

World-Systems and Evolution
An Appraisal

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ABSTRACT

This paper makes six arguments. First, socio-cultural evolution must be studied from a "world-system" or intersocietal interaction perspective. A focus on change in individual "societies" or "groups" fails to attend adequately to the effects of intersocietal interaction on social and cultural change. Second, in order to be useful, theories of the modern world-system must be modified extensively to deal with non-capitalist settings. In particular, changes in system boundaries marked by exchange networks (for information, luxury or prestige goods, political/military interactions, and bulk goods) seldom coincide, and follow different patterns of change. Third, all such systems tend to pulsate, that is, expand and contract, or at least expand rapidly and less rapidly. Fourth, once hierarchical forms of social organization develop such systems typically have cycles of rise and fall in the relative positions of constituent polities. Fifth, expansion of world-systems forms and transforms social relations in newly incorporated areas. While complex in the modern world-system, these changes are even more complex in precapitalist settings. Sixth, these two cycles combine with demographic and epidemiological processes to shape long-term socio-cultural evolution.

Introduction

I begin by indicating several problems, then review recent developments in world-system work, and end with some ways to promote more fruitful interaction. First, I still find instances of writers proclaiming the uselessness of world-system theory, but who have not

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examined recent world-system work (Hall 1995a, 1995b, 1996a, 1996b, 1996c; Hall and Chase-Dunn 1993, 1994). For those of us engaged in extending world-systems analysis to precapitalist settings (i.e., before approximately 1500 CE; "pre" is meant to convey chronology, not inevitability) the worst and most frustrating situation is when outsiders assume that by citing Modern World-System I (Wallerstein 1974b) they both know and have acknowledged the whole of world-system work.

Sometimes these omissions are due the ways in which researchers do not communicate--whether because of time constraints, journal reading habits, or not having seen parallel work in related disciplines. For example, Brian Ferguson and Neil Whitehead in their introduction (1992a:4) to War in the Tribal Zone (1992b), lament that world-systems theory should have addressed how state expansion engenders intertribal warfare. In a review I pointed out that some of us had, in fact, addressed that topic (Hall 1993). This case has a felicitous ending: we had simply not seen each other's work. Since then we have had a fairly regular exchange.

Such omissions, of course, have not been a monopoly of anthropologists and archaeologists, but have occurred in the other social sciences, and among historians and civilizationists (Sanderson 1995a, 1995b; Sanderson and Hall 1995a, 1995b).

From a different angle, many writers are talking about globalization (Featherstone 1990; Featherstone, Lash and Robertson 1995; Robertson 1990, 1992; Roudometof and Robertson 1995) and "glocalization": the manifestation of local tendencies in global processes (Robertson 1995). Many of those discussing "globalization" emphasize culture and communication, sometimes re-inventing Marshall McLuhan's "Global Village" (1964; McLuhan and Agel 1968) or Buckminster Fuller's work (e.g., Fuller, et al. 1970) - - often without due credit or citation. Few of them mention Immanuel Wallerstein who has been discussing global processes for over twenty years, while some engage him directly (Wallerstein 1990a, 1990b, 1991a, 1991b). In other ways it is typical academic invention of a new fad to address the latest perturbation in long-term trends, ignoring all that has gone before.

Finally, there are those who are carrying postmodernism and deconstructionism to extremes, declaring all theorizing, especially evolutionary theorizing suspect. Ironically, there is a rather simple world-system explanation for these movements. Albert Bergesen argues (1995a, 1995b) that in periods of hegemonic decline, such as the current one, dominant

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paradigms for organizing information breakdown. This gives rise to a proliferation of viewpoints and modes of analysis, with no criteria to discriminate amongst them. This can then lead to the current state in literary studies where anything goes and all truth is

relative--at least that is what my colleagues in literature tell me. This appears to be much like what Thomas Kuhn (1970) describes as the transition from one paradigm to another. In this case Bergesen is connecting this shift to the hegemonic cycles in the world-system.

This is not to say that some of the criticisms, especially those directed at exposing ethnocentric, or corecentric, biases in theorizing, choice of research topics, and modes of analysis are without merit. But once all standards other than "texts" produced by authors not from the (declining) hegemonic state are abandoned, conversation and dialog become impossible. But that, as we say, is another story--and one the Bergesen tells better than I do.

So what can remedy all this? Obviously, examination of the recent work in world-systems theorizing, especially as used in precapitalist settings. Next, is to engage in that work directly--what many of the other papers in this collection do in a variety of ways. To facilitate that process, and by way of general introduction to the following papers I will give an overview of recent world-system work, indicating gaps in need of further development.

New Directions in World-Systems Research

There is so much new work that Wallerstein's writings, including *Modern World-System, I, II, III* barely sample world-system research (1974b; 1980; 1989). Christopher Chase-Dunn's *Global Formation* (1989) summarizes most of the quantitative studies of the modern world-system through its publication in 1989. Giovanni Arrighi's recent *The Long Twentieth Century* (1994) explores the oscillations between production capital and finance capital within the modern world-system. In addition William Martin (1994) and Christopher Chase-Dunn with Peter Grimes (1995) summarize more recent world-systems work.

Indeed, there are so many variations in world-system analysis, that it is no longer appropriate to refer to it as a theory. It is better called a perspective, or in Kuhn's sense (1970), a paradigm which contains many competing theories. In Kuhn's use, a paradigm is logically more general than a theory. It is a set of guiding assumptions and approaches that direct researchers to ask questions, and develop theories (note the plural) that attempt to answer those questions.

In political science and international relations George Modelski, William Thompson,

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and Karen Rasler have developed a number of world-system theories (Thompson 1983a, 1988; Rasler and Thompson 1989, 1994; Modelski 1987; Modelski and Thompson 1988;

1995). These writers emphasize geopolitics and technological innovations as keys to understanding international relations and wars. They focus on war, particularly naval power, and international relations more than other world-systems analysts. They all study how cycles of global war emanate from world-systemic processes. George Modelski has deeper interest in long-term evolution than does Immanuel Wallerstein (1995a, 1995b, 1995c). Recently Modelski and Thompson (1996) have joined in tracing the roots of the modern world-system back at least a millennium.

A major mistake--one that typically vitiates many criticisms of world-system "theory"--is to assume that to have read one or two of Wallerstein's works (1974a, 1974b), is to "understand" the world-system perspective. The world-system perspective can no longer be associated solely with his work.

Researchers working from different theoretical bases within the world-system perspective have addressed many new subjects. Geographers have done a great deal of work on spatial aspects of world-system relations and dynamics (see review by Flint and Shelley 1996). Some of the new topics are: cyclical processes in the world-system (Suter 1992); the roles of women, households, and gender in the world-economy (Bradley 1996; Friedman-Kasaba 1996; Smith et al. 1988; Tiano 1994; Ward 1984, 1990, 1993); the consequences of the collapse of the Soviet Union (Bergesen 1992a; Chase -Dunn 1992; Smith and Böröcz 1995); cities in the world-system (Kasaba 1991; Timberlake 1985); the role of culture in the world-economy (Bergesen 1990, 1991, 1992b, n.d.; Kiser and Drass 1987); the environment (Bergesen 1995a, 1995b; Chew 1992, 1995c, 1995d); and subsistence (Bradley et al. 1990). Many case studies offer fine-grained analyses of the complex functioning of the world-system with respect to: slavery (Morrissey 1989; Tomich 1990), agrarian capitalism (McMichael 1984; So 1986), peasants (Bunker 1987; Troillot 1988), revolutions (Foran 1993), recent changes in east Asia (So and Chiu 1995, 1996); and relations with nonstate or aboriginal peoples to the world-economy (Baugh 1991; Dunaway 1994, 1996a, 1996b; Hall 1983, 1986, 1987, 1989a, 1991a, 1991b; Harris 1990; Kardulias 1990; Mathien and McGuire 1986; Meyer 1990, 1991, 1994; Peregrine 1992, 1995).

Eric Wolf has suggested that world-system theory is one way of cumulating anthropological knowledge and building explanations for cultural phenomena (Wolf 1990:594). One collection of such work is now "in press" (Blanton et al. 1996). In the introduction to my section of that work (Hall 1996a) I argue that much work in anthropology that does take cognizance of external connections is world-systemic, but often does not

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explicitly employ a world-system perspective.

Archaeologists, in particular, have found considerable potential in world-system theory, but have been dissatisfied with the results (Hall and Chase-Dunn 1993). All have recognized, to some degree, that world-system theory cannot be applied wholesale to precapitalist settings. Pailes and Whitecotton (1975, 1979) were the first to modify world-system theory for use in precapitalist settings. Jane Schneider (1977) wrote one of the most insightful critiques of early world-system theory, questioning Wallerstein's emphasis on bulk to the neglect of luxury goods. Blanton and Feinman (1984) and Santley and Alexander (1992) have also made important critical statements.

Much of this work is directed not only at understanding precapitalist intersocietal interactions but also at improved understanding of social evolution. The value of a world-system perspective on social evolution bears closer discussion.

The World-System Perspective and Evolution

Stephen Sanderson in chapter 10 of Social Evolutionism (1990) argued that world-system theory ought to be evolutionary, even though it often is not. He elaborates this argument in Social Transformations (1995c), using some of the recent extensions of world-systems analysis to precapitalist settings. Since he has both reviewed the debates on evolutionism and their critiques in detail I will not review that discussion here. Rather I will turn to the first topic in my abstract: that the study of evolution must include examination of the role and evolution of intergroup relations.

Put concisely the strong version of the argument is that interregional interactions have always played a crucial role in evolution. We can not explain how humans got from a situation some ten thousand years ago of order of magnitude of one hundred thousand "groups" (or what anthropologists conventionally call "bands") of around one hundred members to our current situation of around two hundred states of one hundred or more millions of members without examining carefully the roles of interregional interaction.

Let me qualify this statement in a few ways. First, the above statement is one of orders of magnitude, so one hundred thousand societies (for those not familiar with "order of magnitude as used in the physical sciences) means somewhere between thirty and three hundred thousand.

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Second, I argue that most interregional interaction networks constitute one form or another of a "world-system," or better core/periphery relations. They are "worlds" in the sense that they are far more self-contained than anything that exists outside of them.

Third, I use "group" rather than society because of the difficulty in bounding what we mean and to avoid implying too much about presumed social structures. We must

recognize, a la Wolf's (1982) comments, that groups, or "societies" are not billiard balls with firm boundaries, but fuzzy units with variable and permeable boundaries. Sharply delineated boundaries are a relatively modern phenomenon. Even today they are frequently disputed, often with great violence. Still, we can identify, at least approximately, groups by means of a combination of external and internal identity criteria.

Even while not achieving full agreement on what constitutes a group and consequently on the exact number of groups, it is clear that over the last ten millennia or so the number of groups has decreased radically and their size has increased even more radically. Without a doubt their "natures," that is social structures, boundary criteria, permeability and so on, have changed, again often dramatically, during this time.

My claim can now be restated: a fundamental unit of social evolution is the world-system or core/periphery system. The claim is dialectic. The system itself evolves, and as it evolves it transforms its constituent members. Conversely, changes in constituent members collectively produce change in the overall system. To focus solely on the constituent members (conventional "societies") is to miss a good deal of the action, and to fundamentally misunderstand social evolution. The converse is equally valid.

Indeed, if there is a "system" to the world-system, even if it is a "ramshackle affair" (Stinchcombe 1982), its processes and dynamics should be manifested, in some form, everywhere in the system, even on its far peripheries. Robert Pirsig made the same point when commenting on his travelling companions' reticence to become involved in the technology of motorcycle maintenance:

The Buddha, the Godhead, resides quite as comfortably in the circuits of a digital computer or the gears of a cycle transmission as he does at the top of a mountain or in the petals of a flower (Pirsig 1974:26).

Likewise, what happens on those far peripheries is part of the system, plays an

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important role in its overall dynamics and evolution, and is a vital part of its story.

The effects of the periphery on the core and on the entire system, have, however, received less attention than the reverse. There are several reasons for this. First, there is a clear asymmetry in core - periphery relations. The core is generally more powerful than the periphery--certainly for the modern world-system. Second, we must distinguish between the core and the periphery as wholes, and distinct core areas and specific peripheral areas. When we study specifics, say Netherlands vs. the Sultanate of Brunei, or Spain versus New Mexico in the seventeenth century, the asymmetry is even more pronounced. Yet

the periphery as whole can be much more significant. This issue is at the heart of debates over the necessity of peripheral exploitation for core development (Bairoch 1986; O'Brien 1982; Stern 1988a, 1988b; Wallerstein 1988). Third is a tendency for detailed studies of various peripheral areas to be read by regional specialists more than by those interested in general world-system theory.

We also need attention to the effects of the periphery, as collective whole and as individual areas, on the core, again as a collective whole and individual core powers. Sidney Mintz (1985), while not using an explicit world-systems perspective, indeed being critical of it (1977), makes a persuasive argument that techniques of control, specifically on sugar plantations, served as a model for labor control in the first factories. Whether his claim is entirely correct is not the point here. Rather, it is the attempt to examine how some core transformations were shaped by the periphery.

Criticisms of world-system theory for being too abstract and for ignoring proactive efforts of inhabitants of peripheral regions are on occasion on target. Typically, however, they are wide of the mark (see Hall 1996a). Much of the best recent work in world-systems addresses precisely this issue. Still, we need to take Robert Pirsig's lesson to heart and study how the world-system manifests itself in local conditions. We need to attend to how system-wide processes and dynamics shape local processes and dynamics in transforming, sometimes transmuting, local class, racial/ethnic, and gender relations. We need to devote special attention to how local actors attempt, and sometimes succeed, in resisting, or at least turning to their own advantage, various global forces (Alexander, Feinman, Peregrine, Kardulias, Kuznar, Morris, Shutes, and Wells in this collection all do this to various degrees).

I will not support the claim for the fundamental importance of world-systems in

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evolutionary processes in detail in this paper, but will return to it in the conclusion. I hope with sufficient evidence and argument to entice others to examine the claim further (see Schortman and Urban 1994a, 1994b; Dunaway 1996a, 1996b; and as Kardulias and Shutes in this collection have done so well). To do so, however, requires further discussion of recent developments in precapitalist world-system theorizing.

Taking the Modern World-System into the Past

Why attempt to extend a theory avowedly developed to deal with the modern era, i.e., from about 1500 CE, into the ancient past? Two pressures intersect here. First is the frustration of archaeologists with existing theories of interregional relations (Schortman and Urban 1992a, 1992b). As I noted above, many archaeologists have tried to use world-system theory to understand intersocietal relations that bear at least a "family

resemblance" to world-system relations. The second source is with sociologists who have been trying to sort out whether or not the modern world-system is undergoing significant change, or merely going through one its typical, if dramatic cyclical changes.

Here it is useful to draw a distinction between changes of roles and positions within the system and changes in the system itself, or put better, in system logic. The modern world-system has gone through several rounds of hegemonic shifts and several cycles from unicentric to multicentric organization (or hegemonic shifts, see Chase-Dunn 1989). The shift from British to American hegemony early in the 20th century was, to be sure, dramatic and important. But from the point of view of the capitalist world-system it was a routine change. A much deeper change was the first appearance of the capitalist world-system itself.

Are we experiencing such a major shift now, or is the relative decline of the United States merely a sign of an approaching change in hegemony? The difference between the two is hard to discern from the midst of a "noisy" transition. Beyond this, if a system change is afoot, how much flexibility will there be in the process and how much can it be shaped by purposeful human efforts? Certainly these are important questions.

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One way to approach them is to examine past major changes. Not on the assumption that such transitions are identical, but on the more modest assumption that studying past system changes might lend some insight into possible future changes. Work in this area is in its infancy, so conclusions are tentative. Wallerstein himself does not think this is an entirely promising enterprise (Wallerstein 1993, 1995a, 1995b, 1995c). While many civilizationists question the utility of the world-system perspective in addressing such issues, they applaud the attention to ancient empires (Sanderson 1995a, 1995b; Melko 1994, 1995).

A great deal has already been written on this topic. In addition to materials cited above, (Hall and Chase-Dunn 1993, 1994) many others are available or on the way (Blanton et al. 1996; Chase-Dunn and Hall 1994, 1995, 1996; Frank and Gills 1993; Modelski and Thompson 1995; Peregrine and Feinman 1996; Sanderson 1995a; Schortman and Urban 1994a, 1994b). While these and other works contain a great deal of controversy they all share an approach which greatly modifies world-system theory as first presented by Wallerstein (1974a, 1974b).

Janet Abu-Lughod (1989) argued for twelfth, thirteenth, and fourteenth century roots for the modern world-system, deeper than Wallerstein's long sixteenth century. She also argued that the entire conception of the "rise of the west" is mistaken, and suggests that the "east fell," or least withdrew (Abu-Lughod 1989, 1993; Fitzpatrick 1992).

Christopher Chase-Dunn and I (1991, 1993, 1994, 1995, 1996) have argued that in order to be useful in precapitalist settings many of the assumptions of the theory of the modern world-system must be transformed into empirical questions. Andre Gunder Frank and Barry K. Gills (1992, 1993) have made similar arguments about "the 5000 year world system." Schortman and Urban (1994a, 1994b) have developed important critical insights in core-periphery relations in their study of southeast Mesoamerica.

Chase-Dunn and I also have been trying to extend world-system theory into the distant past, twice as far as Andre Gunder Frank's and Barry Gills's 5,000 year old system (1993), back some 10,000 years to the so-called neolithic revolution. To do so we have had to transform nearly every world-system assumption into an empirical, historical problem, and stretch some concepts considerably.

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We argue that world-systems have four kinds of boundaries, which rarely coincide. Interestingly, the 20th century world-system is one of those rare exceptions. These are:

- (1) a boundary of information or cultural flows;
- (2) a boundary of luxury or prestige goods flows;
- (3) a boundary of political/military interaction; and
- (4) a boundary of bulk goods flows.

Typically, but not always, these networks are nested as in the accompanying schematic diagram (Figure 1). Relative sizes of the nets, the density of nesting, and so forth remain somewhat problematic. Information sometimes does not flow with luxury goods, when trade is "down-the-line," that is when goods go from A to B to C, etc. In such cases information may become garbled, even as the goods move. Anyone who has followed the distortions introduced into a "message" whispered from person to person as it moves around a room is familiar with how such garbling can occur.

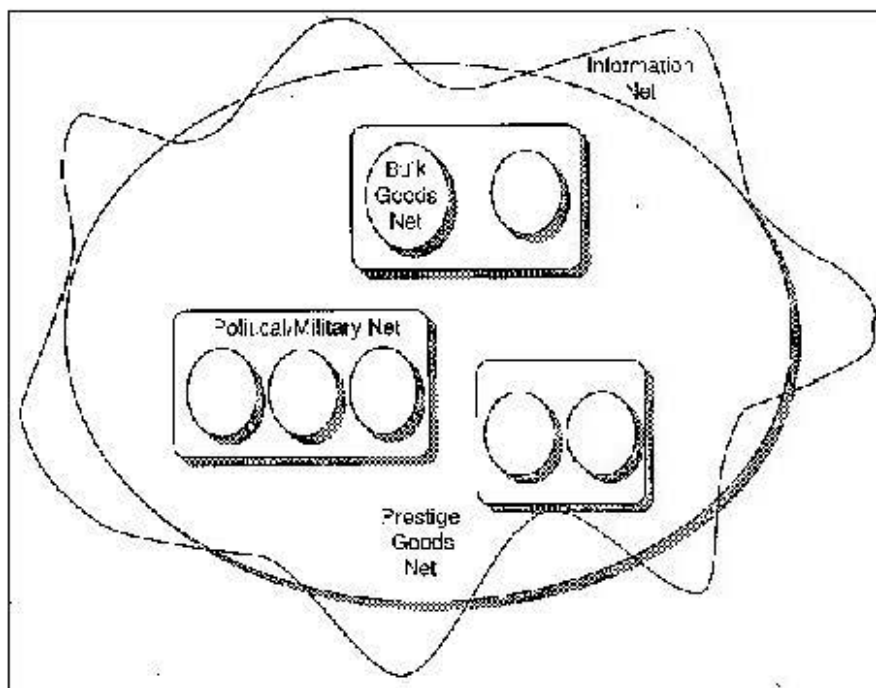


Figure 1. Boundaries of the Four World-System Networks.

We retain two key concepts from the theory of the modern world-system. First, the system itself is the fundamental unit of analysis. All parts of the system and their changes can only be understood in relation to the system as a whole. Thus, "societies" are not fundamental units of social organization, but are crystalizations of systemic relations. As noted above, the converse also holds, namely that the system is constructed by processes and changes in its constituent components. Second, any such system is a "world" in the sense that it is a self-contained division of labor and that there is a sharp break in the relative levels of interactions within the system from those with the outside. More specifically, we hold an interaction to be "important" if it somehow facilitates continued maintenance of the system. Thus, while boundaries are blurry, they are no less real.

Using these criteria we identify three past forms of world-systems:

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- (1) kin-ordered, normatively-based, world-systems
 - (2) tributary, political coercive, state-based world-systems, many of which were world-empires; and
 - (3) capitalist, economically coercive, state-based

world-systems.

We also posit a potential fourth world-system, a "socialist" world-system, that is, one in which resources are used to promote collective, egalitarian welfare based on democratic participation. The collapse of the Soviet Union in no vitiates this possibility. In world-system views there has never been a socialist system, or even a socialist state. Rather, we have had state-owned capitalist states (see Chase-Dunn [1982, 1992] for more detailed discussion of this topic).

The second type of world-system grew out of the sedentary world-systems that formed some 10,000 years ago during the neolithic revolution. In this view, states are a 5,000 year old invention which subverted the rule of kinship--although not entirely--and replaced it with coercive political power. The invention of states, and of state-based world-systems, allowed much greater accumulation of capital than heretofore had been possible. There were a large variety of tributary states, but all rested on coerced accumulation of capital from direct producers.

This is where Frank and Gills begin their analysis, which Chase-Dunn and I argue is too late. In doing so they assume one of the most difficult changes to explain in human history--the origins of states (note plural). This allows them to avoid explaining how and why states were invented. We explain this transition with Robert Carneiro's circumscription theory (1970) combined with population pressure of sufficient severity to compel humans via Ester Boserup's (1965, 1981) principle of least effort to try to do things differently. We note that this comes significantly before the carrying capacity of any technology in a specific environment is reached.

As a not uninteresting aside, anthropologists Irene Silverblatt (1987, 1988) and Christine Gailey (1985, 1987) have observed that the replacement of kinship with

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politics as the dominant mode of social organization entailed a denigration of status and roles of women in society. This explains both the universal lower status of women in state-based societies, and the tremendous variation in the ways in which gender stratification is expressed. Any given gender stratification is a function of both the particular kinship system that preceded it and the specifics of the development of the state.

Throughout the era of tributary systems--approximately 5,000 to about 500 years ago--the amount of capital accumulated through trade increased steadily, if sporadically. In recognizing this we are not capitulating the formalist camp in debates about economic history. Rather, we acknowledge that the amount of wealth involved in commerce was increasing. This explains why in various places and times historians and archaeologists

have found evidence of what appeared as "capitalism" in the ancient world: it was there. The key, however, is that it was always embedded in a larger tributary logic. In this sense Karl Polanyi's (1944, 1957, 1977) argument for a substantive meaning of "economic" was fundamentally correct.

Then, sometime in the seventeenth century, in Netherlands the merchant bourgeoisie succeeded not only in gaining control of a state, but also in becoming the core of a newly emerging world-system. This new, capitalist world-system, was driven by capitalist accumulation of capital, that is capital accumulated through control of production of commodities. In this system we find a sharp reversal of the logic of the system. Now instead of a leading power, a hegemon, trying to conquer all rivals, the hegemon eschews empire, opting instead for free trade, or more precisely sufficiently free trade that its capitalist classes can continue to profit against rival capitalist classes. What do we learn from all this? At this preliminary stage, unfortunately, not as much as we would like, but enough to suggest that further research and theorizing in this area should be fruitful.

Preliminary Findings: Cycles and Hierarchies

One of the preliminary results of investigating precapitalist core/periphery relations (Chase-Dunn and Hall 1996) is that all world-systems seem to pulse. By pulsation we mean they seem to go through cycles of expansion and contraction, or

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faster and slower expansion. Interestingly, this is true for all three types of systems. Furthermore, in those systems which have hierarchical relations among the constituent members (that is, all but the most basic sedentary forager systems) there are cycles of centralization. These may be cycles of rise and demise of hegemonic states or cycles of unipolar empires with multipolar interstate systems. Just exactly what drives these somewhat autonomous cycles is not yet clear.

By examining such a wide variety of core/periphery relations we can also ask when do such systems become hierarchical? That is, when does the core regularly and systematically exploit the periphery? Our investigations, again preliminary, suggest that for a world-system to be hierarchical it must be composed of groups that exhibit different levels of complexity and all those groups must have considerable internal inequality. Thus, the appearance of inequality is a property of both component groups in a world-system and of the world-system as a whole.

One of the more interesting, if tentative, findings of comparative analysis of world-systems is that balance of power situations occur only under specific conditions. Furthermore, the modern, capitalist world-system seems to be unique in that it the first world-system in which one core power, or more typically a rising semiperipheral marcher

state, does not attempt to conquer the entire system. I use "seems to" advisedly since the modern world-system may not yet be the longest lived interstates balance of power system, although it is assuredly among the longer-lived.

Within these various changes and continuities are others: a sporadic, but steady increase in global inequality, a similar increase in size of overall systems and of component units (states), an increasing density of trade, especially in bulk or low value to weight goods, and continued warfare.

Indeed, the cycles of warfare are some of the most difficult to explain (Chase-Dunn 1990; Goldstein 1988; Schaeffer 1989). If past cycles continue as they have for the modern world-system, we can expect a general core war sometime in the first decades of the 21st century (Chase-Dunn and O'Reilly 1989). Seldom have social scientists derived a result they want so much not to be true.

Finally, comparative world-system analysis, along with world historian William H. McNeill (1986), indicates strongly that the so-called nation-state [a government over a group with shared identity] may be a very temporary historical aberration.

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Multi-ethnic states are the historical norm. Thus, those who worry about "foreign contamination" rail against history. Preoccupation with "nation-building" is a waste of time. The recent rise of "multiculturalism" is not so much a fad, as a return to normalcy.

One source of multicultural composition of states, and especially world-systems, is their general tendency to pulsate and expand, and thus incorporate new areas and new peoples.

World-System Expansion, Incorporation, and Frontiers

Discussion of absorption of peoples and regions into the world-system, what I and others have called "incorporation" (Hall 1986, 1987, 1989; Hopkins et al. 1987; So 1984; Wallerstein and Martin 1979), focuses attention on local actors. World-system analyses have been criticized--with some, but not complete justification--for a tendency to overemphasize analysis of core regions and neglect peripheral regions and to see peripheral peoples as "victims," instead of actors. I argue incorporation is most easily observed in peripheral areas and that peripheral areas are the best location to study the efforts of local actors to resist incorporation (see Morris paper in this collection).

I have expanded Wallerstein's fundamentally dichotomous conceptualization (in or out of the system) to an extended continuum that emphasizes the degree of incorporation of a region or people (see Figure 2). I argued that Wallerstein discusses only the very strong pole of the continuum. I studied how changes in the degree of incorporation both affect

those incorporated, and conversely how their actions shaped not only the incorporation process, but the degree of incorporation. Theorizing of incorporation is far from complete (see Hall 1987). To do it will require more detailed local studies which attend to peripheral actors and their attempts to control, shape, and resist the encroaching world-system.

STRENGTH OF INCORPORATION	NONE	WEAK	MODERATE	STRONG
	←—————→			
IMPACT OF CORE ON PERIPHERY	None	Strong	Stronger	Strongest
IMPACT OF PERIPHERY ON CORE	None	Low	Moderate	Significant
TYPE OF PERIPHERY	External arena	Contact periphery	Marginal periphery or region of refuge	Full-blown periphery or dependent periphery
WORLD-SYSTEM TERMINOLOGY		External arena	Incorporation	Peripheralization

Figure 2. The Continuum of Incorporation.

Others, some of whom have used my expanded my concept of incorporation, have begun to do that work in other North American settings (Harris 1990; Kardulias

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1990). Melissa Meyer has studied the role of incorporation in changes in the political culture among nineteenth and twentieth century Anishinaabeg (Chippewa/Ojibway) (Meyer 1990, 1991, 1994). Wilma Dunaway has made analogous studies of commodity chains in the fur trade in what became the southeastern U.S. (Dunaway 1994, 1996a, 1996b).

One spatial theme that addresses peripheral relations directly is the formation and transformation of frontiers. Clearly, when a world-system expands, new areas are incorporated, and boundaries are formed and transformed (Wallerstein 1974b). I addressed this implicitly in my work on the Southwest (1989a, 1996c, 1996d; Markoff 1994).

The same issues arise in the work of Andrew Sherratt on Bronze Age Europe (1993). Sherratt (1993) argues that there is a margin beyond the periphery of the Near Eastern and Mediterranean agricultural and urbanizing world-system in bronze age Europe. He says, "The characteristic of the margin is that it is dominated by time-lag phenomena--'escapes'--rather than structural interdependence with the core" (Sherratt 1993:43). The latter term, "structural interdependence," is reserved for the periphery.

Sherratt drew his concept of margin from Jane Schneider's (1977), critique of Wallerstein's emphasis on bulk goods: "Marginality is a distinct concept from periphery. In contrast to peripheral areas, marginal ones are disengaged from processes of struggle and competition, differentiation, and specialization in relation to much older and more developed centers of civilization" (p. 21).

His concept of "margin" is similar to my concepts of contact periphery and marginal periphery which are areas only partially incorporated into the world-system. Such areas often experienced profound effects from incorporation, and occasionally devastating ones, despite its relatively limited degree.

Still, marginal peripheries typically have experienced milder transformations, and hence often preserve older, untransformed or only partially transformed forms of social organization. This, it seems, is quite close to Sherratt's idea that margins operate at a time-lag and often "escape" core changes.

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If we accept that world-systems have as many as four levels of boundary (information, prestige/luxury goods, political/military, and bulk goods) and that incorporation into a world-system is a matter of degree, then we have a means to begin explaining the formation and transformations of various kinds of transitional zones of incorporation, or types of frontiers. Furthermore, we have a way of sorting out how one type transforms into another as it becomes more tightly incorporated into a world-system. Thus, patterns that we see on a map are actually freeze-frame snapshots of complex processes of incorporation (e. g., see Figure 9 from Sherratt 1993: 32).

Another aspect of incorporation is its reversibility. What happens when a core collapses or when connections to the core are cut? If the core is extracting some local resource, the loosening or cutting of the connection may allow a return of local prosperity. The taking of slaves, "captives," throughout much of the time of Spanish domination of the "southwest" no doubt undermined the prosperity of those groups who were raided. So that when incorporation decreased and such raiding decreased, some prosperity returned to those who had been raided.

If, on the other hand, the core supplied some resource for which there was no local substitute, any prosperity that was a consequence of access to that resource would collapse with its loss. This, some writers have argued (see essays in Mathien and McGuire 1986), is behind the collapse of the Chacoan system in the thirteenth century of what became northwestern New Mexico. The loss of trade connections to Mesoamerica undermined the entire Chacoan economy.

Prestige goods are especially prone to this type of effect (e.g., Peregrine 1992, 1995, 1996, and this collection). If some rare good is used by a local elite to shore up its position, then loss of access would undermine its position, unless they could find a substitute good which they could also monopolize. If, however, the good could be produced locally, then the changes to which it gave rise need not reverse. Turquoise is a familiar southwestern prestige good.

Thus, loosening of incorporation can produce radically different results, depending on the precise nature of the connection and local circumstances. The volatility of change, is, if anything, greater in loosely incorporated areas (what Sherratt calls margins), than in more tightly incorporated areas. That Sherratt found such

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similar patterns in a vastly different setting strongly suggests the analysis of incorporation has wide utility.

Incorporation also can have profound effects on individuals and groups. Some of the American Indian "tribes" we have come to know in the U.S. southwest were, in fact, created from an aboriginal base in the process of incorporation into first the Spanish empire, subsequently the Mexican state, and then the United States.

The Diné (Navajo) are a prime example. While language, customs, and some vague sense of being the same "people" predate the arrival of Europeans, a strong Diné-wide identity was only created in the course of interaction with succeeding European invaders. A formal tribal government was a twentieth century Navajo invention, developed, I would add, precisely to deal with incorporation into American society and the capitalist world-system.

Following the work of Melissa Meyer, incorporation can also have divisive effects. For the White Earth Anishinaabeg (Chippewa or Ojibwa) increasing incorporation broke down old clan and band distinctions and created a division between more and less assimilated Anishinaabeg, or in local parlance, full- and mixed-bloods. Indeed, throughout "Indian country" the full-blood/mixed-blood distinction is a product of incorporation into European societies.

At times incorporation promotes assimilation to the dominant culture. However, at other times, when groups are pushed into very different roles in production or trade group differences can be heightened, promoting ethnic differentiation. Sherratt makes a similar argument (1993:18, note 13). The often cited conflicts between the League of the Iroquois and neighboring peoples are a North American example.

Thus, the fluctuations inherent in world-systems--pulsation, rise and fall of hegemons, oscillation between centralized and decentralized forms--generate many types of social change, some of which eventually may destabilize the overall system. These mechanisms yield further insight to the processes of social evolution.

World-Systems and Evolution

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I will close by returning to the claim raised in the beginning of this paper: that world-systems or core/periphery systems are a fundamental unit of social evolution. A full explication of this claim takes the better part of a book (Chase-Dunn and Hall 1996). A thumbnail sketch must suffice here. We begin with an iteration model that involves complex feedback loops among population pressure, social organization, including especially the ways in which people make their livings (mode of production), environmental degradation, intergroup conflict, and degree of boundedness or circumscription (Carneiro 1970). These are all familiar models and explanations. We call this the iteration model.

Many writers (e.g. Harris 1977, 1979, Johnson and Earle 1987) have used one or another variation of these processes to explain the neolithic revolution and origin of states. The growth of state-systems into empires and the origin of capitalism have been less satisfactorily accounted for by such explanations. Sanderson (1995c) summarizes these explanations and argues that other types of explanation are needed for these changes, ones that include increasing commercialization and some world-systemic processes.

We note that increasing trade and commercialization propagated pathogens along trade routes which connected informational and prestige goods networks. William McNeill (1976) traces how these pathogens unleashed the Black Death in Europe and similar outbreaks in China. Such "virgin soil epidemics" (Crosby 1972, 1986) have occurred many times in human history, typically when formerly isolated groups first came into contact. As is well know they can be extremely disruptive (see, for example, Reff 1991; Thornton 1987).

I must also say a few words about the special role of semiperipheral states in system transformation. A semiperipheral state, especially one which can take advantage of favorable geopolitical position, often will play a vital role in system change.

Semiperipheral states often have the "advantages of backwardness" (Gerschenkron 1966): they have access to latest technologies, including what Michael Mann (1986) calls "techniques of power," but have not yet become burdened with the costs of empire, or in Tainter's (1988) terms, have not reached a point of declining marginal returns. If, additionally, a semiperipheral state is located on the edge of a system so that it is not vulnerable to attack from two directions it can eliminate core

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competitors one at a time and come to dominate the system. This, incidentally, is one of the reasons behind Elman Service's observation (1975) that early civilizations did not fall, but were pushed. Thus, semiperipheral states often play a crucial role in system change.

Our explanation is that pulsating expansion of world-systems (both tributary and capitalist, although for different reasons, and through different dynamics) changes the dynamics of the iteration process. Expansion of world-systems temporarily enhances the direct effects of population density on hierarchy formation and technological intensification through bypassing the usual indirect effects via environmental degradation and increased intergroup conflict. Instead of always leading to environmental degradation and increasing conflict, expansion serves as an outlet for population growth and leads to acquisition of new territories, resources, and populations which in turn trigger attempts to find new ways to administer considerably expanded state activities. Two kinds of solutions are particularly useful: increasing hierarchy--both throughout the system, and within its component states--and changing mode of production. If such solutions are found, they will solve the problems of administration and the effect of population pressure again becomes indirect through environmental degradation and intergroup conflict.

This model is only now being developed and admittedly is somewhat sketchy. However, it does solve a difficult problem: the combination of occasional large changes embedded in an interrupted stream of continuous change (see Figure 3). These interruptions are generated by the cyclic process of world-systems, not contradictions inherent in states or societies. Thus, world-systems are the key unit of analysis of understanding social evolution. However, the case should not be overstated. This does not mean that state or society based process are irrelevant--clearly they are. Rather, it means that they must be embedded or contextualized in larger, world-systemic, processes to be fully understood.

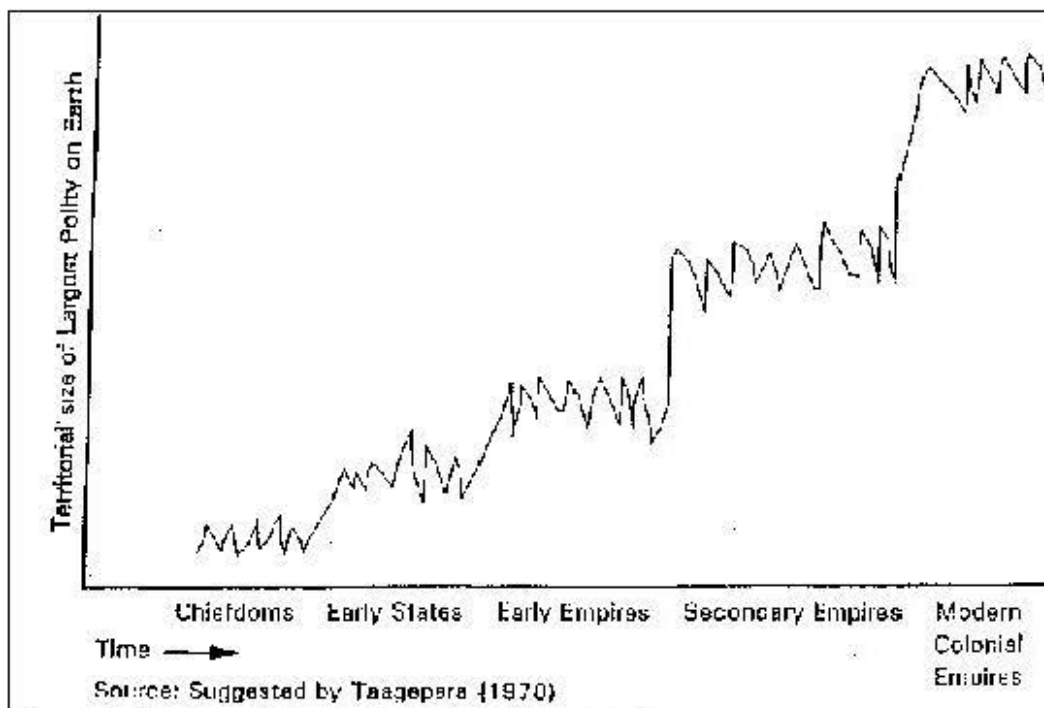


Figure 3. Cycles and Trend of Political Centralization.

Final Remarks

In this type of paper "conclusion" is inappropriate. Rather, I will close with a

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softer claim about the utility of a world-system perspective. By re-examining world history through a world-systemic lens we stand to gain many insights into how societies have changed over the last ten millennia. Much detailed theorizing remains to be done, as does the empirical research upon which it should be based. Archaeologists and anthropologists are particularly well positioned to contribute to this theory-building because so much of their work focuses on local processes. But to do so will require work. They will need to rework world-system theories. The papers by Feinman, Karttias, Kuznar, Morris, and Shutes in this collection show several ways in which this can be done.

Rather than stop at Immanuel Wallerstein's model of the modern world-system, or even at the nascent attempts at precapitalist world-system theorizing, jump into the fray and add to it. There is room for many competing theories which take intersocietal interactions seriously. It is only by developing and testing such theories that we will achieve a better understanding of how we humans got here--the late twentieth century--and where we might go.

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