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**Caste as a Cooperative Economic Entitlement  
Strategy in Complex Societies of the Indian  
Subcontinent and Sub-Saharan Africa**

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The development of complex societies generally is accompanied by an increase in craft specialization, a process that has social, economic, and political correlates. Many labor-intensive traditions of craftmaking such as pottery, metallurgy, and textile manufacturing encompass a long period of apprenticeship that requires the cooperation of group members for the successful transfer of knowledge. Cooperation also is required for the logistical components of manufacture including raw material acquisition, stages of material preparation, the cleaning of work surfaces and installations, and the distribution of finished objects. In many ethnographically and historically documented societies, crafts are learned and carried out by specific subgroups of a population on a hereditary basis, such that the management of skills and the development of cooperation become interwoven with bonds of kinship. In some cases, these social aspects of craft specialization become highly codified, resulting in the development of "castes" in which occupational specialties become overlain with a social hierarchy based on concepts of ritual purity and pollution, along with restrictions on commensality, physical contact, and intermarriage.

Caste systems in the Indian subcontinent and West Africa are among the most robust historical examples of occupational group social hierarchies with moral overtones expressed through endogamy and proscriptions of social contact. However, many other regions of the world have historical and ethnographic evidence for the presence of endogamous, socially restrictive groups that have

**TABLE 12.1** Caste occupations in the Indian subcontinent and in West Africa

Indian subcontinent low-caste occupations	Sweeper, disposer of dead cattle, leather worker, rope maker, carrier of messages about death, collector of wood for cremation fires, village watchman, witness to boundary disputes, scavenger, weaver of rough cotton cloth (Karve 1968); minstrel, executioner, menial laborer (Hutton 1961: 143, 206); collector of night-soil, bard, lime worker, clothes washer, shoemaker (Shah 1987:495,498–99); carrier of corpses, basket maker, potter, barber (Dutt 1968 [1931]: 229–231).
West Africa hereditary caste groups	woodworker, leather worker, griot (bard), blacksmith, hairdresser (Babou 2008); general metalworker, weaver, potter, musician (Tamari 1995); repairer of calabashes (Tamari 1991)

been described as caste systems, including Bali (Geertz 1959), Ethiopia (Todd 1977; Weedman 2002, 2006), Japan (Meerman 2003; see also Hutton 1961: 147), Korea (Passin 1956), Myanmar (Hutton 1961), Rwanda (Maquet 1961), Tibet (Holdich 1906: 313), Yap (Marksbury 1982, Throop 2010), and Yemen (Walters 1987). Within the socially restrictive and endogamous group systems of these societies, higher-ranked groups tend to treat lower-ranked groups as economically and morally inferior, even though lower-ranked groups usually provide needed goods and services (such as pottery, iron, leather-working, barbering, basketry, removal of animal carcasses, clothes washing, and burial assistance; see Table 12.1).

This chapter examines how caste emerged to encompass the paradox of essential services and low social status. I propose that the development of “caste” societies, with their strict moral overtones, are the result of specific episodes of dramatic economic decline, characterized by conditions that are severe enough to require significant social retooling but not severe enough to result in complete collapse and population dispersal. The study of group-level cooperative adaptations to economic change illustrates that a decline in the political economy is not merely a phase of loss, but can also be generative of new social traditions. While the case studies of South Asia and West Africa are highlighted with reference to the development of caste systems, the socially creative group response to economic fluctuations in complex societies can be fruitfully modeled for both ancient and historic societies elsewhere in the world.

### **GROUP RESPONSES TO PERIODS OF DECLINE IN COMPLEX SOCIETIES**

The development of social complexity is characterized not by incremental and steady growth but by fluctuations in political and environmental circumstances (including warfare, drought, conquest, the development of hierarchical administrations, and the introduction of new technologies). The most dramatic fluctuations often have been termed as outright “collapse,” a phenomenon that has elic-

ited a great deal of interest from the public as well as from social scientists (e.g., Diamond 2005; Tainter 1988; Yoffee and Cowgill 1988). However, scholars are increasingly focused on the more subtle rise-and-fall cycling of political systems (Marcus 1998) and the way in which declines are often accompanied by significant cultural survivals (see Schwartz and Nichols 2006). Events of complete disintegration appear to be relatively rare, and even those circumstances that have been characterized as “collapses” are viewed as situationally variable and contain elements that survive into the postcollapse phase.

All human societies encounter environmental fluctuations for which a wide variety of individual, household, and communal mechanisms have been developed, particularly after the widespread adoption of agriculture (Halstead and O'Shea 1989). But in complex societies that are characterized not only by agriculture and sedentism but also a relatively high population density and an extractive political hierarchy, individuals may experience a reduced number of options for mitigating resource scarcity. Under systems of taxation in kind, produce that might have been managed at the household or community level is instead diverted elsewhere. Systems of food procurement and distribution imposed by political authorities can preclude the ability of individuals and households to mitigate local failures, resulting in a cascade effect: for example, massive state storage facilities designed to support centrally directed projects might also serve as a backup source of supply in the event of crop failure, but if the transportation system also fails, individuals cannot reclaim what might have been their very own produce but is now removed from their direct control. Other potential strategies, such as migration to more favorable locales, may be difficult because those locales are likely to be occupied by other people—and by people whose own surplus similarly has already been extracted and removed.

Other strategies of resource-stress mitigation also become challenged by the need to engage in complex economies that often accompany political complexity. Households might engage in individually brokered relationships of patronage, but the diversity and scale of the economy renders these arrangements of limited utility particularly if large numbers of people are affected and if the slide into decline is relatively rapid. Under such circumstances, group-level actions can emerge as a more effective response to crisis. In an article entitled “When the Going Gets Tough, Think as a Group,” D. S. Wilson and his colleagues (2004: 225) suggest that groups can address more complex tasks because “cognitive cooperation often produces substantial gains for everyone at minimal individual cost.” The potential for group-level organization with the result of mutual dependence thus provides an example of what Halstead and O'Shea (1989: 4) describe as “high-level” coping mechanisms that are “embedded . . . with radical consequences for the articulation and survival of that society.”

Manifestations of embedded group-level coping mechanisms are encoded into previously existing social relationships and material practices. One particularly effective way to reinforce social codes is through the use of ritual, and archaeologists working in diverse regions have used architectural remains to

highlight the role of ritual as a component of economic activities in challenging environments (Stanish, chapter 4). In the arid American Southwest, the Hohokam peoples of central Arizona used ritual ballcourt events as a backdrop for trade activities (Abbott 2010); in precontact Hawaii, an increased frequency of temples was associated with the agricultural management of marginal agricultural zones (Kirch et al. 2004). The use of ritual to stabilize volatile political relationships also can be seen for premodern groups (e.g., Drennan [1976: 358–359] for the Olmec; Goodman and Holladay [1986] for the truces associated with the ancient Olympics and other games; Cowdrey [1970] for the Peace of God imposed by bishops on the troubled political landscape of continental Europe in the eleventh century AD). When environmental and/or political volatility reached crisis levels, the archeological record shows that groups increased their ritual activities in response (e.g., di Lernia [2006] for the proliferation of cattle burials along the marginal areas of the Sahara at a time of climate deterioration in the fifth millennium BC; VanDerwarker, Scarry, and Eastman [2007] for the intensity of purification ceremonies in the Contact period of eastern North America). The success of all of these group endeavors was predicated on the capacity of a large proportion of participants to interact according to well-understood rules of action whose intensification was triggered by the presence of environmental, economic, and/or political challenges.

When ritual is incorporated into the structure of group responses to resource stress, participants act in anticipation of a divine as well as human sanction for transgressions. More recent historical cases under conditions of increased social complexity provide additional insights on the intertwined role of ritual and economic roles at a group level of functioning during times of crisis. In a provocative article on the formation of the European guild system, Gary Richardson and Michael McBride (2009) evaluate the intertwined expression of religious and economic commitments expressed during the Black Death. Although there were both religious groups and economic cooperatives in existence starting around AD 1000, the devastating appearance of plague in the mid-fourteenth century led to the formation of “combined cooperatives” that included both crafts and intercessory activities such as praying for deceased members of the guild (Richardson and McBride 2009: 8). To ensure a consistent level of piety that would render those prayers effective, individual members’ actions were scrutinized not only in the course of strictly economic transactions but also in their personal lives, such that the guild’s regulation of behavior permeated daily activities.

As Richardson and McBride’s work suggests, crisis events under conditions of increasing complexity can precipitate a hyperdevelopment of intertwined social and economic interactions. A comparative example from the New World illustrates the way in which group-level responses to political and economic change can be manifested into social hierarchies of occupational specialization. Charles Stanish (2000) has written about the reaction of local elites in the Lake Titicaca basin region to the Inka-Spanish transition of the sixteenth century AD. In this region of the highland Andes of South America, there was a significant shift in

the political economy when the labor-tax system of the Inka was superseded by the money-tax system and market-based political economy of the Spanish. In this transition, local elites of the Lupaqa polity intensified a preexisting social class distinction between groups known as the Aymara and the Uru. The Aymara arranged to pay their taxes in money, while simultaneously hiring the group known as the Uru to fulfill their labor-tax requirements. The Uru were viewed negatively and were repeatedly described as "poor"; as early as 1612, they were described by a local chronicler as "despised by all" (Stanish 2000: 330). Although the transition period from the Inka system to the Spanish system would have been relatively brief, with perceptible changes evident within the span of one generation, the result was the creation of a permanent underclass whose low social standing continues even today.

Examples such as the European guild system and the Aymara/Uru interaction indicate the way in which group-level responses to crisis have long-lasting effects. In some instances, ritual prescriptions can become deeply engrained in economic activities; in other instances, expedient economic solutions can become deeply engrained in social structure. We can view caste systems as another type of group-level response to crisis, in which economic activities, social structure, and ritual practices become mutually reinforced. Although caste systems can be characterized as part of a continuum of economic groups including guilds, unions, cooperatives, and gangs, in caste systems all individuals are classified as having both an occupational specialty and a corresponding social rank. Caste groups are defined and maintained not only through within-group understandings and strictures, but also by between-group restrictions and mutual dependencies whose moral overtones are maintained with reference to religious beliefs and ritual practices. In caste systems, individual and group viability is sustained through the obligation of both high-caste and low-caste members to be employed in economically essential tasks, at the cost of accepting social expectations of seclusion, endogamy, and ritual pollution. Today, much of the discussion of caste concerns the desire to mitigate the political uses and social abuses associated with caste discrimination in contemporary societies. In this chapter, however, I wish to examine the origins of caste as a way of understanding group-level responses to downward cycles of political economy.

The word *caste* as it currently exists in the English language comes via the Portuguese from Latin, and means "pure or unpolluted" (Oxford English Dictionary) or, more neutrally, "unmixed" (Dumont 1980: 21); refer to societies "distinguished by relative degrees of ritual purity or pollution and of social status" (Oxford Dictionary of English). The word has been used to describe many different types of social and economic configurations, resulting in considerable confusion in the use of the term.<sup>1</sup> Regardless of how they are defined, however, caste groups are marked by three distinct characteristics: economic specialization, endogamy, and the social envelope of moral overtones.

*Economic Specialization:* As Akerlof (1976: 611) has observed, "By its very nature the caste system involves trade and the division of labor" (see also Babou

2008: 3; Hoffman 2000: 177; Leach 1960: 6; Tamari 1991: 223). In a caste system, groups are identified with the performance of specific tasks. These tasks can range from specialized skills that require long periods of learning and apprenticeship (ritual services such as singing, healing, and poetry), to the production of goods (such as pottery and metal), to tasks that are viewed as distasteful but necessary (such as disposing of deceased persons, dead animals, and human waste). As economic specialists, caste groups are mutually dependent for the provision of goods and services that encompass both everyday and special-purpose activities. Exchange relationships among economic specialists are themselves socially codified, in which the transfer of products or services often is arranged through long-term mutual association rather than through monetary exchange.

*Moral Overtones:* The interactions among caste groups, though marked by economic interdependence, also are overlain with moral overtones that include prescriptions on behavior and social relations. The simultaneous social distance and economic interdependence is observed wherever caste groups occur; one succinct encapsulation is offered by Kathryn Weedman in her description of the Gamo people of southwestern Ethiopia as a “submerged artisan group” within the caste system: “Hide-workers hold a low social-political-economic status in Gamo society, yet they produce items from cattle hides used in almost every household, including bedding, chairs, saddles, and bridles” (2002: 732). The social distance and moral overtones of caste groups often are described in terms of ritual purity and pollution, as exhibited through prohibitions against sharing food or engaging in sexual relations with members of other groups (Dumont 1980; Passin 1956: 197; Tamari 1991: 230; Todd 1977; Weedman 2006).

*Endogamy:* As the biological expression of social segregation, endogamy is a prominent aspect of caste systems (e.g., Todd 1977: 402; Weedman 2006: 193). Endogamy is strongly associated with moral overtones, and prohibition against intermarriage with members of other castes is one of the most frequently mentioned conditions of caste societies. Endogamy is manifested not only in the oral traditions and social practices of caste groups, but also can be discerned through studies that show a low genetic diversity within caste groups indicative of long-term adherence to marriage rules (e.g., Watkins et al. 2008).

We can examine the development of caste and its sociopolitical milieu through reference to two regions of the world in which caste groups are evident in the historical and ethnographic records: the Indian subcontinent and West Africa.

## THE INDIAN SUBCONTINENT

The Indian subcontinent today is marked by the presence of deeply ingrained caste groupings as a component of economic, social, and political life. Caste differentiations are based not only on the five principal ritual divisions of people (*brahmins*, *kshatriyas*, *vaisyas*, and *shudras*, along with outcastes, today called *harijans*), but also take into account occupations, resulting in thousands of identi-

fiable caste groups (Hutton 1961: 149; Jaiswal 1998: 15). Caste distinctions are recognized and perpetuated through restrictions on intermarriage, commensality, and other forms of contact; in recent times, caste boundaries also have been expanded and reinforced both through government-sponsored affirmative action programs aimed at redressing historical imbalances, and through programs that bring casteless tribal groups into the contemporary political process (e.g., Guha 1982: 487).

One aspect of caste that is universally recorded in ethnographies and historical treatments is the interdependence of caste groups, an observation that is at the foundation of the most well-known treatments of the Indian caste system (e.g., Dumont 1980; Hutton 1961; Leach 1960). This interdependence has both ritual and practical effects, with a mutual reliance in which

the unclean occupations are just as necessary to the Hindu's concept of community life as are the clean ones. In other words, castes who remove dead animals are Untouchable on that account but they are also intrinsically essential to the Hindu social system because the Twice Born are ritually prevented from performing this unclean occupation. By the same token, *all* unclean occupations are at once degrading to their practitioners yet essential to the appropriate organization of any orthodox Hindu community. (Gould 1986: 429, emphasis in original; see also Leach 1960: 6–7)

Although in recent years there has been a trend within postmodern scholarship toward claims that the British “invented” (or at least greatly emphasized) caste as a mechanism for subduing its large colonial population starting in the eighteenth century (e.g., Dirks 2001), historical documentation of social divisions linked to occupation dates back to the second millennium BC (Bayly 1999: 4). The idea of four main economic and social groups is first seen in the text known as the *Rig Veda*, whose oral antecedents go back to c. 1500 BC (Kashikar 2000: 31; Roy 1995: 13). As the first “written” versions of the *Rig Veda* do not appear until many hundreds of years afterwards, there is a considerable potential for the interpolation of texts over time and the inclusion of later practices into the text (this circumstance is analogous to the Homeric epics of ancient Greece, which contain both the original kernels of oral tradition and anachronisms added through later copies). The *Rig Veda* contains a passage that describes the human race as symbolically resulting from the division of the body of the cosmic entity Purusha into the four main social groups still recognized today: the brahmans from the head, the rajanya (kshatriya) group from the arms, the vaishya group from the thighs, and the shudras from the feet.

After the sixth century BC, population growth was accompanied by the reemergence of urbanism, the development of new religious traditions including Buddhism, and the growth of political dynasties throughout the subcontinent (Singh 2008). Documents from that era, such as the “Laws of Manu” and the *Jataka* (stories of the Buddha’s past lives), record the notion of social divisions as a trope for interactions and political gain (Dumont 1980: 53). The written

observations of the Greek traveler Megasthenes from the fourth century BC similarly note the presence of seven social divisions yet “without any association of degrees of purity” (Thapar 2002/2004: 62).

Another external source of information is found in the writings of the fifth century AD Chinese pilgrim Fa-Hian, who observed that the group known as the Chandalas, who dealt with dead bodies, were “outcastes” shunned by other castes, though he makes little other comment about distinctions or social proscriptions among other known groups (Keay 2000: 145). An assessment of historical sources suggests that the caste system’s development of rigidity had a long trajectory, and that the ritual divisions seen in the *Rig Veda* and other early texts were not codified into social prescriptions for many centuries. Nor was the development of the caste system uniform throughout the subcontinent: southern India was distinguished not only by a completely distinct language family unrelated to the Indo-European languages of the north, but also a different mode of social divisions, which initially consisted of only a binary grouping equivalent to brahmins and nonbrahmins (Avari 2007: 241).

The textual record of the early subcontinent provides information about economic conditions as well as about social structure. The environment of the subcontinent, while conducive to agriculture and animal husbandry, is marked by variability in agricultural productivity and extreme seasonality in the form of monsoon rains. Rainfall cycles, which are unpredictable, produce years of significant drought as well as years of flooding, both of which adversely affect crop yields even today. These realities are reflected in documents from the earliest period such as prayers related to weather and rainfall. Significant food shortages also are a component of historical texts as early as the first century BC, when the Buddhist text known as the *Dhammapada* mentions the presence of famines (Kumar 1988).

South Asian textual sources also indicate numerous competing political agents over time and space. In the northern subcontinent, the florescence of the sixteen “mahajanapada” dynasties starting in the sixth century BC was superseded by the growth of the expansionist Mauryan polity starting in the late fourth century BC. This polity was defeated by rivals in 187 BC, and subsequently replaced by a number of competing polities that fought over territory until the development of robust states starting in the fourth century AD. Throughout the first millennium AD, the subcontinent was marked by the development of regional political dynasties that formed alliances and controlled substantial amounts of territory. Subsequent episodes of political and economic change included Islamic political incursions, particularly in the western subcontinent, starting in the early eleventh century AD. By the sixteenth century, larger political entities such as the Mughals (in the north) and Vijayanagara (in the south) grew large enough to be considered “empires” and continually engaged with other dynasties in the temporal and spatial interstices of territorial control (Keay 2000; Sinopoli 2003).

Increased sociopolitical complexity was accompanied by economic expansion and growth, but also by increased risks. As Breckenridge (1985) notes,



empires that make military demands (in the form of people and cash from the hinterlands) and that encourage the expansion of farming into areas previously considered "marginal" actually increase the level of uncertainty in a society, a stress that leads to the development of many storage mechanisms to avert famine and other disasters. In the subcontinent, famine and warfare become increasingly part of the historical record after the end of the first millennium AD, coincident with the growth of political groups.<sup>2</sup> For example, the reign of Muhammad bin Tughluq (1325–1351) in the northern Indian plains was marked by a multiyear famine and a reorganization of the monetary system that resulted in a high level of counterfeiting and economic destabilization (Keay 2000: 268–269). Famines are recorded in the southern subcontinent in AD 1201, 1412, 1424, 1471, 1509, and 1540 (Kotraiah 1995: 13, Srivastava 1968), and again in the northern subcontinent in 1291, 1396, 1399, 1555, 1573, 1577, 1583, 1595–98, 1614, 1630, 1641, 1646, 1650, 1658–60, 1687, 1702–1704, and 1747 (Srivastava 1968).

Given the uncertainties of the environment and the fluctuations in the effectiveness of political authorities to ameliorate hardship, an economic solution that relied on social relationships rather than distant bureaucracies was a more sustainable solution to economic duress. In caste systems, occupational specializations became codified and crystallized into more rigid hierarchies of mutual dependence that encoded socially sanctioned access to essential goods, particularly food. An intense bout of nineteenth- and early twentieth-century scholarship on caste in the subcontinent provided a number of explanations for its origins, including the clash of cultures resulting from ancient migration, geographic isolation, ideas of pollution, belief in reincarnation and magic, hereditary occupations with trade and craft secrets, exclusivity of religious and social privileges, exploitation by the social hierarchy, and "deliberate economic and administrative policies" (summarized in Hutton 1961: 190–191). Even in those early days of scholarship, however, some researchers saw a relationship between the functioning of the caste system and the frequency of famine (Hutton 1961: 186). More recent studies also acknowledge that one of the factors in the subcontinent's development of caste systems are the "persistent oscillations between prosperity and dearth" (Bayly 1999: 29).

Under conditions of political uncertainty, resource fluctuation, and environmental unpredictability in the subcontinent, caste systems were a group-level response to perceptible economic decline as an institutionalized form of mutual dependence. These developments were not dictated by political authorities but emerged as nongovernmental (or extragovernmental) innovations precisely because the state was unable to mitigate economic hardship. This process accelerated during cycles of political instability right up to the modern period; for example, S. Bayly (1999: 5) associates a phase of highly divisive caste-based distinctions as having accompanied the "rapid regional state-building which accompanied the collapse of Mughal rule and the expansion of Western power in the subcontinent" in the early eighteenth century.

## WEST AFRICA

West Africa, a large region with a continental scale of environmental diversity, is the home of many historically documented chiefdoms and states. Many cultural groups practice caste divisions that in both historical and modern times segregate people on the basis of social hierarchy, endogamy, specialized occupation, and moral injunctions against contact (Babou 2008; Ezeanya 1967; Hoffman 2000). The nomenclature of these divisions identifies three groups: "freeborn" (sometimes identified as "nobles"), caste people, and slaves (Tamari 1991: 223). Many caste groups are engaged in specialized craftmaking that provides everyday goods and essential ritual services including woodworking, leather working, blacksmithing, music making, and weaving (Babou 2008: 4; Tamari 1991).

In West Africa the terminology of occupational specialization appears, at least in some cases, to have predated the emergence of caste as a system of social segregation. Although indigenous historical texts are limited, some evidence can be found in the *Sunjata* epic, which narrates the story of the Sosso/Malinke war (the foundational event of the Mali empire during the early thirteenth century AD). In the *Sunjata* epic, references are made to individuals of blacksmith caste who engage in social life without the restrictions on intermarriage and political authority that afterwards became associated with that group (Tamari 1991: 237). Thus it is possible to see the caste system in portions of West Africa as having considerable longevity (by AD 1300 among the Malinke, and among the Soninke and Wolof by AD 1500 according to Tamari on the basis of historical evidence [1991: 221], while S. K. McIntosh [2001: 17] supports placing this development three centuries earlier on the basis of archaeological evidence). The timing of the emergence of social prescriptions can be suggested by reference to external historical sources, which by the 1590s mention the social segregation of caste groups, including prohibitions on caste individuals entering the homes of higher-status individuals and on intermarriage (Tamari 1991: 233).

As in the case of India, caste divisions and the notion of social segregation make reference to religious actions. One example is found in the West African Osu subgroup of the Igbo as a "cult-slave" designation in which members of this group are regarded as sacrifice offerings of the highest sanctity (Ezeanya 1967). In spite of this unique qualification and proximity to the divine, the Osu also are viewed as polluting and of low social rank, with traditional prohibitions on marriage, sexual contact, commensality, and washing or barbering a non-Osu individual that still reverberate in contemporary society (Ezeanya 1967: 38–39; Okwelum 2010). Osu status is achieved either through birth or through adoption; as S. N. Ezeanya notes, individuals can deliberately seek cult-slave status as a means of avoiding punishment or to escape a repressive family situation (e.g., for women after widowhood). Osu status also entitles individuals "to appropriate certain things as it were by force, and make them his own, and above all, to a share of the food and articles offered in sacrifice to the divinity to which he belonged" (Ezeanya 1967: 38).

The historical trajectory of caste systems reveals that conflict and resource scarcity were implicated in the emergence of socially restrictive hierarchies. In her examination of West African caste systems, Tal Tamari suggests that “castes may have originated in interclan alliances contracted in conditions of extreme inequality” (1991: 239). Although she does not specify the source of the inequality, economic disruption is suggested by the political turmoil associated with warfare and resource stress starting in the early second millennium AD, a time of significant changes in economic conditions. Scott MacEachern (2005) has noted that the relatively stable climate of AD 300–1100 was followed by environmental fluctuations starting in the twelfth century. Political conditions in this era also fluctuated, with both centralized states and smaller entities interacting in a dynamic and complex fashion that included “decreases as well as increases in degree of social hierarchy and political centralization” (MacEachern 2005: 452). Additional factors of change in the political economy of West Africa would have included the coming of Islam starting in the late first millennium AD in which Islamic states “waged *jibads* or holy wars on neighboring non-Islamic populations” with economic, social, and political consequences (DeCorse 2001: 6). Specific historical events include the Sosso/Malinke war of the thirteenth century and what Tamari (1991: 235) calls the “final collapse” of the Mali empire c. AD 1600, events of regional magnitude that would have had an impact on large numbers of people.

Another obvious stressor of the political economy is the Atlantic slave trade starting in the fifteenth century. As DeCorse notes (2001: 7), 12–15 million persons were transported from Africa during the slave era, an economic action that would have affected local labor relations. The selection of individuals for removal would have reinforced preexisting ideas of social division. At the same time, however, the removal of those perceived as “low status” would have reduced the size of the workforce otherwise needed for labor-intensive and craft-making activities. The enforcement of a rigid standard of caste with its expectations of interdependence would have protected higher-ranking individuals’ rights to the labor pool, at the same time that it enabled them to justify the removal of lower-ranking people and transship them to ports on the coast for export as slaves. The reinforcement of caste concepts as a stabilizing force during the extreme political and economic fluctuations of the slave trade era might therefore have been responsible for the “broad continuity in social systems” in regions such as Senegambia from AD 1500 to 1900 cited by Scott MacEachern (2005: 456).

### **THE DEVELOPMENT OF CASTE AS A GROUP-LEVEL RESPONSE TO ENVIRONMENTAL AND POLITICAL FLUCTUATIONS**

The brief examination of caste systems in the Indian subcontinent and in West Africa illustrates the conditions that serve as the parameters for group-level solutions to resource stress. In complex societies, periodic fluctuations in the natural environment are exacerbated by political systems that affect household and

community approaches to resource scarcity. When migration is not an option and when political structures are incapable of providing access to resources, group-level responses become the most efficient means of providing economic stability and the access to essential resources such as food, water, and shelter. Three characteristics mark the inception of caste as a system of socially restrictive economic specializations: entitlements, opportunity hoarding, and cheap signaling.

*Entitlements:* The economist Amartya Sen uses the term “entitlements” to refer to the social sanctions and “rules of legitimacy” (1981: 1) that people utilize to acquire needed goods. These “entitlements” become particularly critical under conditions of stress such as food shortages; writing about poverty, famine, and government intervention, Sen has proposed that famine is often not the simple result of a lack of food, but of a lack of socially sanctioned access to the food resources that do exist. In caste societies, all members of society are classified as a member of particular groups, with few mechanisms by which individuals can “opt out” of an ascribed social status. Caste groups also become mutually implicated, defined not only by their own occupation but by what they do *not* do.

As Gould (1986) observes, high and low castes are mutually interdependent: lower-caste groups undertake “polluting” work that enables high-caste individuals to retain their ritual status, in return for physical sustenance and protection (see also Dumont 1980: 24, citing Dubois 1906; Levine 1974: 169–170). Caste groups also “bundle” their entitlements through integrating the equipment and domain of craft expertise into social realms of performance and ritual. For example, in the Bambara cultural region of West Africa, “only blacksmiths and woodworkers may cut down large, old trees, believed to be the homes of divinities” (Tamari 1991: 225). In India, Dumont (1980: 54–55) notes that outcaste groups who touch cow skins as part of their occupation in leather working also have a monopoly on village musical bands and therefore render themselves essential in the domains of celebration and ritual (for a parallel case in Ethiopia, see Weedman 2006: 194).

The mechanism by which caste groups protect their entitlements is specialization and interdependence, usually through direct interpersonal relationships. In an examination of Senegalese caste interdependence, Cheikh Anta Babou describes the relationship of high-ranking (*gээр*) families with low-ranking (*ñeeño*) families: “*Gээр* families collectively offered gifts of clothes, food, and sometimes money, to their clients. The *ñeeño* had rights over certain parts of animals slaughtered at their *gээр*’s house; they were owed gifts at the occasion of family ceremonies such as marriages, naming ceremonies, funerals, and circumcisions; and *in time of need, it was a moral obligation of their patrons to provide them help*” (2008: 5, emphasis added). Kathryn Weedman (2006: 193) similarly points out the mutual interdependence of Ethiopian caste groups, in which pollution is interwoven with the specialized activities of lower-caste groups: “While the Gamo consider the *tsoma* artisans to be impure; they are necessary to perform rituals that mediate between people and illness, death and infertility. The *tsoma* artisans are mediators between

life, death, and social disharmony in Gamo society by serving as circumcisers, midwives, healers, morticians, and messengers."

Mutual interdependence provides economic security to both high-caste and low-caste groups. Higher-caste people have a dependent labor pool when they need it, the importance of which is underscored by higher-caste households engaging not only in sustained patron-client relationships but also through providing residential spaces, thereby bringing lower-caste people into as close a physical proximity as standards of pollution will permit (see Todd 1977: 402). The fact that low-caste groups provide essential services reveals their substantial power in the high-caste/low-caste relationship, in which clientship provides for the "protection of socially weak individuals" (Maquet 1961 cited in Todd 1977: 400; for the affirmation of agency in the caste relationship, see also Weedman 2006: 194–195). Bayly (1999: 30–31) similarly sees the accentuation of caste prerogatives in India after the decline of the Mughal empire in the mid-eighteenth century as one that "equipped both the weak and the strong with a means to maximise assets and protect themselves from loss."

*Opportunity hoarding:* The concept of "opportunity hoarding," first developed by Charles Tilly (1998: 10), refers to the phenomenon that occurs when members of a group acquire and monopolize access to resources such as goods or services. Opportunity hoarding is facilitated through group members' ability to include and exclude other individuals on the basis of language, kinship, marriage, housing, religion, ceremonial life, and credit, and is frequently buttressed through the "creation of beliefs and practices" that uphold the group's ability to monopolize a particular resource (1998: 154–155). Although Tilly developed this analytic concept in reference to modern ethnic groups who dominate particular professions and service industries, the concept of "opportunity hoarding" can be applied more broadly to the development of socially restrictive economic categories of all kinds.

In caste systems, both high- and low-caste groups engage in opportunity hoarding through the conservation of ritual knowledge related to their economic specialization, and through the exercise of specialized skills. High-caste groups, regarded as ritually pure, are essential for the performance of rites of passage by all members of society, while low-caste groups perform services that are necessary for the retention of purity of high-ranking groups. The result is the creation of what can be characterized as "economic niches" that in particular serve to shelter the entitlements of members of lower castes (e.g., Todd 1977: 410). In West Africa, Tamari notes that social prohibitions dictate what "freemen" (as higher-ranking persons) may not do: "While caste persons are by no means obliged to engage in craft or musical activities, free persons may not engage in metalwork, woodwork (beyond that necessitated by house construction), leatherwork and pottery-making" (1991: 225). Moreover, as Edmund Leach (1960: 6) proposes, the balance of power is equalized because of those economic niches: "Economic rights are allocated by right to closed minority groups of low social status; members of the high-status 'dominant caste', to whom the low-status

groups are bound, generally form a numerical majority and must compete among themselves for the services of individual members of the lower 'castes'."

Caste groups engage in a variety of strategies to prevent their entitlement-bearing knowledge from being acquired or co-opted by others. While it may be obvious that high-ranking groups retain the rights to specialized ritual education that is supported by their generally greater access to the wealth and leisure opportunities that such education depends on, the strict guardianship of knowledge is not limited to the higher castes. Within-group enforcement of specialist knowledge can be found through the use of "secret" languages of craft production by low-caste persons (Weedman 2006: 193). Perhaps the most elaborate form of ritual knowledge guardianship is seen in certain West African blacksmith groups, for whom ironworking has a close relationship with mystical power (e.g., Njoku 1991; Tamari 1991: 238).

The combination of entitlements and opportunity hoarding, although exercised in a pattern of mutual dependence, does not, however, result in a pattern of social equality. In the development of caste systems, preexisting traditions of access to knowledge, ritual, and resources are crystallized into a more durable social stratification with strict expectations about conduct and obligations. Charles Tilly's (2003: 31) examination of group-based inequalities serve to place caste in the continuum of social constraints on access in which inequality is the result of "the conjunction of socially organized categories with (a) clique control of value-producing resources, (b) clique deployment of those resources in relations of exploitation and/or opportunity with members of subordinated or excluded categories, backed up by (c) emulation and adaptation." The likelihood that caste emerges as a group-enforced socioeconomic system during times of crisis also conditions the type of emulation, which takes the form of modifications to activities that are already practiced through the form of cheap signaling.

*Cheap signaling:* Anthropologists have been drawn to the concept of "costly signaling" as an evolutionary explanation for the development of elaborate rituals and social entanglements (e.g., Smith and Bliege Bird 2000; Sosis 2003). In evolutionary biology, costly signaling is a means by which free-riders are deterred and through which the trustworthiness of exchange partners can be assessed by the participants in advance of commitment.

By contrast, the maintenance of moral systems such as the ones that are engendered in caste, including prohibitions on marriage, commensality, and physical contact, require very little additional effort. This low-energy maintenance can be described as "cheap signaling" (e.g., Smith 2007). Low maintenance costs would be key in any kind of new social behavior born of a crisis moment, when there would be little scope for the invention of labor-intensive modes of signaling and group maintenance. In caste systems, markers of distinction are manifested through regular activities that are already part of the individual and household routine such as having meals, acquiring necessary goods, selecting mates, and burying the dead. Actions such as the acknowledgment of a restricted pool of marriage partners, refusing to eat in the company of others, or demar-

cating spaces of physical separation require virtually no energy expenditure, yet serve to create and enforce social boundaries on a regular basis.

The effectiveness of cheap signaling as a component of caste systems should not be underestimated. As Akerlof (1976: 610) notes, any move by an individual to go against socially held caste prescriptions can be a risky endeavor, as the individual may be outcast and therefore dramatically lower her or his own social and economic status. This form of reinforcement fulfills the conditions for successful group-level action identified by Wilson, Timmel, and Miller (2004: 226) in which "there is little incentive to cheat because cooperation produces large benefits for everyone at trivial individual cost." Hence, the maintenance of caste requires only a low level of energy to perpetuate through everyday transactions, but requires a high level of energy by a large number of persons to eradicate once established—a factor evident in the contemporary treatment of caste individuals in places such as India and West Africa. Although occupational specialties and even endogamy have been greatly relaxed due to factors such as migration and new technologies that provide new occupational opportunities, the moral overtones of caste membership are highly resistant to change.

Contemporary observations illustrate that the social restrictions of caste can ameliorate in good economic times, which provides additional support for the proposition that its emergence had something to do with bad economic times. Improved economies can be manifested through migration, for example; Babou (2008) notes that caste status, types of employment, and social stigma among the Senegalese diaspora in the United States is considerably lessened in the face of new economic opportunities that are seized by members of both high and low castes. Caste boundaries also can be effaced through new technologies; Karve (1968: 112) observes that people of different castes living in towns could take up tailoring as an occupation without loss of status, a move that was accelerated when the sewing machine came to the Indian subcontinent. Improved economic conditions also can provide the opportunity for entire caste groups to upgrade their status by adopting customs associated with higher-ranked castes, such as refraining from alcohol and meat, adopting particular ceremonies, and shortening the mourning period (e.g., Cohn 1958; Mukherjee 1994).

## DISCUSSION

Ancient political economies were challenged by many types of change, including technological change (the introduction of large-scale technologies such as irrigation or transportation systems), political change (absorption into a rival state, warfare, or the growth and collapse of alliances), and ideological shifts (such as new religious traditions that affected the flows of economic interchange). Sometimes, changes facilitated population growth and political expansion, but sometimes political agents were unable to manage complex series of changes or even made conditions worse through their actions. Historical and ethnographic information shows that the development of caste is coincident with extreme fluctuations in

the political economy of the kind that can be described as decline that stops short of outright collapse. With institutional hierarchies unable to mitigate significant fluctuations in the availability of food (due to natural disaster, warfare, or other causes), group-level responses provided a form of redress that also resulted in a socially sanctioned reinforcement of occupational categories.

In this chapter, it has been proposed that caste develops as a response to sharp declines in economic conditions, in which strictly defined occupational designations become beneficial to laboring groups and in which low social status is accepted in exchange for a guarantee of livelihood. Caste is thus not a unilateral imposition by a ruling authority, but rather the creation of an interdependent system from both the top down and the bottom up as social groups codify mutual interdependence along a hierarchy. The mechanism of group formation, which would require large-scale coordination, might be characterized as a self-organizing system (e.g., Mullane 2009; Radzicki 1990). Groups may self-organize on the basis of both internal and external pressures, resulting in new and long-lasting social configurations. From the individual perspective, caste at the time of formation might have served as a welcome cognitive shortcut at a moment of economic and social crisis, in which individuals and households could assure their survival through a low-energy expenditure of “cheap signaling” and a reduction of activities.

The recognition that caste is not a unique configuration but one that is part of a continuum of socioeconomic groupings provides new opportunities to examine the role of group-level responses to changes in political economy in ancient states as well as in more recent historical cases, even those that are not traditionally described as having had caste systems. Moreover, we can posit the potential for caste structures throughout complex societies as one of many forms of group-developed mutualism that can develop under crisis conditions. Although scholars tend to focus on spectacular moments of “collapse” as the final degradation of a particular society, it may be more productive to focus on the many intermittent political, economic, and environmental challenges that were survivable through group-level innovations that often made use of preexisting ritual and religious precepts.

The recognition that social and moral assignments have a specific point of inception also enables us to look at social change from the perspective of individuals and households as they face widespread conditions of loss. State-level economic and social fluctuations have an effect on ordinary people, who in a single lifetime may have had to accept and adjust to circumstances of significant social degradation as a trade-off for the entitlement of access to food through services such as making pottery and metal, or dealing with the dead. The acceptance of social degradation in hereditary occupations in one’s lifetime also could be perceived as a matter of improved reproductive fitness, in which individuals and households were guaranteed a minimum level of survival moving forward into the next generation. Economic practices thus became intimately integrated with religious practices in an attempt to secure both present-day survival and long-term viability for one’s descendants.



Although the regions of the Indian subcontinent and West Africa are the most familiar anthropological examples of caste systems, we should look for the emergence of caste and other socially restrictive systems whenever we see a complex society in which there has been a precipitous decline that stops short of complete collapse. There are a number of types of social relations of production that can be discerned from the historical record that can be applicable to archaeological time periods, including master-apprentice relationships, guilds, unions, caste, debt bondage, and slavery. Of these relationships, caste might actually be one of the more straightforward to examine because of the ability to trace endogamy through DNA (e.g., Watkins et al. 2008; see also summary in Boivin 2007: 350–356). Caste and caste-like systems also can be inferred through the relative quality and abundance of wealth and status indicators such as housing structures, daily-use tools, foods, and storage facilities as well as spatial organization.

### CONCLUSION

As a group-level response to resource shortfall, caste systems create effective entitlements to basic human needs at times of crisis through the codification of occupational specialization, mutual dependence, and the “cheap signaling” of social boundaries. The strong internal cohesion of both high- and low-caste groups is evident in self-policing among group members in both daily and ritual life through commensal rules and endogamy, and as they guard the secrets of their economic specialization whether they are ritual specialists or craft specialists. Such a phenomenon may be similar to the “groupishness” discussed by Feinman (chapter 2), and may have wide applicability to past complex societies. Indeed, caste systems may be only one of a variety of systems that people develop at the group level as a response to the decline phases (or stress points) of social complexity.

Crisis phases are not merely times of cultural or economic loss, but also can foster the development of new patterns of social interaction that persist well into resurgent phases of political economy. Models that examine the opportunities provided by crisis phases therefore might help social scientists to make sense of other types of social groupings that appear to emerge under conditions that are adverse but not severe enough to cause the collapse of an entire social or political system. One example is the formation of gangs and other crime syndicates through which individuals can engage in remunerative work at times of economic stagnation in which there are few other opportunities (see Venkatesh and Levitt 2000). Like other craft specialists, gang members develop and harbor secret knowledge about logistics and ritual, and use material culture (ornaments, tattoos, color-coded clothing) to identify group members through signals that also are readable by nongroup members. Like castes, gangs are economically specialized (often in illegal activities), provide items or services that are in high demand (drugs, prostitution, low-wage smuggled laborers), and have rules of association that are analogous to commensality and endogamy. Finally, the

dissolution of gangs often occurs only with great difficulty; while gangs usually operate outside of the law and individuals can be punished, successfully countering gangs at the group level usually involves the provision of new economic opportunities. Similarly, the formation of other nongovernmental organizations, ranging from assistance groups to insurgencies, might also be characterized as self-organizing systems that emerge under conditions of significant decline and which often are maintained even when economic conditions improve.

In their anthropological examination of risk management, Halstead and O'Shea (1989: 5) note, "The importance of variability and buffering lies not only in the immediate realm of provisioning and economic activities, but extends beyond these to exert a strong influence on culture at large, shaping social organisation and providing the crucial conditions that give rise to social change and transformation." For caste groups, the emergence and presence of entitlements is particularly evident in times of crisis, but their existence can sustain social interactions well after the crisis period is over, such that "entitlements" are continually reinforced through a perception of tradition, mutual obligations, and social expectations. The mutual dependence of high-caste and low-caste groups indicates that instead of perceiving the developing of caste systems as a top-down organizational imposition, we can instead propose that they are the result of a mutual integration of a top-down/bottom-up approach in which all levels of the social and political hierarchies are deliberately engaged (see Janusek and Kolata 2004; Smith 2006). The development of caste and other socioeconomic groups as coherent, integrated social and economic systems indicates the extent to which crisis and fluctuation in complex societies can be a source of generative change with significant potential for long-term effects at the individual, household, and society-wide scale.

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### NOTES

1. One particular debate is whether the word *caste* can be used to refer to any societies except those in the Indian subcontinent, a factor that enters into nearly every discussion

of the phenomenon of caste, and even affects the dictionary definition of the term in which caste is usually made equivalent to Hindu (Indian) society; for lengthy discussions of this issue, see Leach 1960; Pitt-Rivers 1971; Todd 1977. Because the phenomenon of socially segregated occupational groups is a demonstrable world-wide phenomenon, it might in the future be advisable to develop a more neutral terminology such as "Groups that are Economically specialized and Endogamous with Moral overtones" (or GEEMs, for short).

2. The increased number of recorded famines is probably due in part to the actual increase of famine that is correlated with an increase in political complexity; however, it is probably also due to the advent of more thorough recording systems for taxation and record keeping resulting in the cataloging of local and regional events that previously might have gone unrecorded.

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