then my objections are the same as before. On the other hand, if by his statement Wendt means that the presence of the Other serves to underscore the definition of the Self by emphasizing difference and boundary distinctions – a necessity I fundamentally agree with – then that kind of symmetric recognition is *only possible in the absence of* a state.

Wendt offers a second solution in the possibility that temporal differentiation can sustain the distinction of difference. Thus, "'history' becomes the Other in terms of which the global Self is defined" (Wendt, 2003: 527). The problem with this is that the historical Other is 1) not present, and 2) interpreted and presented. The continual renegotiation of difference requires a constant conversation between Self and Other, and the past does not talk back. It cannot object to its treatment by the Self. This leads directly to the second point, which is that the historical Other *is* "treated" by the present Self. In the case of history, it is constantly reinterpreted and re-presented (represented). If the landscape for such presentation is anarchic and diverse, then numerous understandings are possible, but if the landscape is "provided" by the mediation of a world-state, i.e. if knowledge is authenticated, or "sanctioned," then totalization and repression are not only present, but *hidden*. By contrast, where a world state creates an embedded Self against which past and present differences are discovered, a

complex adaptive system creates an embedded Other against which totalization and repression are discovered. Wendt is implicitly aware of this but not explicitly aware of his awareness: "a world state would differ from anarchy in that it would constitute such disruptions as crime, not as politics or history" (Wendt, 2003: 528). The hidden politics of crime and repression have been adequately illuminated by Foucault (Foucault, 1995). Suffice it to say that constituting *unauthorized* difference as crime is significantly at odds with allowing the very definition of *difference* to be explored without repression.

Finally, Wendt says "it might be better to say that a world state would be the end of just one kind of history. Even if one telos is over, another would be just beginning" (Wendt, 2003: 528). If teleology represents development to an end-state, then it is hard to see how a system could have a succession of end-states. A teleonomic system on the other hand, adapts its program in response to internal and external conditions, so what Wendt reveals here is that there is a teleonomic logic underlying his teloi. This logic is the "logic of panarchy."

The logic of panarchy, then, is the logic of complex adaptive systems that do *not* rigidify, but instead are able to poise themselves between too much order and too much chaos. In addition, it is the logic of networks wherein overly "powerful" nodes become overburdened, and again the system reaches an "uneasy equilibrium" poised on the threshold between stasis and change (Buchanan, 2002: 123-127; Thompson, 2003).

Conclusion

To wit, I have argued that a world state is *neither inevitable nor likely*. The teleonomic "logic of panarchy," i.e. the dynamics of complex adaptive systems and networks, channels the struggle for recognition horizontally into peer-to-peer systems instead of vertically into a world state. Neither technology nor globality is sufficient in itself to create panarchy. First, without the presence of advanced communications technologies, a global unity would be forced to implement vertical hierarchies to perform its functions and reproduce itself. One can imagine that historical pathway if some ancient empire, such as Rome, had succeed in consolidating global control early on. Second, because state boundaries are maintained in opposition to an extra-territorial Other, states that are technologically connected internally may still exhibit totalitarian properties. This is very similar to the world we inhabit today, wherein much of the turmoil at the state level is produced by the challenges to statehood embedded in connective technologies. It is only at the nexus of peer-to-peer network technologies and global emergence that panarchy is possible. Because either globality *or* technology could evolve first, panarchy is *multiply realizable*.

It is possible that Wendt would see an "edge of chaos" state as an attractor. I am not entirely sure I would disagree. But the differences between an equilibrium, or fixed-point, end-state and an "edge of chaos" end state are significant. As we have seen, it is only *because* complex adaptive systems operate far from equilibrium that are able to maintain their structural identity through autopoiesis while simultaneously adapting to changing conditions.

The truth embedded in Wendt's rhetoric contradicts his own conclusions. For example, he states that "it seems hard to argue that a world in which recognition is unequal… would be normatively superior to one in which recognition is equal, (Wendt, 2003: 529)" a statement which is not only undeniably true, but is the very reason state-based recognition is neither sufficient nor sustainable. At the very least, Wendt insists that a world-state is necessary to meet the minimum condition for a just world order. Unfortunately, the state reproduces its identity whether it is just or not. The status quo comes to be represented as "good" and is henceforth the very measure of justice.

Herein lies the real danger of the world state. The legitimation of power has two aspects: universality and naturalism. The first presents itself when a distinctly limited "good" is taken as if it were a *universal* "good," i.e. when the state's interests are taken as being in the interests of everyone. The second is revealed when a distinctly particular way of being is taken as "more advanced" than other ways of being. Thus, by being seen as "natural," or along a developmental progression, some ways of being are marginalized as emulation reinforces the naturalistic fallacy. As both of these aspects have been present in the international system, so too would they be enacted by a world state (Taylor, 1996). It is in so doing that the state proves itself a totality and not an adaptive system.

Luhmann warns of the crisis that arises when the "environment is only a negative correlate of the system…. One can say that the system *totalizes* itself by referring to the environment and by leaving it undetermined" (Luhmann, 1995: 181). Historically, as long as the social was primarily a domestic process, i.e. state-mediated, the state was, at least in some sense, justified in referring to an underdetermined and underconnected social. Now, however, as the social becomes increasingly connected it manifests as *an alternative global social fabric through which identities are constructed and reproduced, and through which governance is channeled*. Therein global society escapes the previous historical necessity of becoming a "polity" bounded by and mediated by the state, and instead becomes the boundary and mediator of the state as an historical institution that has outlived its usefulness. Global society "selects" against the state as a mechanism in favor of newer peer-to-peer network processes. It is not necessary for this selection to be intentional on the part of the agents of global society, because, as I have shown, the system itself adapts to the edge of chaos.

Therein lies a point on which I am willing to concede that Wendt has captured something *essential not only to his argument but also to mine*. Wendt stresses that "interaction is structured by boundary conditions… and as self-organized systems states have reached an at least local end-state in their development" (Wendt, 2003: 507). The boundaries of the planet are not a final closure, but a temporary one, and they system of political organization that comes about is definitely a *local* phenomenon. When that system encounters a change in the relevance of its boundary then the system will again be forced to adapt. Moreover, it is only the presence of an external Other that catalyzes boundary solidification. For the world society, an external Other would be required to catalyze boundary formation of world-state. This Other could take two forms: 1) contact with alien societies, or 2) establishment of colonies on other worlds. The

first case presents the world with an Other from which it must distinguish itself by becoming a whole *that is capable of acting as a peer in the larger system that includes the new Self and the new Other*. The second case reasserts distance in a communicative sense (because interstellar distances face communications lag), and the ensuing separation results in the creation of both the new Other and the new Self *as peers in a new system*. Thus, *it is only at that time that I believe a world-state could emerge*. A world of complex adaptive governance networks constitutes an evolutionarily stable strategy, *until such time as it becomes necessary to solidify its boundary with respect to an extraterritorial Other.* So, at the very least, on the point of local and temporary stability, I agree with Wendt.

Finally we turn to the effects of intentionality on systemic change. Wendt sums up his teleology saying, "the process of world state formation involves a progressive 'amplification' of intentionality from individuals and groups to the global level." But intentionality can be enacted through many mechanisms besides the state. The underbelly of Wendt's teleology is intentionality enacted through a corporate agent wielding the legitimate application of violence to enforce behavior, but there exists an alternative possibility of an intentionality enacted through many corporate agents who have rejected the legitimacy of violence as a means of affecting behavior in favor of "soft" security. In a teleonomy, the focus is on the adaptive rules, i.e. the processes by which the system explores and exploits new possibilities. Because the system's identity is enacted through a program and not by virtue of an outcome, plurality, diversity, democracy, and the navigation of competing rules and norms take on a new urgency. That urgency is enshrined in the voluntary and "freely given" intentionality that is possible only in panarchy.

Insofar as networks and complex adaptive systems are a kind of post-structuralist structure, then panarchy is a fundamentally postmodern phenomenon. Moreover, because anarchist and postmodern discourses exist only in opposition to the phenomena of totalizing states, they are in a very real sense part of the system of binary opposites that they repudiate. Panarchy escapes this limitation by revealing a new way forward, in which we must neither submit to the repressiveness of a totalizing state, or to the anomie and nihilism necessitated by a purely oppositional rejection. In his book, Complexity and Postmodernism, Paul Cilliers suggests that embracing complexity offers a brighter hope:

> "The postmodern condition is characterized by the co-existence of a multiplicity of heterogeneous discourses – a state of affairs assessed differently by different parties. Those who have a nostalgia for a unifying metanarrative – a dream central to the history of Western metaphysics – experience the postmodern condition as fragmented, full of anarchy and therefore ultimately meaningless. It leaves them with a feeling of vertigo. On the other hand, those who embrace postmodernism find it challenging, exciting and full of uncharted spaces. It fills them with a sense of adventure" (Cilliers, 1998: 114).

References

Arquilla, John, David F. Ronfeldt and United States. Dept. of Defense. Office of the Secretary of Defense. (2001). *Networks and Netwars : The Future of Terror, Crime, and Militancy*. Santa Monica, CA: Rand.

Arquilla, John, David F. Ronfeldt, United States. Dept. of Defense. Office of the Secretary of Defense. and National Defense Research Institute (U.S.). (1997). *In Athena's Camp : Preparing for Conflict in the Information Age*. Santa Monica, Calif.: Rand.

Atlan, Henri. (1979). *Entre Le Cristal Et La Fumâee : Essai Sur Lâorganisation Du Vivant*. Paris: âEditions du Seuil.

Axelrod, Robert M. (1984). *The Evolution of Cooperation*. New York: Basic Books.

Axelrod, Robert M. (1997). *The Complexity of Cooperation : Agent-Based Models of Competition and Collaboration*, *Princeton Studies in Complexity.* Princeton, NJ: Princeton University Press.

Axelrod, Robert M. and Michael D. Cohen. (1999). *Harnessing Complexity : Organizational Implications of a Scientific Frontier*. New York: Free Press.

Bak, Per. (1996). *How Nature Works : The Science of Self-Organized Criticality*. New York, NY, USA: Copernicus.

Benkler, Yochai (2002) 'Coase's Penguin', *The Yale Law Journal* 112:

Brewer, Marilynn (1991) 'The Social Self: On Being the Same and Different at the Same Time', *Personality and Social Psychology Bulletin* 17(5): 475-482.

Bricklin, Dan. (2001). 'The Cornucopia of the Commons', In Andrew Oram (ed.) *Peer-to-Peer : Harnessing the Benefits of a Disruptive Technology*, 59-63. Beijing ; Cambridge Mass.: O'Reilly.

Brin, David. (1998). *The Transparent Society : Will Technology Force Us to Choose between Privacy and Freedom?* Reading, Mass.: Addison-Wesley.

Brown, Chris. (1994). 'Critical Theory and Postmodernism', In A.J.R. Groom and Margot Light (ed.) *Contemporary International Relations: A Guide to Theory*, 56-68. London, New York: Pinter Publishers.

Buchanan, Mark. (2002). *Nexus : Small Worlds and the Groundbreaking Science of Networks*. 1st ed. New York: W.W. Norton.

Bull, Hedley. (2002). *The Anarchical Society : A Study of Order in World Politics*. 3rd ed. New York: Columbia University Press.

Buss, Leo W. (1987). *The Evolution of Individuality*. Princeton, N.J.: Princeton University Press.

Cederman, Lars-Erik. (1997). *Emergent Actors in World Politics : How States and Nations Develop and Dissolve*, *Princeton Studies in Complexity*. Princeton, N.J.: Princeton University Press.

Chayes, Abram and Antonia Handler Chayes (1993) 'On Compliance', *International Organization* 47(2): 175-205.

Cilliers, Paul. (1998). *Complexity and Postmodernism : Understanding Complex Systems*. London ; New York: Routledge.

Deudney, Daniel. (1999). 'Geopolitics and Change', In Michael Doyle and G. John Ikenberry (ed.) *New Thinking in International Relations Theory*, 91-123. Boulder, CO: Westview Press.

Feyerabend, Paul K. (1993). *Against Method*. 3rd ed. London ; New York: Verso.

Foucault, Michel. (1995). *Discipline and Punish : The Birth of the Prison*. 2nd Vintage Books ed. New York: Vintage Books.

Friedrichs, Jörg (2001) 'The Meaning of New Midievalism', *European Journal of International Relations* 7(4): 475-502.

Gillmor, Dan. (2004). *We the Media : Grassroots Journalism by the People, for the People*. 1st ed. Beijing ; Sebastopol, CA: O'Reilly.
Goffman, Erving. (1971). *The Presentation of Self in Everyday Life*. Harmondsworth: Penguin.
Gould, Stephen Jay. (1983). *Hen's Teeth and Horse's Toes*. 1st ed. New York: Norton.
Guâerin, Daniel. (1998). *No Gods, No Masters*. Edinburgh, Scotland ; San Francisco, CA: AK Press.
Guâerin, Daniel and Paul Avrich Collection (Library of Congress). (1970). *Anarchism; from Theory to Practice*. New York,: Monthly Review Press.
Hartzog, Paul B. (2004). '21st Century Governance as a Complex Adaptive System', In Jose V. Carrasquero, Friedrich Welsch, Angel Oropeza, Charles Mitchell and Maritta Valimaki (ed.) *Proceedings Pista 2004*, 300-305. Orlando: International Institute of Informatics and Systemics.
Hasenclever, Andreas, Peter Mayer and Volker Rittberger. (1997). *Theories of International Regimes*, *Cambridge Studies in International Relations ; 55*. Cambridge ; New York: Cambridge University Press.
Hegel, Georg Wilhelm Friedrich, Arnold V. Miller and J. N. Findlay. (1977). *Phenomenology of Spirit*. Oxford: Clarendon Press.
Hobbes, Thomas and Aloysius Martinich. (2002). *Leviathan*, *Broadview Literary Texts*. Peterborough, Ont.: Broadview Press.
Hoffman, Mark. (1994). 'Normative International Theory: Approaches and Issues', In A.J.R. Groom and Margot Light (ed.) *Contemporary International Relations: A Guide to Theory*, 27-44. London, New York: Pinter Publishers.
Holland, John H. (1995). *Hidden Order : How Adaptation Builds Complexity*. Reading, Mass.: Addison-Wesley.
Hollis, Martin and Steve Smith. (1991). *Explaining and Understanding International Relations*. Oxford/New York: Clarendon Press; Oxford University Press.
Kauffman, Stuart A. (1993). *The Origins of Order : Self Organization and Selection in Evolution*. New York: Oxford University Press.
Kauffman, Stuart A. (1995). *At Home in the Universe: The Search for Laws of Self-Organization and Complexity*. New York: Oxford University Press.
Keck, Margaret E. and Kathryn Sikkink. (1998). *Activists Beyond Borders : Advocacy Networks in International Politics*. Ithaca, N.Y.: Cornell University Press.
Keohane, Robert O. (1984). *After Hegemony : Cooperation and Discord in the World Political Economy*. Princeton, N.J.: Princeton University Press.
Kollman, Ken, J. H. Miller and Scott E. Page. (2003). *Computational Models in Political Economy*. Cambridge, Mass.: MIT Press.
Kratochwil, Friedrich V. (1989). *Rules, Norms, and Decisions : On the Conditions of Practical and Legal Reasoning in International Relations and Domestic Affairs*, *Cambridge Studies in International Relations ; 2*. Cambridge [Cambridgeshire] ; New York: Cambridge University Press.
Lewin, Roger. (1999). *Complexity : Life at the Edge of Chaos*. 2nd ed. Chicago, Ill.: University of Chicago Press.
Locke, John. (1996). 'Second Treatise of Government', In David Wootton (ed.) *Modern Political Thought : Readings from Machiavelli to Nietzsche*, xi, 946 p. Indianapolis, Ind.: Hackett Pub.
Luhmann, Niklas. (1995). *Social Systems*, *Writing Science*. Stanford, Calif.: Stanford University Press.
Mayr, Ernst. (1976). *Evolution and the Diversity of Life : Selected Essays*. Cambridge, Mass.: Belknap Press of Harvard University press.

Morgan, Patrick. (1993). 'Security Prospects in Europe', In John Gerard Ruggie (ed.) *Multilateralism Matters : The Theory and Praxis of an Institutional Form*, 327-364. New York: Columbia University Press.
Oram, Andrew. (2001). *Peer-to-Peer : Harnessing the Benefits of a Disruptive Technology*. 1st ed. Beijing ; Cambridge Mass.: O'Reilly.
Ostrom, Elinor. (1990). *Governing the Commons : The Evolution of Institutions for Collective Action*, *The Political Economy of Institutions and Decisions*. Cambridge ; New York: Cambridge University Press.
Ougaard, Morten and Richard A. Higgott. (2002). *Towards a Global Polity*. New York: Routledge.
Oye, Kenneth A. (1986). *Cooperation under Anarchy*. Princeton, N.J.: Princeton University Press.
Raymond, Eric S. (2001). *The Cathedral and the Bazaar : Musings on Linux and Open Source by an Accidental Revolutionary*. Rev. ed. Beijing ; Cambridge, Mass.: O'Reilly.
Rheingold, Howard. (2002). *Smart Mobs: The Next Social Revolution*. Cambridge, MA: Perseus Publishing.
Rosenau, James N. (2003). *Distant Proximities : Dynamics Beyond Globalization*. Princeton, N.J.: Princeton University Press.
Rosenau, James N. and Ernst Otto Czempiel. (1992). *Governance without Government : Order and Change in World Politics*, *Cambridge Studies in International Relations ; 20*. Cambridge ; New York: Cambridge University Press.
Rousseau, Jean-Jacques. (1996a). 'Discourse on the Origins and Foundations of Inequality among Men', In David Wootton (ed.) *Modern Political Thought : Readings from Machiavelli to Nietzsche*, 404-463. Indianapolis, Ind.: Hackett Pub.
Rousseau, Jean-Jacques. (1996b). 'On the Social Contract', In David Wootton (ed.) *Modern Political Thought : Readings from Machiavelli to Nietzsche*, 464-534. Indianapolis, Ind.: Hackett Pub.
Ruggie, John Gerard. (1993a). *Multilateralism Matters : The Theory and Praxis of an Institutional Form*, *New Directions in World Politics*. New York: Columbia University Press.
Ruggie, John Gerard (1993b) 'Territoriality and Beyond: Problematizing Modernity in International Relations', *International Organization* 47(1): 139-174.
Ruggie, John Gerard (1998) 'What Makes the World Hang Together? Neo-Utilitarianism and the Social Constructivist Challenge', *International Organization* 52(4, International Organization at Fifty: Exploration and Contestation in the Study of World Politics): 855-885.
Sassen, Saskia. (2001). *The Global City : New York, London, Tokyo*. 2nd ed. Princeton, N.J.: Princeton University Press.
Skocpol, Theda (1977) 'Wallerstein's World Capitalist System: A Theoretical and Historical Critique', *American Journal of Sociology* 82(5): 1075-1090.
Taylor, Charles. (1998). 'Living with Difference', In Anita L. Allen and Milton C. Regan (ed.) *Debating Democracy's Discontent : Essays on American Politics, Law, and Public Philosophy*. Oxford ; New York: Oxford University Press.
Taylor, Mark C. (2001). *The Moment of Complexity : Emerging Network Culture*. Chicago: University of Chicago Press.
Taylor, Peter J. (1996). *The Way the Modern World Works : World Hegemony to World Impasse*. Chichester ; New York: John Wiley.
Thompson, Grahame. (2003). *Between Hierarchies and Markets : The Logic and Limits of Network Forms of Organization*. Oxford ; New York: Oxford University Press.
Waldrop, M. Mitchell. (1992). *Complexity: The Emerging Science at the Edge of Order and Chaos*. New York: Simon & Schuster.

Wallerstein, Immanuel Maurice. (1979). *The Capitalist World-Economy : Essays*, *Studies in Modern Capitalism*. Cambridge [Eng.] ; New York: Cambridge University Press.
Waltz, Kenneth Neal. (1979). *Theory of International Politics*. 1st ed. Boston, Mass.: McGraw-Hill.
Walzer, Michael. (1986). 'The Reform of the International System', In Øyvind Østerud (ed.) *Studies of War and Peace*, 227–240. Oslo: Norwegian University Press.
Watts, Duncan J. (1999). *Small Worlds : The Dynamics of Networks between Order and Randomness*, *Princeton Studies in Complexity*. Princeton, N.J.: Princeton University Press.
Watts, Duncan J. (2003). *Six Degrees: The Science of a Connected Age*. 1st ed. New York: W.W. Norton.
Weber, Max, Guenther Roth and Claus Wittich. (1978). *Economy and Society : An Outline of Interpretive Sociology*. 2 vols. Berkeley: University of California Press.
Weber, Steve. (2004). *The Success of Open Source*. Cambridge, MA: Harvard University Press.
Wendt, Alexander (1998) 'On Constitution and Causation in International Relations', *Review of International Studies* 24(5): 101-117.
Wendt, Alexander. (1999). *Social Theory of International Politics*, *Cambridge Studies in International Relations*. Cambridge ; New York: Cambridge University Press.
Wendt, Alexander (2003) 'Why a World State Is Inevitable', *European Journal of International Relations* 9(4): 491-542.
Young, Oran R. (1999). 'Governance without Government', In Oran R. Young (ed.) *Governance in World Affairs*, 1-23. Ithaca, N.Y.: Cornell University Press.
Zachary, G. Pascal. (2003). *The Diversity Advantage: Multicultural Identity in the New World Economy*. 1st ed. Boulder: Westview Press.

Notes

Wendt defends his positivism in Wendt, Alexander. (1999). *Social Theory of International Politics*, *Cambridge Studies in International Relations*. Cambridge ; New York: Cambridge University Press.

[2] Axelrod, Robert M. and Michael D. Cohen. (1999). *Harnessing Complexity : Organizational Implications of a Scientific Frontier*. New York: Free Press, Bak, Per. (1996). *How Nature Works : The Science of Self-Organized Criticality*. New York, NY, USA: Copernicus, Kauffman, Stuart A. (1995). *At Home in the Universe: The Search for Laws of Self-Organization and Complexity*. New York: Oxford University Press, Lewin, Roger. (1999). *Complexity : Life at the Edge of Chaos*. 2nd ed. Chicago, Ill.: University of Chicago Press, Taylor, Mark C. (2001). *The Moment of Complexity : Emerging Network Culture*. Chicago: University of Chicago Press, Waldrop, M. Mitchell. (1992). *Complexity: The Emerging Science at the Edge of Order and Chaos*. New York: Simon & Schuster.

[3] Keck, Margaret E. and Kathryn Sikkink. (1998). *Activists Beyond Borders : Advocacy Networks in International Politics*. Ithaca, N.Y.: Cornell University Press, Rheingold, Howard. (2002). *Smart Mobs: The Next Social Revolution*. Cambridge, MA: Perseus Publishing.

[4] Axelrod, Robert M. (1984). *The Evolution of Cooperation*. New York: Basic Books, Axelrod, Robert M. (1997). *The Complexity of Cooperation : Agent-Based Models of Competition and Collaboration*, *Princeton Studies in Complexity.* Princeton, NJ: Princeton University Press, Cederman, Lars-Erik. (1997). *Emergent Actors in World Politics : How States and Nations Develop and Dissolve*, *Princeton Studies in Complexity*. Princeton, N.J.: Princeton University Press, Kollman, Ken, J. H. Miller and Scott E. Page. (2003). *Computational Models in Political Economy*. Cambridge, Mass.: MIT Press.

[5] It is instructive to note that Europe is explicitly avoiding the formation of a "United States of Europe" for many of the same reasons I am using in this paper.

[6] Saska Sassen for example has investigated the rise of networks of "global cities." Sassen, Saskia. (2001). *The Global City : New York, London, Tokyo*. 2nd ed. Princeton, N.J.: Princeton University Press.

[7] Considerable work has been done in this area: Axelrod, Robert M. (1984). *The Evolution of Cooperation*. New York: Basic Books, Ostrom, Elinor. (1990). *Governing the Commons : The Evolution of Institutions for Collective Action*, *The Political Economy of Institutions and Decisions*. Cambridge ; New York: Cambridge University Press, Rheingold, Howard. (2002). *Smart Mobs: The Next Social Revolution*. Cambridge, MA: Perseus Publishing.

[8] Wallerstein makes this same point regarding capital and labor. Wallerstein, Immanuel Maurice. (1979). *The Capitalist World-Economy : Essays*, *Studies in Modern Capitalism*. Cambridge [Eng.] ; New York: Cambridge University Press.

[9] Specifically, Wendt makes this claim early on, then reverses himself, and here returns to his original proposition.

[10] This position is common among anarchist political theorists. For an overview see Guâerin, Daniel. (1998). *No Gods, No Masters*. Edinburgh, Scotland ; San Francisco, CA: AK Press, Guâerin, Daniel and Paul Avrich Collection (Library of Congress). (1970). *Anarchism; from Theory to Practice*. New York,: Monthly Review Press.

[11] "Peer-production" systems are predicated on this fact, and use peering to create and legitimate knowledge instead of hierarchical or authoritative structures. In fact, Science is a peer-produced system, as is open-source programming. Wikipedia, which uses an open-access system called a wiki, is a peer-produced encyclopedia. Even news is becoming a peer-produced, for example, see Gillmor, Dan. (2004). *We the Media : Grassroots Journalism by the People, for the People*. 1st ed. Beijing ; Sebastopol, CA: O'Reilly, Oram, Andrew. (2001). *Peer-to-Peer : Harnessing the Benefits of a Disruptive Technology*. 1st ed. Beijing ; Cambridge Mass.: O'Reilly. For a brief on *why* peer-production is advantageous see Benkler, Yochai (2002) 'Coase's Penguin', *The Yale Law Journal* 112: , Weber, Steve. (2004). *The Success of Open Source*. Cambridge, MA: Harvard University Press.

[12] The recent neologism sousveillance refers to the emerging phenomena of individuals empowered with handheld video cameras and camera-phones recording the surveillers, usually to their obvious discomfort.

[13] This is a perception, not a "brute fact." The struggle for recognition is, in the end, a struggle for the *perception* that one is recognized.