
AGENCY, IDEOLOGY, AND POWER IN ARCHAEOLOGICAL THEORY

I A Dual-Processual Theory for the Evolution of Mesoamerican Civilization¹

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Current neoevolutionary theory is inadequate to the analysis of past social change because it lacks a suitable behavioral theory and because its simple stage typology fails to account for variation among societies of similar complexity and scale. We propose a remedial program for neoevolutionary theory that will help it avoid these shortcomings. To accomplish this, we lay out a preliminary behavioral theory grounded in political economy, point to comparative situations from various world areas that illustrate the processes involved, and then apply the approach to pre-Hispanic Mesoamerica. We argue that a productive explanatory framework for Mesoamerica will be a dual-processual theory that elucidates the interactions and contradictions of two main patterns of political action, one exclusionary and individual-centered and the other more group-oriented.

1. We were stimulated to write this paper after reading the insightful comments found in Willey (1991). Two distinguished lectures presented to the Archaeology Division of the American Anthropological Association, by Elizabeth Brumfiel (1992) and George Cowgill (1993), also contributed importantly to our thinking. An earlier version of this paper was presented by Blanton at the School of American Research Advanced Seminar on the Archaic State, organized by Gary Feinman and Joyce Marcus. The paper's development benefited from the seminar discussions. We thank David Grove and an anonymous referee for useful comments. Any errors are our own.

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The present paper was submitted 22 IX 94 and accepted 3 II 95; the final version reached the Editor's office 3 III 95.

The explanation of the development of ancient Mesoamerican civilization is in need of a new theoretical approach to replace the sterile debates between, for example, materialists and cognitivists or region-centered versus world-systems theorists. The foremost source of theoretical difficulty is that all of the arguments take place within the conceptual confines of a flawed neoevolutionism. Current theory has proved inadequate to the study of sociocultural evolution in Mesoamerica and elsewhere because it focuses on a directional development through evolutionary stages (from bands to states) (Flannery 1972, Service 1975) that are static societal types. In neoevolutionary theory the administrative subsystems of chiefdoms and states respond to socio-environmental stresses by increasing political centralization (Flannery 1972, Wright and Johnson 1975), but there is no convincing theory of human behavior, especially the crucial behavior found in political competition (Brumfiel 1992). Researchers should abandon its static ideal-type stages and instead investigate the varying strategies used by political actors to construct and maintain polities and other sociocultural institutions. In this

paper we take a beginning step toward the development of a political behavioral theory of social change by pointing to two largely distinct political-economic strategies employed in the Mesoamerican past. We then discuss the interrelationships of the two in space and time and apply this theory in a consideration of some of the main features of sociocultural change in pre-Hispanic Mesoamerica.

Our approach builds on the suggestions of Giddens (1984), Bourdieu (1977), and Sewell (1992) and has many features in common with the behavioral approach described by Brumfiel (1992; see Blanton n.d.). We assume that some persons in any society will strive to influence the governing institutions of society as they pursue, variously, wealth, status, or power. Political action is inherently conflictive; actors may have diverse political aims and varying views of the ideal form of the governing institutions and may contest for positions of power. As Sewell (1992:22) points out, states are "consciously established, maintained, fought over, and argued about rather than taken for granted." Political actors capable of influencing the governing institutions of society are often persons already occupying positions of power or wealth but may be persons or groups (factions) challenging the dominant ones. While political struggle has the potential of bringing with it social and cultural change, it is played out against a background of shared culture, acquired through socialization, that constrains what political actors may do. Culture is not, however, completely determinative, because political actors' knowledge of society's structure and its culture is potentially not just a constraint but a resource that they can use as they pursue their goals. Thus, political actors may, variously, reproduce society and culture, reject it, or modify it as a way of achieving desired outcomes.

Variation in Political Strategies

TWO TYPES OF POWER

Political actors make use of differing strategies that can be analytically broken down by reference to the type of power strategy and the source of power (here we follow Lehman [1969] but modify some of his terminology and concepts). A heuristically useful distinction may be made between two main types of power strategy, the *exclusionary* and the *corporate*, which coexist to some degree in the political dynamics of all social formations (e.g., Mann 1986:chap. 1) but one or the other of which is likely to be dominant at any particular time and place. In the exclusionary power strategy, political actors aim at the development of a political system built around their monopoly control of sources of power. Exclusionary power may be exercised in small-scale networks of personal dominance, for example, in patron-client relationships such as vassalage in European feudalism (Bloch 1961). On a larger scale, a bureaucratic form of government supplants the personalized control found in patron-client relationships and similar intermember power relationships, for example, in situations in which

rulers are able to subordinate a state's bureaucracy (Eisenstadt 1969:278-79).

In the corporate political strategy, in contrast, power is shared across different groups and sectors of society in such a way as to inhibit exclusionary strategies. This need not mean a hierarchically flat society or a completely egalitarian one (see, e.g., Blanton n.d.); chiefs, rulers, bureaucracies, and governing councils may be found within the structure of corporate governance. Monopoly control of sources of power is precluded by restrictions on the political behavior of those vested with power or aspirants to power. In corporate polities, the distribution of power is structured, determined, legitimated, and controlled within the limits set by the prevailing corporate cognitive code (Blanton n.d.).

The evolution of corporate behavior has received insufficient attention in the literature on sociocultural change in ancient complex societies (Cowgill 1993). Here the major goal of research has been understanding political centralization and the development of economic inequality. It is generally assumed, in fact, that exclusionary power strategies predominate in archaic states. For example, it is almost always accepted that the cognitive code of an archaic state simply serves to mystify a system of power monopoly and inequality (but see Abercrombie, Hill, and Turner 1980 and Thompson 1978 and cf. Blanton n.d.). This argument is one of the very few areas of overlap between functionalist-systems and marxist theories of complex society. For example, the systems analyst Flannery (1972:407) writes, "It is the hierarchical arrangement of the members and classes of society which provides the actual integration in states. The critical contribution of state religious and state art styles is to legitimate that hierarchy, to confirm the divine affiliation of those at the top by inducing religious experience" (see also Rappaport 1971; for similar "false consciousness" arguments, see such marxist sources as Bourdieu 1979; Broda 1982; Wolf 1982:83). We would argue, however, that cognitive code and ritual experience may also support a corporate political structure (Blanton n.d.). Archaic state systems with strongly corporate features, for example, the Classic-period Greek polis (Humphreys 1978), are infrequently considered in general works on sociocultural evolution (e.g., Service 1975; for an exception, see Runciman 1982) or in comparative studies of archaic states (e.g., Claessen and Skalník 1978). Brumfiel and Fox's collection (1994) takes a behavioral approach to faction building in New World aboriginal polities but considers only exclusionary power strategies. One of the purposes of this paper is to correct what we perceive as a centralization bias in theories of complex societies. We point to the dual nature of political strategy and ask that equal attention be paid to exclusionary and corporate power strategies, their contradictions, and their interactions.

SOURCES OF POWER

Political actors draw upon various sources of power (or "funds of power" [Brumfiel 1992:554-55; Wolf 1982:

97]). *Objective* sources include wealth and factors of production, while *symbolic* sources include elements of a cognitive code, including religion and ritual (table 1). Whatever its source, power is always exercised in a culture-laden social situation. Materials and symbols are powerful only to the extent that they move people.

POLITICAL ECONOMY: TYPES AND SOURCES OF POWER

By "political economy" we mean an analytical approach that elucidates the interactions of types and sources of power. No simple evolutionary-stage sequence of societal types appears capable of capturing the complexity and variety found in political economy. Although some aspects of political economy are likely to be common in the evolution of all complex societies, each major world region developed a characteristic pattern of political-economic behaviors. More work will be required to elucidate and explain this cross-regional and temporal variation, but a few major patterns can be mentioned. In China, for example, a partially corporate system had developed as early as the Chou dynasty (e.g., Creel 1970). This arrangement was exemplified most clearly in the Mandate of Heaven and the doctrines of the Confucian literati, which placed constraints on the ability of rulers to employ exclusionary power strategies; alternative schools of political theory allowed more leeway for centralization (e.g., Hsu 1986:308; summarized in Blanton n.d.). A pattern originating in ancient Mesopotamia (Jacobsen 1957) and extending to later polities in the eastern Mediterranean and beyond (Humphreys 1978:181–82) involved forms of assembly government, another aspect of corporate political behavior. In ancient Egypt, in contrast, except during the intermediate periods, a powerfully centralized political economy was characterized by the subordination of the bureaucracy to the pharaoh and supported by a cognitive code that viewed the whole society as his patrimony (e.g., Eisenstadt 1969: 23). In ancient Mesoamerica, no large centralized polity comparable in scale to ancient Egypt's ever developed. Instead, both corporate and exclusionary strategies produced political-economic systems of varying scale and degree of complexity. Exclusionary power strategies were principally associated with comparatively small,

autonomous polities linked by trade, war, and the strategic marriages of rulers in large interactive networks. Corporate systems of differing scales also developed, but large-scale polities seem always to have been based on some kind of corporate strategy.

The Dual-Processual Theory

Analogous political-economic strategies may be found in social formations of widely varying degrees of complexity and scale, not just in certain evolutionary "stages" (Feinman 1995). Lindstrom (1984), following Modjeska (1982), argues that the traditional view of the "big man" as one who manipulates wealth to create prominence and political power (e.g., Sahlins 1963; 1972:135–37) is limited in that it ignores other potential sources of power (see Godelier and Strathern 1991). An alternative context for political struggle and social inequality is found in the control of knowledge and ritual (see Harrison 1987, 1993). In the latter, big men "who command attractive explanatory systems gather followers or, according to the stereotypic Melanesian model, exchange partners who become indebted in a commerce of ideas" (Lindstrom 1984:294).

An important distinction between wealth-based and knowledge-based political economies is in the spatial scale of political action. For the wealth-based actor, prominence comes primarily from centrality to a network of extragroup exchange partnerships. The manipulation of network exchanges translates into prestige and power vis-à-vis the actor's own group, but it is aimed also at gaining regional prominence (Strathern 1969, 1978). In knowledge-based systems, by contrast, political action takes place primarily within the local group. Further, it is concerned less with the acquisition of individual prestige than with the maintenance of local-group solidarity. As Lindstrom (1984:305) expresses it, "Where control of knowledge is the dominant dimension of inequality . . . the consumption of information and explanatory knowledge does not support inequality generated elsewhere but itself serves to structure and maintain social groups." This structuring of social relations is done through the manipulation of ideational systems that "transcend principles of local atomism" (p. 294). In

TABLE 1
Sources of Power

Objective	Symbolic	Reference
Wealth	Knowledge	Lindstrom (1984)
Political-economic	Ritual	Modjeska (1982)
Material	Magic	Harrison (1987)
Allocative resources	Authoritative resources	Giddens (1981; 1984:258)
Economic interests	Authority	Weber (1978:943)
Material interests	Ideal interests	Weber (1946:280)
Natural	Moral	Rowlands (1987)
Objective	Symbolic	Lehman (1969)

Avatip (Harrison 1987), for example, this is accomplished through the development of a cognitive model of an unchanging corporate social structure based on reciprocal obligations between disparate subgroups, supported by a ritual cycle emphasizing cosmological themes that transcend local belief systems.

Knowledge-based political systems are not unrelated to material flows in society. For example, Harrison (1987:14) points to the way in which success in ideationally based Avatip politics brings access to resources, particularly affines and land rights. In his comparative discussion of highland New Guinea exchange systems, Strathern (1969, 1978) describes two main strategies used by men who strive for preeminence—"finance" and "home production." In the latter, as in our corporate-based strategy, big men aim for "consensus management" within the local system (p. 49). Both political strategies require that goods be assembled for prestige-building prestations, but in the finance strategy prestational items come primarily from intergroup exchange partnerships while in home production "a participant depends on the labour force of his own settlement to raise the goods" (Strathern 1969:42; see Friedman 1982, Modjeska 1982:79). As Strathern observes, both strategies have inherent material limitations. A finance strategist seeking to obtain more goods for prestations and payments finds it difficult to influence distantly located exchange partners to reciprocate with goods at timely intervals (Strathern 1969, 1971). Also, although a finance strategy offers greater scope for preeminence, where it predominates it makes "the conditions of competition more fluid" (1969:47). Home production will be curbed both by the limited potential for agricultural intensification and the limited ways in which political actors can gain access to land and labor. In both cases, building larger, more complex polities requires that new institutions be put in place, but the strategies used to accomplish this will differ according to whether in a particular situation the network or the corporate strategy is dominant.

THE NETWORK STRATEGY

We adopt the term "network" to characterize a political-economic pattern in which preeminence is an outcome of the development and maintenance of individual-centered exchange relations established primarily outside one's local group. Like Strathern's finance strategy, the network strategy brings preeminence principally through action on a large spatial scale through manipulation of distant social connections. Social relationships outside local groups are created and maintained through prestational events and payments, involving the exchange of marriage partners, exotic goods, and even knowledge (e.g., Helms 1988), whose value is recognized cross-culturally. Participation in extralocal networks and the accompanying differential access to prestigious marriage alliances, exotic goods, and specialized knowledge also translate to varying degrees into leadership within the local group. Theoretically, any individual or

household may strive to establish network ties, implying considerable potential for competition between individuals with overlapping networks. Thus where a network strategy is the basis of the political economy, leadership tends to be volatile and the social scene laden with potential for conflict (Douglas 1967:133; Modjeska 1982:87-102; Strathern 1969:47; cf. Schneider, Schneider, and Hansen 1972:338). Also, since individual military, trading, and social skills are often important components of political success or failure (Strathern 1969:47; Weiner 1983), networks tend to go through cycles that approximate a generation in length.

In the purest imaginable case, effective participation in extralocal networks alone would underpin political preeminence, as in the case described by Vogel (1990:124) in which trade "endorsed an elite authority. Command of it endowed power. It was literal proof of executive performance" (cf. Modjeska [1982:86] on the Enga as opposed to the Duna of Highland New Guinea and Sillitoe [1979] on the Wola). But actors manipulating long-distance networks eventually face the structural limitations previously alluded to, namely, the inability to control exchange partners at a distance and the inevitable competition from other similarly striving individuals. Reallocating resources from existing trade partnerships in order to create new partnerships or to enhance status within the local group is likely to be counterproductive, for example, when "divergences" of kula goods result in conflicts between Massim trade partners (Weiner 1983:164; cf. Appadurai 1986:19-20; Bohannan 1955; Fortune 1932:217; Lederman 1986). Establishing new partnerships or successfully competing with other similarly aspiring network players requires an increased frequency of feasting, more warfare, and increased production of desirable prestational goods. Change along these lines implies, in turn, a need for more control over local followers; strategies developed to accomplish this bring about sociocultural evolutionary change in a network-based political economy.

We suggest that the most important precondition for the establishment of a larger faction in the context of the network strategy is an ability to divert prestational goods and followers away from potential competitors. This is accomplished primarily through what we will call *patrimonial rhetoric* (following Weber [1978:chap. 12]) and through *prestige-goods systems* (following some of the suggestions of Friedman and Rowlands [1978], although their framework does not explicitly distinguish between network and corporate strategies). Obviously, strategies aimed at consolidating a local faction at the expense of other political actors are not often successful (e.g., Weiner 1983:166), since they are potentially constrained by limitations such as the above-mentioned trade divergences and environmental ceilings on agricultural intensification. Also, followers may resist attempts to increase production or migrate in the face of excessive workloads (Sahlins 1963:292-93; 1972:130). Within the dynamic of the network-based political economy, evolutionary transformation involves the development of new patrimonial social structures and the manipulation of prestige-goods systems as follows:

Patrimonial rhetoric. Polygyny, gender hierarchy, multigenerational extended households, clanship, and “tribal formation” (Swidler 1992:554) are strategies for the mobilization of labor and the control of material resources and marriage exchanges (for similar arguments, see Arnold 1993; Blanton 1994: chap. 3; Bonte 1979; Flanagan 1989; Moore 1991; Paynter and Cole 1980; Strathern 1982; Webster 1990; Wolf 1982:88–96). The affirmation of household, descent, and ethnic social ties also serves to dampen the free migration of faction members between competing network strategists in what otherwise would be a more openly fluid, competitive social landscape. A system of ranked descent groups (conical clans) allows an emergent elite to monopolize the most advantageous marriage alliances between lineage segments and legitimates the appropriation of surpluses from hierarchically connected segments beyond one’s own household and community. Patrimonial rhetoric is thus likely to be primarily an outcome of an exclusionary strategy instituting and culturally legitimating new social arrangements to solidify the control of local followers. Our approach differs from that of Friedman and Rowlands (1978:206), who regard lineages as a given and the starting point for their discussion of the evolution of civilizations.

Prestige-goods systems. Manipulating the production, exchange, and consumption of valuable goods is central to strategies aimed at gaining control over politically potent exchange relations (Appadurai 1986:24–25; Douglas 1967; Feil 1984:chap. 3; Friedman and Rowlands 1978; Strathern 1979). From our perspective, such manipulations of exchange goods allow the emergent elite to monopolize network exchange and its political payoffs by reducing the number of households in a local system that can acquire preeminence in a network-based political economy. Some elements of this same process permit network players to compete successfully outside their local domains as well. The outcome of this kind of exclusionary political behavior is the growth of a prestige-goods system (cf. Ekholm 1972; Frankenstein and Rowlands 1978; Friedman 1982; Friedman and Rowlands 1978:214; Peregrine 1991, 1992).

Among the many elements of a prestige-goods system are the following: First, difficult-to-obtain exotic goods are increasingly substituted for the food or other utilitarian items found in simpler intergroup exchange systems, given the greater susceptibility of the rarer items to monopoly control (Brumfiel and Earle 1987). Goods that are produced using complex technologies or are highly labor-intensive are also consistent with the exclusionary political strategy (Brumfiel and Earle 1987, Peregrine 1991). This process results in social pressures favoring technological innovation primarily in the production of exotic goods rather than in basic productive technologies. The distribution of prestige goods in society is altered, some of them being incorporated into the process of individual and household social reproduction, including marriage payments and events such as age-grade rituals, creating new consumer demands. Since the elite has control over the requisite raw materials and production processes of these goods of social reproduction,

household social reproduction forms an important basis of reciprocal obligations between the elite and the dependent members of its own and other households (Friedman and Rowlands 1978:214, 222; Meillassoux 1978).

Where this prestige-goods manipulation is successful, the elite is able to monopolize a network strategy vis-à-vis its local domain, but network strategists at the tops of local hierarchies in adjoining groups both participate in exchanges and compete with one another for dominance of larger multigroup factions (“peer-polity interaction” [Renfrew and Cherry 1986]). At this scale, the fragmented macroregional political landscape reproduces many of the same features of the network dynamic as smaller-scale systems, namely, fluidity, competitiveness, and an emphasis on individual skills in the establishment and maintenance of exchange networks. In this context, network participants make use of a symbolic vocabulary we refer to as an “international style” in goods and information crossing sociocultural boundaries (see Brumfiel 1989, Robertson 1968; similar concepts include the “nonnuclear” system [Smith and Heath-Smith 1982:19], the “interaction sphere” [Vogel 1990:137–38], and the “multinational culture” [Willey 1973:158–59]; cf. Flannery 1968, Lévi-Strauss 1982, Schortman 1989). This international style facilitates cross-cultural exchanges and reconfirms the elite’s legitimacy vis-à-vis other elites as well as any local faction (e.g., Kopytoff 1987:17) but in a situation in which no single society has the ability to dictate its symbolic content or its stylistic canons.

THE CORPORATE STRATEGY

From our Mesoamerican perspective, an important dimension of the corporate strategy is its ability to transcend the scale limitations of the network strategy to include large, powerful states such as Teotihuacan. But we would argue that these cases are analogous to social systems of smaller scale, including those Strathern (1969, 1978) describes in New Guinea in which big men gain preeminence through the control of home production. Similarly, Renfrew’s (1974:74–79) concept of the “group-oriented chiefdom” seems to us to fit this category, and Friedman and Rowlands (1978:215) point to Polynesia, where there are “highly developed political structures in the relative absence of elaborate prestige-goods systems.” Thus our dual-processual approach has features in common with several analytical schemes addressing the nature of variation in political organization (table 2). Similarly, the political-economic patterns that underlie our categories “network” and “corporate” are found in several sources that link political form to economy (table 3). We emphasize that our dual scheme highlights major forms of political-economic strategy and does not aim to develop a rigid social typology. We reiterate Sewell’s (1992:22) point that social actors with varying agendas and strategies may compete for political preeminence. Although either the corporate or the exclusionary strategy may dominate the political process of a social formation at any given time, elements of both

TABLE 2
Political Typologies Analogous to the Network/Corporate Dichotomy

Network	Corporate	Reference
Individualizing chiefdoms	Group-oriented chiefdoms	Renfrew (1974), Drennan (1991), Earle (1991)
<i>Gumsa</i>	<i>Gumlao</i>	Leach (1954), Friedman (1975)
Prestige-goods systems	—	Friedman and Rowlands (1978), Peregrine (1992)
Prestige-goods systems	Big-man competitive feasting	Friedman (1982)
Wealth-based	Knowledge-based	Lindstrom (1984)
Material-based	Magical-based	Harrison (1987)
Primitive coupon systems	—	Douglas (1967)
Finance-based big-man	Production-based big-man	Strathern (1969)
Prestige economy	—	Strathern (1979)
Noncorporate organization	Corporate organization	Schneider, Schneider, and Hansen (1972); cf. Paynter (1981)

may coexist, and cyclic change between forms may be found.

The variant patterns of political economy discussed here are well illustrated by Renfrew's (1974) comparison of "group-oriented chiefdoms" and "individualizing chiefdoms" in prehistoric Europe (cf. Drennan 1991, Earle 1991). Group-oriented chiefdoms are characterized by impressive public works, including large architectural spaces suitable for communal ritual, and a comparative egalitarianism in which individuals are "faceless and anonymous" (p. 79). The archaeological data from individualizing chiefdoms indicate emphasis on competition, warfare, personal wealth, and the consumption of elaborate prestige goods, often found in "princely burials" (p. 82). We associate Renfrew's group-oriented chiefdoms with our concept of the corporate strategy.

As Renfrew points out, group-oriented social formations were capable of constructing massive architectural features. This may seem counterintuitive in light of their comparative egalitarianism and the lack of evidence for domination by particular powerful individuals who might be identified as the chiefly heads of centralized polities. However, it is clear that politically complex social formations may evolve along corporate lines. In our conceptualization, the corporate emphasis may be achieved in several ways but always involves the establishment and maintenance of a cognitive code that

emphasizes a corporate solidarity of society as an integrated whole, based on a natural, fixed, and immutable interdependence between subgroups and, in more complex societies, between rulers and subjects (Lamberg-Karlovsky 1985). The ecumenical viewpoint of the corporate orientation contrasts with ancestral ritual that legitimates the control of society by a limited number of high-ranking individuals or households. A corporate strategy emphasizes collective representations and the accompanying ritual based on broad themes such as fertility and renewal in society and cosmos. The corporate strategy is thus able to transcend the scale and scope limitations of patrimonial rhetoric, which emphasizes the controlling roles of particular individuals based on gender, generation, and primacy of descent from common ancestors. A cognitive restructuring involving transcendent themes of cosmic renewal not only allows the incorporation of disparate ethnically defined subgroups into the larger society but also legitimates the appropriation of surpluses of primary production, especially agricultural goods ("staple finance" [D'Altroy and Earle 1985; cf. Earle 1987a]). A hierarchically graded set of roles and statuses—what Miller (1989:70) calls "structurally integrative classifications"—constrains and regulates the outcomes of network entrepreneurship and individual achievement in the determination of social preeminence, thus defusing internal political threats

TABLE 3
Variation in Forms of Goods Production and Exchange in the Contexts of Exclusionary and Corporate Strategies

Exclusionary Strategy	Corporate Strategy	Reference
Finance	Home production	Strathern (1969)
Wealth finance	Staple finance	D'Altroy and Earle (1985), Earle (1987a)
Wealth distribution	Staple finance	Gilman (1987)
<i>Twem</i> exchange	<i>Sem</i> exchange	Lederman (1986)

from striving political actors (see Mann 1986:22; Mead 1937:466). Merchants, in particular, whose access to and control over exotic goods and other forms of wealth may have disruptive political implications, are placed, as Miller (1989:70) puts it, "within systems of categories . . . to assert control over them with respect to larger hierarchies" (cf. Wolf 1982:84–85). In Douglas's (1973: 86–87) terms these are cognitive systems of "high classification."

The relative unimportance of the prestige-goods system in these cases should result in different patterns of material production and consumption in the two types of polities. The corporate orientation should imply reduced consumption of prestige items overall and a greater degree of wealth equality in society, but these are issues that require further empirical testing. In his comparison of the Millaran Copper Age and the Argaric Bronze Age of Iberia, for example, Gilman (1987) notes distinct patterns of material systems that he calls "staple finance" (our corporate model) and "wealth distribution" (our prestige-goods system). The Copper Age (staple finance) sites are characterized by collective tombs and an emphasis on ritual and utilitarian items, while the Bronze Age (wealth distribution) sites display a tendency toward individual interments emphasizing personal finery, weapons, "special pottery," and wealth differentials. Similarly, Morris (1987:173–217) contrasts the burial behavior of the Greek "Dark Age" (1050–750 B.C.), which displayed an emphasis on rank distinction in burials, with the Archaic period (750–500 B.C.), characterized by the polis and communal cemeteries.

Network and Corporate Polities in Time and Space

In both network and corporate polities, the playing-out of political-economic strategy may place strain on subsistence systems, providing a source of pressure that might favor innovative changes in subsistence technology (see Arnold 1993; Bender 1978; Friedman and Rowlands 1978:214; Hayden 1990; Runnels and van Andel 1988). Increased surplus agricultural production benefits political actors in both cases (e.g., Strathern 1969:63; Rowlands 1980). However, because in network polities a major source of power is the manipulation of external social ties and prestige goods, complex social systems may develop in marginal environmental settings, for example, along trade routes, even where the potential for agricultural intensification is limited (e.g., Vogel 1990: 105). One example of a state's employing a network strategy is the case of the kings of the 15th-century entrepôt of Melaka. Melaka's rulers adopted Hindu-Buddhist and then Islamic styles and symbolism, created appropriate genealogies for themselves, manipulated marriage alliances, used both Thai and rival Chinese patrons, exchanged royal prestations and diplomatic missions, made war against local rivals, and built trade by legitimating what had been essentially piracy (Wheatley

1961, Sandhu and Wheatley 1983). They adopted the most convenient international style, Islam, encouraged the polyglot activity of merchants from every significant trading society from Venice to China, and secured local shores militarily but invested little in agricultural production.

To understand social change of this type in marginal environmental cases the analyst must take a "top-down" view, placing the local system within its larger macroregional context to examine its role in the control and manipulation of intergroup exchanges. Is the polity central to an exchange sphere or able to control the raw-material sources of a prestige-goods system? Is it located in a weakly controlled periphery or in a "boundary region" between core polities such as the internal African frontier described by Kopytoff (1987; cf. Blanton, Kowalewski, and Feinman 1992, Rowlands 1980)? In these situations, network strategists may benefit from controlling intercore trade routes or providing periphery goods to core consumers, but to do this they must attract followers who provide labor and fighting capacity. In the comparative institutional vacuum of periphery and boundary situations, exclusionary power is acquired through the use of patrimonial rhetoric, prestige-goods systems, and the adoption of an international style (see Kopytoff 1987:16–17) as described above.

In Mesoamerica, the largest-scale manifestations of a corporate political economy were developed in regions such as the Basin of Mexico, which contained large areas of irrigable alluvium. Thus there is a loose association of the corporate strategy with environmental situations providing the potential for substantial agricultural development and of the network strategy with more marginal environments. On a macroregional scale, the two types are likely to coexist antagonistically, maintaining a core/periphery relationship (e.g., Hall 1991, Hedeager 1987), although not all network polities necessarily had periphery or boundary status. Powerful core states may try to manage the network actors of the periphery to monopolize interregional exchanges and to reduce the political threat these actors represent. But the weakening or collapse of a corporate polity may produce an institutional vacuum that provides scope for the activities of network strategists even in the core. Thus a regional sequence may consist of cycles of alternating network and corporate emphases in the political economy (see Sahlins 1983:517).

Corporate and network strategies result in dissimilar and antagonistic political economies and so are likely to be temporally or spatially separated. Elements of both approaches may, however, be employed in certain complex cases. Here again we stress that our terms "corporate" and "network" delimit political-economic strategies, not necessarily types of societies. Dynastic-period China's management of its chaotic peripheries through distributions of prestige goods (e.g., Schneider 1977:23–24), for example, contrasts with the internal role emperors played as mediators in rituals of earthly and societal renewal (Eisenstadt 1969:59).

To this point, we have identified two political-

economic strategies and described their characteristics and relationships. Having developed our theoretical argument and related our scheme to similar conceptualizations advanced by other researchers, we now turn to a consideration of some main trends in pre-Hispanic Mesoamerica's sociocultural transformations. Figure 1 shows the time periods discussed and their chronologies and figure 2 the locations of sites mentioned.

Dual-Processual Theory and Sociocultural Change in Pre-Hispanic Mesoamerica

THE EARLY AND MIDDLE FORMATIVE PERIODS

We suggest that the Mesoamerican Early and Middle Formative periods were characterized by extensive long-distance interaction within an elite exchanging exotic goods and perhaps brides (Demarest 1989; Flannery 1968; Grove 1984:64–65) in the manner of our network strategy. (Drennan [1991], however, from his comparative perspective of Colombian chiefdoms, sees some features of group orientation in Renfrew's sense even this early.) The "Olmec" horizon style, in particular, leads us to this conclusion; as Grove (1989) reminds us, it was widely adopted in western Mesoamerica but cannot be associated entirely with any one locality (cf. Flannery and Marcus 1994:385–90; Marcus 1989a; Tolstoy 1989:98). Groups in various regions shared an artistic-symbolic tradition, but, consistent with the process of the "international style," no one group was the singular source of that tradition.

Long-distance exchange of exotic goods is well documented (Pires-Ferreira 1976a, b), and although during the Early and Middle Formative periods there was evidently widespread access to goods of this type in some localities (Tolstoy 1989), at other sites, including San José Mogote, Chalcatzingo, and San Lorenzo Tenochtitlan, the production and consumption of prestige goods was associated mainly with elite households (Flannery 1982). Further, the content of Olmec symbolism, including the importance of "jaguarized" human representations that indicate elite descent from a mating of human and animal (Coe and Diehl 1980), is consistent with patrimonial rhetoric, and evidence for lineages is noted by Pyne (1976) at San José Mogote (cf. Marcus 1989a:169). Representations of preeminent individuals—for example, the colossal stone heads of the Gulf Coast lowlands and the portrait monuments and portrait figurines of Chalcatzingo and elsewhere (Gillespie 1987, Grove 1987a)—are consistent with the individualizing emphasis of the network strategy and its public glorification of important personages (Grove and Gillespie 1992:35).

Prominent sites are often located in settings that are environmentally marginal but have the potential for controlling long-distance trade routes, for example, Chalcatzingo (Grove 1987b, Hirth 1987). One of the largest Early Formative sites in the Basin of Mexico, at Coapexco (Parsons et al. 1982:366), is located on the pass

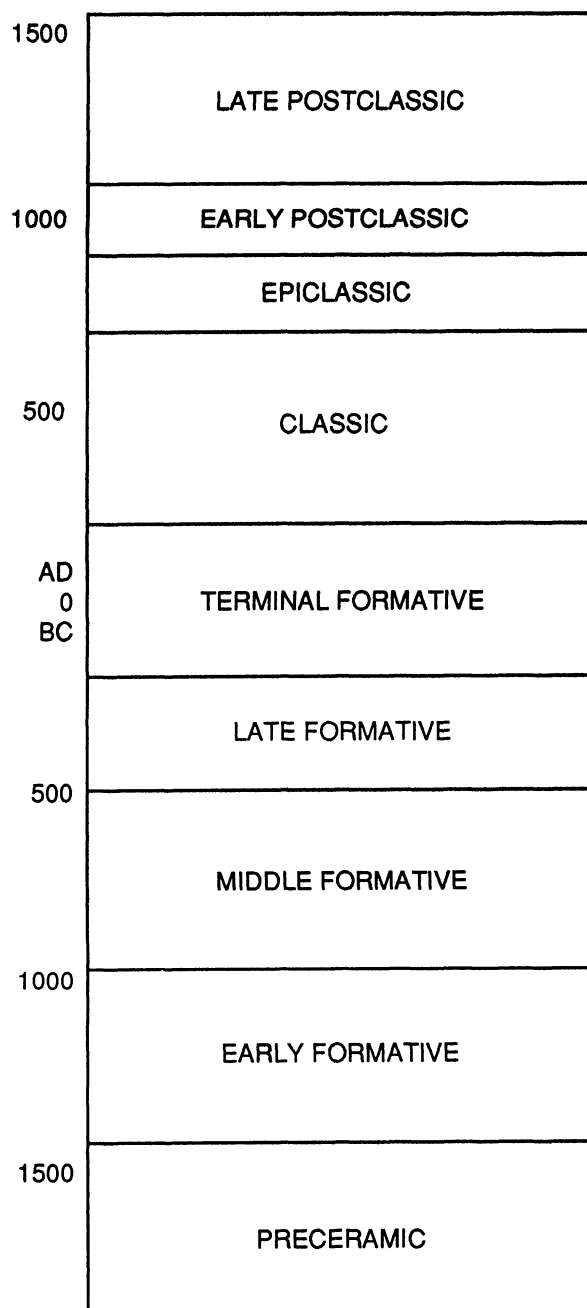


FIG. 1. Major Mesoamerican chronological periods.

linking two major Central Mexican valleys, and its population evidently was involved in interregional obsidian exchange (Tolstoy 1989). Several of the largest sites of the Early and Middle Formative, including San Lorenzo Tenochtitlan and La Venta, were positioned centrally with respect to the interaction sphere (Demarest 1989) but in a comparatively marginal tropical lowland that never saw the growth of an important core polity. In a later phase of domination by network polities, however, this same general area was a major zone of network strategists.

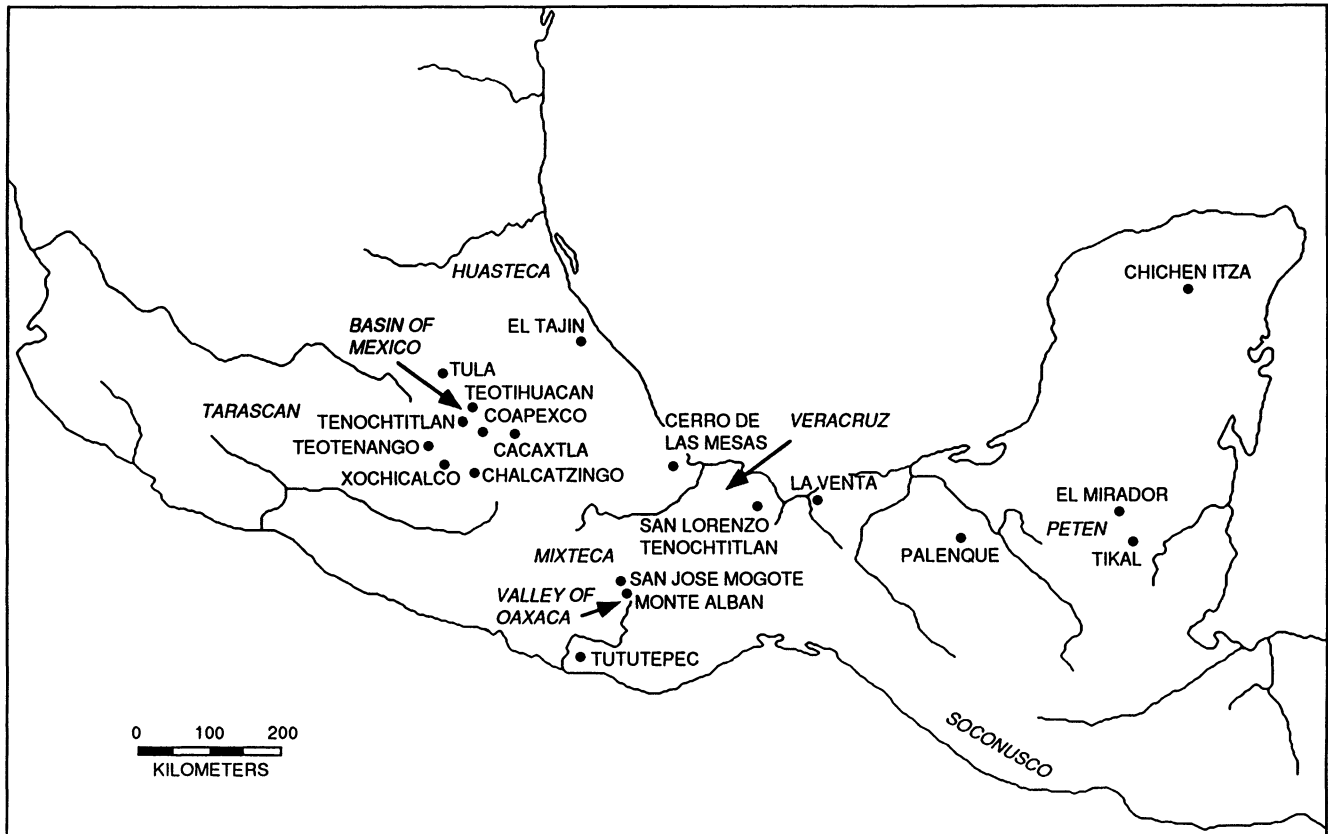


FIG. 2. Locations of sites mentioned in text.

LATE AND TERMINAL FORMATIVE PERIODS

The comparative decline in importance of the international style during the subsequent Late and Terminal Formative periods (Wiley 1991) is consistent with the decline of a network-based political economy. Grove and Gillespie (1992:35) point to the reduction in the frequency of figural representations of identified rulers after the end of the Middle Formative. In the Maya lowlands the first evidence of an elaboration of political structure is indicated by the construction of pyramid platforms during the Late Preclassic period (beginning around 300 B.C.) at sites such as Uaxactun and Cerros (Freidel 1981). Unlike the highly exclusionary political economies of the Classic-period lowland Maya kingdoms, these early polities appear to have been strongly corporate, emphasizing social integration through communal ritual (Freidel 1981:206). The form of this early public architecture illustrates two themes that we suggest characterized other Mesoamerican corporate polities: First, the pyramids, decorated with large masks, symbolize the serpent and the daily passage of the sun (p. 222), both linked with earthly renewal in Mesoamerican cosmology (Broda 1982; Pasztory 1988:57). Secondly, there was an emphasis on the creation of ritual places rather than on any particular ritual or political object such as the stela cult that accompanied the exclu-

sionary political-economic strategy of the lowland Classic Maya kingdoms (Freidel 1981:226).

THE TEOTIHUACAN POLITY

Teotihuacan from the Late Tlamimilolpa through Metepec phases (A.D. 300–750) of the Classic period is the foremost manifestation of the corporate strategy in ancient Mesoamerica. This strategy had four main features:

1. Individual entrepreneurial achievement and ruler cults were deemphasized in favor of a corporate governing structure indicated by the lack of portrayal of or textual reference to named rulers and any indication of patrimonial rhetoric (R. Millon 1988a:112; 1992:396; Pasztory 1992:292–95). There is not even an easily identifiable palace; the Ciudadela complex and adjacent areas along the Street of the Dead were clearly offices of the central government and elite residences, but there is no consensus on their precise functional interpretation (Cowgill 1983, 1992a). René Millon (1973:55) argues that the strength of the Teotihuacan polity stemmed from its massive buildings and architectural spaces and the rituals that occurred in them rather than from the glorification of a particular ruling descent group. Obvious parallels can be seen between Renfrew's (1974:79)

group-oriented chiefdoms, where "public works are impressive, but individuals faceless and anonymous," and Teotihuacan, whose architectural spaces include a plaza in the Ciudadela that could have held some 100,000 persons (Cowgill 1983:322)—not the society's or even the city's total population but certainly a broad segment of that society. Rather than the exploits of rulers or royal lineages, mural art and scenes on ceramic vessels portray ritual processions of high-ranking personages. Frequently depicted are individuals wearing tassel head-dresses, interpreted by Clara Millon (1973, 1988) as indicating the named and ranked categories of persons belonging to corporate organizations whose responsibilities lay in external militarism, diplomacy, and perhaps long-distance trade. Evidently, external military and trade ventures could bring preeminence in Teotihuacan society, but only within the institutional constraints of a symbolic system defining a hierarchy of ranks and statuses.

2. Teotihuacan state cults emphasized cosmological principles linking rain, earth, sun, moon, and serpents with renewal and fertility and included an important female deity (Berlo 1992; Pasztory 1978:130–32; 1988:57; 1992:311–13).

3. The standardization of artistic conventions and the systematization of religious iconography (Pasztory 1978, 1992) are consistent with the rejection of an ethnic (patrimonial) basis for political ideology (cf. Cohodas 1989:223) and reflect what Pasztory (1988:57) calls the "codification of corporate ideology"—a symbolic incorporation of diverse ethnic groups.

4. From the surplus production of Teotihuacan's vast core system, estimated to include a population of 500,000 persons in the Basin of Mexico and adjacent areas of the Central Highlands, it seems that the city was able to extend its direct control into peripheral zones through the establishment of trade enclaves and extractive outposts as far away as highland Guatemala (R. Millon 1981, 1988b). Although the exact institutional nature of this expansion is unknown, it is associated with groups whose authority is indicated by the tassel-headress corporate organization (C. Millon 1973, 1988). In this case, the basis for the spread of Teotihuacan traits was not, as in Olmec art, the establishment of an international style. Instead, this episode of Mesoamerican "horizontal integration" (Willey 1991) reflects the dissemination of an artistic-symbolic system from a particular dominant center (a "nuclear" system, in Smith and Heath-Smith's [1982:19] terms) as part of its strategy of institutional and cultural restructuring of a periphery. (In areas outside direct Teotihuacan control, Teotihuacan style may have been imitated or modified as an international style.)

THE EPICLASSIC AND EARLY POSTCLASSIC

The decline of Teotihuacan brought a return to preeminence of the network-based political economy in Western Mesoamerica. These social formations often developed in boundary regions that had been economically

and politically peripheral during the highlands Classic period. While network strategists dominated much of the Postclassic, in some cases local systems may have cycled between network and corporate structure, for example, in Tula's attempt to reestablish Central Mexican hegemony. By and large, however, the political systems of the Epiclassic up to the final century or so of the pre-Hispanic sequence illustrate features of a network political economy. In what follows, we summarize these characteristics on the basis of what we know about Xochicalco, Cacaxtla, Teotenango, El Tajín, and Tula (see esp. Baird 1989, Berlo 1989, Cohodas 1989, Hirth 1989, Marcus 1989b, and Nagao 1989; cf. Blanton, Kowalewski, and Feinman 1992). The major patterns of social and cultural change of relevance to this discussion include the following:

1. Political power was often linked importantly to involvement in long-distance exchange of prestige goods, for example, the growth of Tututepec (Ball and Brockington 1978; cf. Cohodas 1989:223; Brumfiel 1989). Extensive trade networks flourished, particularly in the mountainous and swampy areas of Veracruz and southern and coastal Mesoamerica that had not been the loci of Classic-period core systems (Smith and Heath-Smith 1982:25, 26).

2. Individual achievement—particularly masculine achievement—in trade and war was a major source of political legitimation. The exploits of individual rulers were publicly proclaimed in written texts (carved-stone monuments and codices) illustrating success in war and marriage alliances (e.g., Marcus 1992, Spores 1974); patrimonial rhetoric is indicated by genealogical registers, which became an important component of written texts (Marcus 1980).

3. Mesoamerica was horizontally integrated stylistically and symbolically by the elements of the Mixteca-Puebla style (for a summary of chronology and content, see Smith and Heath-Smith 1982). Like the previous Olmec style, Mixteca-Puebla art and symbolism fit comfortably into the category we have labeled the international style. Its sources were varied (Smith and Heath-Smith 1982) and, interestingly, situated in zones (e.g., the Mixteca, western Mexico, and the Nicoya Peninsula of Costa Rica) that had long been marginal to regions where corporate polities had flourished during the Classic period.

The riverine Gulf Coast was one of the most dynamic areas in Mesoamerica during this period and prior ones. Wilkerson (1991) notes that the major centers of development here shifted over time from the south in Olmec times to the Cerro de las Mesas region in the Late Formative and then to El Tajín and finally the Huasteca in the Postclassic. In each time period coastal Veracruz regions had special connections with particular cores in the highlands and acted as key players in wider Mesoamerican network relations. The Gulf Coast offers the best transportation of any major geographic zone in Mesoamerica. In these two respects, transportation and evolutionary dynamics, the Gulf Coast is Mesoamerica's Mediterranean.

THE LATE POSTCLASSIC

By the Late Postclassic, a cycling back to corporate-based polities is evident, including, probably, the Tarascan state (Pollard 1980) and, most important, the Basin of Mexico. There the development of what van Zantwijk (1985) calls “the Aztec arrangement” aimed at the political, economic, and cultural consolidation of an ethnically fragmented social landscape. At the same time, it extended beyond the core to exert control over what was becoming an imperial periphery (Berdan et al. 1995). Ethnohistorical and archaeological sources provide a fascinating if incomplete picture of social and cultural changes initiated during an approximately 30-year period after about A.D. 1430. Several sources describe the political (Brumfiel 1983, Davies 1980, Hodge 1995), economic (Blanton 1995), and cultural ecological (Sanders, Parson, and Santley 1979) dimensions of change in the core, while van Zantwijk (1985) analyzes the cognitive code that became the cultural basis for a corporate conceptualization of society that transcended the petty politics of an ethnically complex landscape (cf. Bray 1978, Kurtz 1984, van Zantwijk 1973). The authorship of the new cognitive order is not clear, although the guiding personality appears to have been Tlacayeletl I, a renowned soldier and *cihuacoatl* (internal chief) of the powerful Culhua Mexica of Tenochtitlan. This new cognitive system is summarized by van Zantwijk (1985: 127) as follows: “In accordance with this new doctrine, the Aztec Mexican tribal god Huitzilopochtli was made the principal deity in the pantheon constellation of the fifth sun. Thus the Aztecs were charged to organize life on earth accordingly by guiding and coordinating the united efforts of all humanity.”

The resulting cognitive arrangement was not built from whole cloth. Aztec state builders appropriated old Mesoamerican symbols to anchor themselves deep in the Mesoamerican past, extending and modifying cognitive codes relating to directional symbolism, cosmological domains, and Mesoamerican almanacs. And they tried to draw in and incorporate the known contemporary world symbolically into a single worldview. The features of the Aztec arrangement that emerged from the application of this ideational mandate to the activities of everyday life of the Aztec peoples are far too numerous and complex to describe here. Primarily following van Zantwijk (1985: esp. 198–242), we point to the following key aspects of the corporate strategy:

1. In Tenochtitlan, the ceremonial center (where the main plaza was large enough to hold 8,000–10,000 people [Durán 1971:76]), city plan, and main temple-pyramid (Templo Mayor) symbolized the pivot of the four-quartered structure of the heavens (Broda 1987:211; Matos Moctezuma 1992:36). The *axis mundi* (*contra* Wolf 1994:13) was not in the palaces of rulers, which were placed outside the boundary walls of the great civic-ceremonial compound (Marquina 1964:185), but in a plaza bounded by the west-facing twin-topped Templo Mayor, which manifested rain (Tlaloc) and sun (Huitzilopochtli) symbolism, and the east-facing Temple of

Quetzalcoatl, with its serpent symbolism (Broda 1987: 211; Matos Moctezuma 1992:36–39). This spatial structure not only created a center defined by the intersection of the four cardinal directions but formed quadrants manifesting links between sectors of the social system (descent groups, occupational groups, ruling offices, etc.), clarifying their mutual interdependencies, relationships, and comparative importances, through the use of principles of hierarchy, opposition (dual structure), and tripartite and quadripartite structure. This included internal (*cihuacoatl*) and external (*huehuetin tlatoani*) rulership, the former being accorded, at least in theory, somewhat higher status (van Zantwijk 1985: 214). In spite of the importance of dual rulership, the Aztec Templo Mayor and its Great Compound setting are nearly anonymous, the Aztec rulers being depicted or named on only two known carved stone monuments; by far the most frequent category of carved-stone monument in the main ceremonial concourse is cult effigies (Townsend 1979:23). Massive burial monuments of rulers are absent; Umberger (1983) suggests that the ashes of one of the most important Aztec kings might have been placed in an urn buried in a small pit next to the Coyolxauhqui stone, but even this would have been invisible.

2. Not only was the tribal deity Huitzilopochtli “promoted” to a prominent position, but “an encapsulating policy was pursued. All the gods of other peoples were regarded as appearances of their own gods, and in the Coateocalli (the Temple of Unification) of Tenochtitlan each of them had its own place” (van Zantwijk 1985: 112). Finally, the “*calpollis*, guilds, and other groups in and outside Tenochtitlan cooperated in the feast celebration of the solar calendar” (p. 261), emphasizing the ritual interdependency of distinct and specialized social sectors.

3. The Mexica ruler Itzcoatl ordered the destruction of books in order to begin the process of rewriting history (van Zantwijk 1985:267). In their new cognitive code Aztec rulers promoted the concept of multitribal solidarity. Patrimonial rhetoric continued to be an important determinant of noble status and royal officeholding, but a reconstruction of royal genealogies claimed Mexica descent from Chinampanec, Toltec, Tepanec, and even Chichimec families (p. 186) on the basis of a new origin myth that “integrated some completely different origin myths in one single narrative, the so-called pilgrimage from the obscure and mystical land of Aztlan” (p. 267; cf. Gillespie 1989). This notion of multiethnic solidarity devalued the factionalism prevailing in the pre–A.D. 1430 Early Aztec period.

THE LOWLAND MAYA AREA

Since regional population densities in the Late Formative and Classic periods were often high (Culbert and Rice 1990), our discipline has often considered places such as the Petén “core” or “nuclear” in the sense of supporting major demographic and political development (Palerm and Wolf 1957). This simple characteriza-

tion hides the fact that, at different times, the same place can support network or corporate polities. The Late Preclassic chiefdoms of the Maya lowlands seem to display characteristics of corporate polity building, with head towns featuring open expansive plazas in front of some of the most massive architecture in the history of the region (for example, at El Mirador), and pyramids featuring cosmic-renewal imagery rather than the cult-of-the-ruler texts indicated by the stelae of the Classic period (Adams 1977, Freidel 1981, Hammond 1992, Mathews 1985, Sharer 1992). During the Classic period these polities were replaced by a broad network of interacting city-states (e.g., Freidel 1986, Pohl and Pohl 1994, Sabloff 1986), which have been interpreted as atomistic (Mathews 1991) but were probably capable of becoming somewhat larger (Culbert 1991). Here were as many as millions of people in a single cultural, economic, and linguistic system but politically segmented into a multiplicity of interacting states. Elite families promoted the cults of named rulers and the rhetoric of royal descent and ancestor veneration, engaged in the politics of warfare and marriage alliance, and promoted luxury trade and craft specialization (Schele and Miller 1986). In the development of the lowland Maya concept of kingship (*ahaw*), beginning about the 1st century B.C. several symbolic and ritual systems were transformed as rulers aimed for exclusionary control of supernatural forces. These modified concepts placed them centrally with respect to the temporal cycles of history, shamanistic prophecy and curing, and ancestor worship (Freidel and Schele 1988, Schele and Miller 1986). Rulers were buried under massive commemorative pyramid mounds, as at Tikal (Haviland 1992, Jones 1991) and Palenque (Ruz Lhuillier 1973).

The public glorification of named rulers in the Classic Maya political economy is the antithesis of the "faceless" polity of contemporary Teotihuacan (Pasztory 1988:50). Obviously this is not simply an expression of a "Maya pattern," since corporate polities had an earlier history in the area. Likewise, the lowland Maya Postclassic shows a trend toward the rebirth of the corporate orientation at Chichén Itzá (whose growth is described in Wren and Schmidt 1991 and Lincoln 1986). Like other centers of the Early Postclassic, Chichén Itzá operated in an international network and displayed the elements of the international style, but at home it was more of a corporate polity than perhaps any other Maya system of Classic or Postclassic times. Particular rulers are difficult to identify in spite of the enormous quantity of iconography at the site (although see Ringle 1990). Instead, feathered serpents (a key symbol of renewal) are frequently portrayed. The main plaza is larger and more open than any other in the Maya area. Likewise, the open, colonnaded buildings on the main plaza suggest far wider participation in ritual events than was ever seen in the Classic-period city-states. In some aspects of symbolic expression and architecture—including the colonnaded buildings—Chichén Itzá's social architects shared concepts seen also at Tula, in the Central Highlands of Mexico, and perhaps other highland Mexican

centers (Lincoln 1986:188), where corporate political economy had a long history.

A Dual-Processual Consideration of Technological Change

The two patterns of political economy contrasted here imply distinct patterns of material goods production, distribution, and consumption. In the more open, fluid, and competitive network systems, the exclusionary political strategy includes monopoly control of prestige goods, achieved partly by encouraging technological development in the production of goods that require exotic materials and esoteric skills. Such developments ensure that prestige goods used for political purposes will not easily be duplicated by ordinary households within the elite's local system or by competing elites in other systems. This competitive social atmosphere is a natural crucible for technological innovation.

In prestige-goods systems, goods exchanged cross-culturally may often include items whose value stems in part from intrinsic properties such as durability, texture, sheen, color, reflectivity, translucence, magnetic attractiveness, or tonality (cf. Miller 1987:122; Renfrew 1986). Such goods are more likely than those with culture-specific symbolic associations to be recognized as having value in exchanges across sociocultural boundaries and thus would be of considerable importance in the dynamics of network-based politics. Cross-culturally, items of this type include semiprecious stones such as crystal, lapis, jade, and amber. In this light, we would point to an important association, apparent in many contexts, between prestige-goods systems and the development of exotic metallurgical technologies, especially bronze, gold, and silver casting (Gilman 1987; Marfoe 1987:28; Renfrew 1974:79; 1986:153–56; Schneider 1977:24–25; Shennan 1982:31). Not only is this technology likely to involve production processes unavailable to ordinary households, but the resulting products have distinctive textural properties including durability, surface texture, color, and sound. Developments of this type would extend to ceramic technological change aiming for similar tactile appeal and technological virtuosity.

These sociotechnical processes may result in rapid technological change in societies that are comparatively simple or marginal socioculturally, as among network systems in the peripheral zones of core/periphery systems (e.g., Kohl 1987:20) or in early periods in a regional archaeological sequence (Renfrew 1979, 1986). We apply these suggestions to the characteristic features of technological change in pre-Hispanic Mesoamerica as follows:

1. The development of ceramic technology during the Early Formative was rapid, including white-rim black ware, specular hematite, fine white ware, and large hollow figurines. These were probably beyond the production abilities of the majority of households. Early and Middle Formative Mesoamerica saw less development

of metallurgy than the comparable early ceramic phases of coastal Peru (Mountjoy 1969:27), although the production of ground magnetite mirrors and lodestone compasses indicates an “advanced knowledge and skill in working iron ore minerals” (Carlson 1975:759). Overall, technological developments in Early and Middle Formative Mesoamerica emphasized exotic ceramic and lapidary arts, especially jade working.

2. The development and spread of the Mesoamerican metallurgical tradition occurred primarily during the Epiclassic and Early Postclassic periods (Hosler 1988a, b; Mountjoy 1969:28), which we associate with the political dynamics of prestige-goods systems rather than the corporate-based polities of the Classic period’s core zones (in the latter, metallurgical technology was largely nonexistent). Further, metallurgy makes its earliest appearance in zones that had been largely peripheral to the main Central Mexican zones of the corporate strategy during the Classic period, especially western Mexico, the Huasteca, and the highland Maya area (Hosler 1988a, b; Hosler and Stresser-Pean 1992; Mountjoy 1969:26). Significantly, the earliest Mesoamerican applications of metallurgy were to the production of items most relevant to what Hosler (1988a:330; cf. 1988b) calls the “elite and sacred or religious domains of culture.” One of the most important intrinsic properties of metal objects in Mesoamerican use was the distinctive tonality of cast metal bells (Hosler 1988b:833).

3. The Epiclassic and Early Postclassic saw many new developments in ceramic technology, and similarly these were developed initially in peripheries and boundary zones. Fine paste vessels (with few or no mineral inclusions) were manufactured in the rather peripheral Gulf Coast region as early as the Classic period (Pool and Santley 1992), but these highly decorated fine gray and fine orange wares became more widespread and increasingly elaborate during the Epiclassic and Postclassic, when they were also produced across the Maya lowlands (Sabloff et al. 1982, Smith 1958). Plumbate, originating in eastern Soconusco (Neff 1989), had distinctive surface properties of color, luster, and iridescence (Shepard 1948). Likewise, the Nicoya polychrome tradition has its roots in the distant fringes of Costa Rica and Nicaragua (Smith and Heath-Smith 1982).

4. Large corporate polities such as Teotihuacan also produced pressures for technological change but of other kinds; exotic items suitable for prestige-goods exchanges were not involved to the same degree. An important technological innovation at Teotihuacan, for example, was mold-made figurines, reflecting, we think, the enhanced importance of ritual events reinforcing concepts of corporate and earthly renewal. In the Valley of Oaxaca Late Formative period, the most notable ceramic technological innovations brought change to domestic tool kits, including the invention of the comal and tortillas (Blanton et al. 1981:71–72; 1993:75). Ceramic technological innovation during the Classic period centered on means of mass production of utilitarian pots (Feinman, Kowalewski, and Blanton 1984) rather than on the manufacture of highly decorated, labor-

intensive vessels designed for elite exchange. These technological innovations increased production intensity but do not appear to have enhanced the communication of status-related information. At this time, when the Valley of Oaxaca was unified politically under Monte Albán, subregional interdependency was fostered by the intravalley transfer of basic commodities (Kowalewski et al. 1989).

Political-economic processes such as those just summarized result in counterintuitive archaeological sequences in which the earliest manifestations of technological innovations include primarily prestige goods rather than productivity-enhancing tools. These latter technologies develop, we suggest, with the advent of corporate polities, when previously developed exotic technology is harnessed for use in the production of widely disseminated tools for household use (Renfrew 1986), for example, bronze tools in Inca Peru (Costin and Earle 1989, Lechtman 1980) and metal tools in Greece after 700 B.C. (Morris 1989:514). A socially broad distribution of technologically advanced goods, especially cast metal tools, would serve not only to increase household production but also to limit their potential use in prestige-goods exchanges by reducing their exclusivity. This pattern of technological change was evidently delayed or nonexistent in Mesoamerica, possibly because Early Formative techniques for producing iron-ore compasses and mirrors were not easily translated into the manufacture of utilitarian items and because bronze-casting technology, potentially more adaptable for utilitarian uses, was adopted late in the pre-Hispanic sequence in the context of the prestige-goods systems that dominated the political economies of Postclassic Mesoamerica until nearly the end of that sequence.

Building Dual-Processual Theory

We conclude that Mesoamericanists should work toward the development of a dual-processual approach that is capable of incorporating simultaneously network and corporate political-economic processes into one grand theory of sociocultural transformation. A comparative theoretical literature that provides a dual-processual model for Mesoamerica is not yet sufficiently developed, although we have pointed to several potentially useful comparative situations (especially New Guinea and prehistoric Europe). Applying dual-processual theory, we think, illustrates the weakness of a neoevolutionary approach. Viewed broadly, Mesoamerican social history from the early Early Formative to the Spanish conquest consisted of cycles of long duration alternating between network and corporate emphases rather than a simple linear sequence of tribe, chiefdom, and state. These cycles were not strictly repetitive; social formations changed in scale, integration, and complexity over time (see, e.g., Kowalewski et al. 1989: chap. 15), and differing areas had somewhat distinct cyclic histories. For Mesoamerica as a whole, however, both of the political-economic processes discussed here

contributed to the overall cultural and social composition of Mesoamerican civilization.

Our discussion points to the need for an expanded and redirected sociocultural evolutionary theory, one that is processually grounded in the variant outcomes of political-economic strategies. The network and corporate conceptualizations discussed here are not equivalent to sociocultural evolutionary stages, and in this our theory differs substantially from traditional neoevolutionary theory (e.g., Flannery 1972, Johnson and Earle 1987, Service 1975). By focusing on process rather than on stages or social typologies, dual-processual theory is better equipped to contribute to the explanation of variation between homologous social formations and their transformations rather than just describing types of social formations and their evolutionary sequence. It thus responds to a valid critique of neoevolutionary theory regarding the existence of variability within social types (e.g., Chang 1989, Earle 1987*b*, 1991; Yoffee 1991:289).

We suggest that it will be of particular importance to advance our understanding of corporate systems, since the discipline has tended to devote most of its attention to exclusionary strategies and their outcomes. Thus we

think that Sahlins (1983:522) misleads us by pointing to the need for a new sociology of ruler-centered societies founded upon what he terms "heroic history." There is an abundance of theory of this type already. What is needed, instead, is an expanded theory capable of addressing the nature and development of the corporate political economy and its processual relationships with the exclusionary political economy. René Millon (1988a:112; 1992:396), for example, proposes that Teotihuacan's rejection of glorified rulership emerged out of a tyranny so intense that "it provoked a reaction strong enough ultimately to lead to an abiding limitation on the power of the ruler" (1988a:112; cf. Cowgill 1992*b*:107-9). Unlike Sahlins's formulation, a robust social theory would have to account for social formations, such as Teotihuacan, that are corporately organized and unlike those that Sahlins describes. In these cases, heroic history is specifically rejected, and complex society is organized around a conceptual model of collective representation integrated not only by Durkheimian mechanical solidarity but by a sublimation of individual and factional politics into corporately defined hierarchical social structure.