proposed reflecting the theoretical diversity, or fragmentation, of anthropology and archaeology. Many authors have offered classifications and critiques of some or all of them (Chapman 2003b; Flanagan 1989; Fried 1968; Hass 1982; Hayden 1995; McGuire 1992a,b; Paynter 1989; Service 1975; Wason 1994).

Summarized in Box 28.1, these theories have deep roots in Western thought. Most seek to explain the origins and persistence of institutionalized inequality—tactical power—not the origins of inequality per se. They intend to elucidate the shift from Wolf’s social power to tactical power, or the development of a permanent political economy, which Earle (2002:1) defines as “the material flows of goods and labor through a society, channeled to create wealth and to finance institutions of rule.” As Blake and Clark (1999) note, to be permanent, ranking has to last at least two or three generations. That necessitates the evolution of a political economy to, among other things, control the surplus (Hayden 1998, 2001) needed to finance conspicuous consumption (Earle 2000).

Much current theory emphasizes cultural and organizational diversity rather than uniformities. Some of this diversity can be attributed to differences in

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**Box 28.1. Anthropologists, archaeologists, and others have suggested a great array of final and proximate causes for the origins and development of social inequality and cultural complexity. The box contains summaries of most of the major ones.**

**High populations.** While it is evident that complex societies are almost always larger than simple societies, the causal role of population size has long been the topic of acrimonious debate (Keeley 1988; Hayden 2001). Some scholars have identified population thresholds for different degrees of social complexity (Kosse 1990; Upham 1990; table 28.4). Currently the focus has been on community size (the number of people in regular face-to-face contact) rather than on overall population size or density. Higher population densities lead to a greater need for coordination and centralized decision making. They also produce higher levels of social conflict necessitating methods of dispute resolution (Cohen 1985). The central issue is whether population growth and/or increasing community size drives economic and social change or is a consequence of it. More recently, Boone (2000) suggests status differential is a consequence of selection arising from population collapse (Escoffier and Schneider 1999).

**Specialization and regional interaction.** Specialization in production has long been associated with social complexity. In one version, society becomes increasingly differentiated through growing specialization, necessitating increased coordination among the parts, and ensuring the flow of raw materials and finished goods to specialists to specialists. Elites arise as a consequence of these needs (Childe 1942; Service 1975). Elites may arise by controlling or manipulating production of key resources or goods (Haas 1982; Arnold 1987; Arnold and Munns 1994). Regional interaction spheres may also provide a field in which competition can occur (Hayden and Schulting 1997). Rank is often measured regionally rather than locally (Renfrew and TK). Some suggest that interaction spheres are a consequence of elite formation (Hayden and Schulting 1997), others that elites can form within the context of regional interaction (Colten and Stewart 1996; Ames and Maschner 1999).

**Feasting.** Aggrandizers compete for followers and resources. Feasting is widely seen as a major form of competition (Hayden 1994, 1995, 2001; Spielman 2002).

**Productive subsistence bases and surpluses.** Surplus production has been widely seen as the ultimate cause of permanent inequality among hunter-gatherers and farmers. In this view, the economic base is productive enough to produce surpluses, which aggrandizers (either as individuals or groups) manipulate to further their own ends (Childe 1942; Hayden 1995). Surplus production may also lead to an easing of the strictures against aggrandizers (Clark and Blake 1994; Blake and Clark 1995; Hayden 1998, 2001). Control of surplus production can be either direct or indirect through control of labor (Arnold 1993, 1996) or through debt (Gosden 1989). Control of surplus production is generally seen as fundamental to a political economy (Muller 1997; Earle 1997, 2002).

**Scalar stress.** There is a broad, general relationship between the size of a society and its organizational complexity (Johnson 1982). Scalar stress arguments suggest that this relationship may rest ultimately in cognitive limits on human ability to process information or limits on the effective size of decision-making groups, leading to stress caused by organizational size (Ames 1985; Kosse 1990). Leadership emerges as a solution to these problems.

**Sedentism.** Settled populations have been widely seen as a proximate cause or a necessary precondition to the evolution of social complexity (Wilson 1988; Bar-Yosef 2002), although many aspects of

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The Archaeology of Rank  493
complexity are visible among pastoralists. Sedentism is associated with population growth, the development of property, scalar stress, and institutions for dispute resolution, territorial defense, and permanent leadership. The most complex hunter-gatherer groups appear to be those that are sedentary, store foods, and defend territories (Rowley-Conwy 2001).

Storage. Stored foods can be a surplus necessary for aggrandizers or that can be used in prestige competitions. It is property. It can lead to and support higher population sizes and densities and to more settled or sedentary populations (Testart 1982; Sofer 1989; Wesson 1999).

Mobility and settlement patterns. Logistical mobility is organizationally more complicated than foraging (Ames 1985; Rowley-Conway 2001; Habu 2002, 2004; Bergvik 2002). Collectors are also, virtually by definition, at least semisedentary. Also, virtually by definition, collectors depend on food storage. Collectors are thought to evolve (1) in middle latitudes where winter food storage is obligatory for any but the lowest population densities; (2) when available means (boats, pack animals) allow transportation of large volumes of field-processed foods (Ames 2002); (3) under conditions of demographic packing that preclude the high levels of mobility associated with foraging (Binford 1980, 2001).

Patchy heterogeneous environments. There are several versions. In one, variation in patch quality leads to defense of patches with high-quality, predictable patches, and the owners of those patches become “haves” (Matson 1985; Coupland 1985, 1986). Alternatively, local resource fluctuation requires maintaining long-distance social ties to ensure access to distant resources when local ones fail. Permanent leaders emerge as the intermediaries who create and maintain these ties (Kelly 1995). Heterogeneous environments coupled with sedentism have also been thought to produce specialization in produce, leading in turn to the rise of elites to coordinate and redistribute raw materials and finished products to specialists (Service 1972).

Aquatic/maritime economies. Maritime or aquatic hunter-gatherers tend to have larger populations, be more sedentary, and have more complex technologies and mobility patterns that do terrestrial hunter-gatherers. As a consequence, maritime societies are thought more likely to evolve permanent inequality than are terrestrial groups (Renouf 1991). This is usually attributed to the greater productivity of aquatic environments. It is as likely due to the transportation advantages of boats.

Subsistence intensification. Increased food production is sometimes seen as a trigger for subsequent social changes, including the development of social inequality. It can lead to population growth, scalar stresses, production of surpluses, or to organizational changes leading to inequality (Price and Brown 1985a).

Corporate households. Evidence of households (in the form of houses) can be a precursor to or accompany evidence for social complexity in hunter-gatherer sequences (Hayden and Cannon 1982). Cross-culturally, these households may but do not necessarily have considerable genealogical and temporal depth. There is also no consistency in size. In some instances small corporate households develop, in others, such as the Northwest Coast, large households do. Large, permanent households appear to evolve to accomplish complex sequential tasks (Netting 1982).

Competition and warfare. A number of otherwise very different theories postulate that competition is the ratchet driving social change and the evolution of elites (Maschner 1991, 1992; Maschner and Reedy-Maschner 1998; Hayden 1995, 2001; Richerson and Boyd 2000; Ames 2003). Warfare is an arena for competition as well as a form of regional interaction. It also can be a means by which control is established over crucial resources or surpluses. Simple conquest may also produce stratification (Carniero 1970).

Property. Property has been seen as central to the development of social inequality, at least since Hobbes and Rousseau. Property is variously seen as a source of disputes, social friction, and control over production (Park 1992, discussion and citations in Earle 2000). The importance of property weaves its way through many of the foregoing preconditions and is explicit both in Woodburn’s “delayed return” class of hunter-gatherers (Rowley-Conwy 2001).

how political economies can be organized. Hierarchy (Crumley 1995; Ehrenreich et al. 1995) refers to the presence of multiple systems of inequality with different sources of power in a same society.

Earle (1997) suggests four potential sources of power in a society, including our familiar social power as well as economic, military, and ideological power. These are the basis for political economy. Economic power is “being able to buy compliance” through “material rewards and deprivations” (Earle 1997:6). Military power coerces or forces compliance. Ideologies “present the code of social order,” and establish “an authority structure and institutionalizes practices of rule” (Earle 1997:8).