Patterned variation in prehistoric chiefdoms

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Comparative study of early complex societies (chiefdoms) conjures visions of a cultural evolutionary emphasis on similarities and societal typology. Variation within the group has not been as systematically examined but offers an even more productive avenue of approach to fundamental principles of organization and change. Three widely separated trajectories of early chiefdom development are compared here: the Valley of Oaxaca (Mexico), the Alto Magdalena (Colombia), and Northeast China. Archaeological data from all three regions are analyzed with the same tools to reveal variation in human activities, relationships, and interactions as these change in the emergence of chiefly communities. Patterned variation in prehistoric chiefdoms

Interdependence Within Chiefly Communities in Oaxaca, Mexico, During the First Millennium B.C.

Anthropologists have often studied villages—small local communities of people in daily face-to-face interaction—and archaeologists are accustomed to thinking of early sedentary agricultural living as organized into just such villages. The Rosario phase (700–500 B.C.) occupation of the Valley of Oaxaca, Mexico, for example, consisted of about 65 such village communities in an area of 2,125 km² that were surveyed systematically (1–4). Most of these communities had fewer than 50 inhabitants, but one, San José Mogote, had a population of more than 500. Small villages had been the norm in Oaxaca since the beginning of sedentary life about 1500 B.C. They consisted of around 10 nuclear families whose small thatch-roofed wattle-and-daub houses were scattered across 1 or 2 ha at intervals of around 20–50 m. Households are easy to identify in the archaeological record from the remains of structures, hearths, middens, and pits, and their activities are easy to reconstruct from associated artifacts and ecofacts. These activities include subsistence and household maintenance tasks carried out by virtually all families as well as a number of possibly specialized crafts (5, 6). A multidimensional scaling of 10 households at Fábrica San José, a Late Guadalupe phase (800–700 B.C.) village (7), shows five grouped tightly together (Fig. 1). These households have evidence of only basic domestic activities. Four others are set off from this group by the presence of distinctly different sets of tools related to different crafts. Such specialization means economic interdependence and a level of daily interaction that would have strengthened the forces that pulled these 10 households together into a compact community in the first place. Fábrica San José seems typical of small villages in Oaxaca, not only during the Guadalupe phase, but also during the preceding San José phase (1200–900 B.C.).

In addition to economic interdependence, social inequality is a second major axis of variability in Fig. 1. One household is set off sharply from all of the rest in this regard; its members had many decorated serving vessels, ate considerably more deer meat, and owned more elaborate ornamental possessions than their neighbors. A 60-year-old woman of this household was buried with four ceramic vessels and 55 polished stone beads—much more elaborate treatment than any other burial excavated at the site. Three of the four craft specialist households also had somewhat elevated ranks on this social scale. The locations of higher status households at Fábrica San José show enough consistency through time to suggest a degree of institutionalization or at least heritability of status. In some villages, higher-status residential compounds were more elaborate, including features such as the San José phase 1-m-high stone and adobe platform at Tomaltepec (8).

In addition to its much larger population, the community at San José Mogote differed from these small villages in several ways (6, 9). Household economic specialization was more extensive, including a larger variety of crafts, although initially higher status residences were no more impressive than those of small villages. San José Mogote also had non-residential structures from the time of its founding. By San José and Guadalupe phase times these took the form of plastered platforms with wattle-and-daub structures for public or ceremonial activities.

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True temples of much more monumental proportions appeared in the Rosario phase.

Rosario phase San José Mogote thus fits the archaeological description of a central place—the nexus of a larger web of social interaction. The application of distance-interaction principles to a smoothed plot of the distribution of Rosario phase occupation on the Oaxaca landscape (Fig. 2) permits the delineation of that web in the form of a district that incorporates 28 villages within about 12 km of San José Mogote (1, 2). None of these villages has produced any evidence of the kind of monumental-scale public buildings or residences known for Rosario phase San José Mogote. Participation in ceremonial activities at San José Mogote’s public buildings was clearly one form of social interaction that produced this district, and this activity was closely associated with the presence at San José Mogote of the region’s most elite families. It was in this context of stable intercommunity interaction that households at the small village of Fabrica San José began to specialize in the production of salt, presumably for distribution to other local communities, since this resource was not widely available. Small communities may also have acquired some goods produced by San José Mogote’s greater diversity of craft specialists. With unique ceremonial activities and the district’s highest ranking families at San José Mogote, its relationships with the small villages were clearly asymmetrical, forming a hierarchically structured regional-scale community composed of village building blocks. In similar fashion, the internal organization of the central place relied on residential wards not unlike a set of villages pulled very tightly together by more intense interaction. Like the outlying villages in the district, these wards interacted through their hierarchical social relations with San José Mogote elites and participation in ceremonial activities at the center’s public buildings, but it is at this local scale that the economic interaction from complementary economic specializations seems particularly important.

The San José Mogote chiefdom was constituted in these activities, relationships, and interactions, and this community represents the largest scale of such interaction at the time in Oaxaca. Other supralocal communities were much smaller; the San José Mogote chiefdom contained some two-thirds of the entire regional population. The economic interactions of households in local communities and the complementary specializations of wards at San José Mogote are detectable as early as 1200 B.C. in the San José phase. Social ranking began by the same time and grew stronger up through the Rosario phase. During the Guadalupe phase, there were public buildings at San José Mogote as well as at potentially rival centers, but the activities for which they were constructed became highly centralized at San José Mogote in the Rosario phase. In Oaxaca, the regional-scale chiefly community depended heavily on social and ceremonial interaction for integration. The economic component of community interaction was particularly well developed at the local scale, both at small villages and at the large local community of San José Mogote.

**Ceremonial Chiefly Centers in the Alto Magdalena, Colombia, During the First Millennium A.D.**

Regional-scale chiefly communities are also visible on the landscape in the Alto Magdalena of the Colombian Andes. A smoothed density plot representing Regional Classic (A.D. 1–900) period occupation in a completely surveyed area of 317 km² in the Valle de la Plata (10, 11) shows four districts (Fig. 3). The two chiefdoms that are relatively complete in Fig. 3 are roughly half the size of the San José Mogote district, although, at perhaps as many as 7,000 inhabitants, their populations were three or four times that of the San José Mogote district. This survey area is only part of a much larger zone containing probably 20 or more such districts of roughly similar size, focused around complexes of funerary monuments. In each complex, the central elements are the burials of single individuals in stone slab tombs, covered by earthen mounds up to about 4 m high (Fig. 4). The overall impact of the Alto Magdalena’s monuments is to focus attention strongly on these specific individuals, who may well be represented in the large sculptures incorporated into the barrows and the plazas adjoining them. The sculptures combine human and animal characteristics in clearly supernatural references, as in human faces with fangs or two-headed reptiles on the backs of human figures (Fig. 4). These themes recall ethnographically known shamanic beliefs in supernatural power involving human–animal transformations (13). The monument complexes range from small (a single mound and a few statues) to large (several large mounds and dozens of statues on adjacent hilltops) and are widely distributed across the Alto
Magdalena. The ceremonial activities carried out at the monuments and the hierarchical social relationships they express so conspicuously seem the central elements in regional-scale social integration. The multiple regional-scale chiefly communities of the Alto Magdalena are, in this respect, very much like the lone San José Mogote district in Oaxaca.

There are, nonetheless, important differences between the two regions in the nature of ceremonial activities and the way in which social hierarchy is expressed. It is in ritual that social inequalities are most strongly expressed in the Alto Magdalena, since principal ceremonies apparently consisted of rituals performed at funerary monuments, continually reemphasizing the importance of specific individuals. Oaxaca public buildings also created ceremonial spaces, but they were not, in their very essence, monuments to particular people, even though elite residences were close at hand. When, late in the Oaxaca sequence, monumental sculpture appeared, it depicted not elites or supernatural themes, but rather the unfortunate victim of political violence (9). A naked and bleeding sacrificial victim carved in relief on a stone slab formed a threshold to be trod upon by those approaching San José Mogote’s public buildings (Fig. 5).

A stronger contrast is the relative weakness in the Alto Magdalena of the economic component to interaction that loomed so large locally in Oaxaca. Households of different ranks and specializations can be identified in the Alto Magdalena by their artifact assemblages, but these differences are quite small by comparison to Oaxaca. Artifacts related to such differentiations are much more abundant in Oaxaca. In a sample of San José phase households at San José Mogote, 299 status-related artifacts were recovered for every 100,000 sherds (6). In the Guadalupe and Rosario phase households at the peripheral village of Fábrica San José, there were 224 (7). Assemblages from communities around four of the Alto Magdalena’s most impressive monumental centers, however, yielded only four status-related artifacts for every 100,000 sherds, reflecting only the most modest differences in standard of living between households. Higher-ranking families in the Alto Magdalena did not live in much larger or more elaborate houses, as they did in Oaxaca. Craft specialization was present in the Alto Magdalena, but there were only 17 craft-related artifacts for every 100,000 sherds, compared with 338 at Fábrica San José and 972 at San José Mogote. The greater heterogeneity of Oaxaca households, particularly with regard to craft activities, would have involved substantially more intense local interaction—the interaction that formed Oaxaca’s compact early villages. At the local scale, the Alto Magdalena presents a very different picture. It has been argued (1, 2) that Regional Classic occupation is not comprised of separate compact villages at all, but rather of widely scattered individual households, probably living directly adjacent to the lands they cultivated. The weaker development of specialization in the Alto Magdalena would have meant less intense local interaction, and this, in turn, could have produced this pattern of very dispersed residence without village formation.

**Economic and Symbolic Hierarchies in Northeast China During the Fourth Millennium B.C.**

The local community pattern for the Hongshan culture area in Northeast China is much more like that of the Valley of Oaxaca than the Alto Magdalena. For a systematically surveyed zone of 783 km² in the Chifeng region (14, 15), it is easy to delineate a village pattern similar to that of Oaxaca in Hongshan occupation (4500–3000 B.C.) (1, 2). Hongshan villages, like those of Oaxaca, ranged from only a few households up to over 500 inhabitants. Unlike the lone large village at San José Mogote, however, the Chifeng region contained at least a half-dozen with populations over 200. No one stands out as dramatically larger than all of the rest. Chifeng villages of all sizes, though, were considerably less compact than their Oaxaca counterparts. The Chifeng Hongshan village of Fushanzhuang, for example, had some 35–40 households in an area of about 50 ha—a clearly defined village community, but one spread across 10 times the area that a Oaxaca village of comparable population might cover. Subtle differences in the assemblages of lithic tools associated with different households at Fushanzhuang indicate different kinds and degrees of specialization (Fig. 6), but the distinctions between households are less marked than those in Oaxaca. Fushanzhuang yielded a total of 131 craft-related artifacts for every 100,000 sherds recovered, a value nearly eight times that for the Alto Magdalena but still well below those calculated for Oaxaca communities. This evidence is entirely consistent with the notion that Hongshan villages, like Oaxaca villages, were products of specialized local economies. It also appears that the more intensive interaction patterns that result from a greater degree of economic interdependence between households play a role in the much greater compactness of Oaxaca villages.

At Fushanzhuang, some households have higher proportions than others do of ornamental luxury items, of fine serving vessels, and of incised, painted, or burnished pottery. There is considerable variation along a scale from low to high, as in Oaxaca villages. Higher-status households are differentiated from lower-status ones to a similar degree in both regions, but a much higher proportion of Fushanzhuang households fall near the bottom of the social scale. As a consequence, the overall abundance of status-related artifacts at Fushanzhuang (at 39 per 100,000 sherds) is much less than that calculated for Oaxaca.
communities. Most excavated Hongshan residences are less than 20 m²; at least one was over 100 m², but all are single-room structures and none was raised on a platform. Hongshan households, then, display differences in the material conditions of daily life, although such disparities were greater in Oaxaca communities, and a larger proportion of Oaxaca households enjoyed elevated standards of living. By contrast, evidence for the expression in daily life of differences in wealth or status is extremely scarce in the Alto Magdalena.

Both economic specialization and social ranking, then, are easily recognized in the archeological evidence of village life at Fushanzhuang, although both are more conspicuous in Oaxaca communities. There is little sign at Fushanzhuang of the connection between economic specialization and social status seen in Oaxaca. Thus, of the three cases compared here, it is in the early chiefdoms of Oaxaca where both craft specialization and the economic aspect of social ranking are not only most highly developed but also most strongly linked to each other, and where local communities are most clearly defined and nucleated. Hongshan local communities, although easy to delineate, are less nucleated; both craft activity and differences in standards of living figure less prominently and seem unconnected to each other. In the Alto Magdalena, with its very dispersed residence pattern, craft specialization is still less developed, and the economic component of social differentiation is weakest.

A smoothed density plot of Hongshan occupation in Chifeng (Fig. 7) clearly shows a number of larger-scale communities.

Most of the large villages like Fushanzhuang form peaks whose lower slopes incorporate other nearby villages into districts, along the lines of Oaxaca. The dozen or so districts have populations generally numbering in the hundreds in an area no more than 3 km across, making these chiefdoms the smallest, both demographically and spatially, of any of the three regions. There is no indication, however, of any chiefdom substantially larger than its potential rivals or of any sociopolitical integration at a scale larger than these districts. Ceremonial activity may have, once again, been an important element in district-scale social interaction. At Fushanzhuang, for example, there are remains of at least four ceremonial constructions. No such structures have been excavated in the Chifeng region, but they have been investigated in detail in other parts of the Hongshan culture area, as at Niuheliang (16, 17). They consist of square or circular earthen stone-faced platforms of varying dimensions, usually 1–2 m high and up to about 25 m across (Fig. 8), although larger examples are known. Hundreds of 1-m-tall painted pottery cylinders might be incorporated into the platform construction. These open-ended cylinders were not containers and only occur in platform contexts. Unbaked clay figurines, usually female, and sometimes pregnant, are occasionally found in platform fill. Ceremonial, or at least public, activities performed atop these platforms would have been visible to sizeable crowds assembled around them. Occasional examples are alone on the landscape, but they more often occur as complexes of several platforms.

Most platforms have a large stone slab tomb in the center, and other tombs (up to a half-dozen) may be arranged around it. These burials contain elaborate jade carvings (Fig. 8) of birds, turtles, insects, and other animals, as well as supernatural themes such as pig-dragons (18). Most Hongshan villagers were buried without offerings in village cemeteries, but graves not in platforms were sometimes lined with stone slabs or had artifacts. At Nantaizi, for example, one burial contained jade earrings, a shell ornament, and a stone chisel; and another, three bone tools, a ceramic bowl, two incised ceramic jars, a grinding stone, and a shovel, an axe, and a knife of stone (19). Large jade carvings, on the other hand, are almost exclusive to platform burials, where they are typically the only kind of offering included. These two different sets of burials (platform and non-platform) both reflect hierarchical elements in Hongshan society, but they trade in different currencies. Non-platform burials, with their varying quantities of tools and ornaments, seem connected to the variation in material standard of living seen in Hongshan residential architecture and artifact assemblages. Platform graves and their jades, on the other hand, are not obviously related to the material conditions of life. Their currency is not economic but symbolic (20). The occupants of these tombs were a special group of people, set off from the rest of the population.
by their connection to the supernatural. They were not just well-to-do villagers, but shamans or some sort of leader with great spiritual power—like chiefs are often thought to have. The distinction between two different (although not necessarily unrelated) social hierarchies is clear.

Economic Hierarchy, Religion, and Politics

Hongshan monuments share a number of characteristics with those of the Alto Magdalena. Both were, in their very essence, monuments dedicated to specific individuals, who were buried in the central tombs, frequently surrounded by less central burials of other important individuals. The sculptural elaboration of the Alto Magdalena monumental burials, like the Hongshan jades, emphasizes the supernatural. Offerings suggesting personal wealth are scarce in Alto Magdalena tombs (21), as in Hongshan platform burials. Highly visible monuments in both regions, then, signal hierarchies with a strongly similar symbolic basis. In each case, the presumably ritual activities for which these monuments were constructed were critical to the integration of supralocal chiefly communities. Both Hongshan and Alto Magdalena burial monuments were the central elements of public spaces suitable for the assembly of large numbers of people. Architectural layouts were open, and access to these spaces was completely unrestricted. [The lone Hongshan enclosed ritual space (22) seems the exception that proves the rule.] The entire population of a Hongshan or Alto Magdalena chiefdom could easily have assembled in the level or sloping space around the monumental tombs of important people. In addition, wherever information about habitational remains is available, these public spaces were fully integrated into the central residential zones of their respective chiefdoms. These ritual activities are the most readily identifiable special functions of central places.

As we have already seen, in the Alto Magdalena this ritual hierarchy is not complemented by a distinct one of more secular character, as it is in the Hongshan case. Precisely such a secular hierarchy in Oaxaca, though, provides a very strong parallel to Hongshan organization. The modest amounts of utilitarian and ornamental objects that distinguish the burials of higher ranking people in Oaxaca recall not the Alto Magdalena burial mounds or the Hongshan platform tombs, but rather the non-platform burials of Hongshan villagers. It is in these burials, along with household evidence, that social hierarchy in Oaxaca finds its expression. Each of the two distinct hierarchies present in Hongshan society has a parallel in the other regions we discuss—the ritual burial hierarchy in the Alto Magdalena, and the more secular hierarchy in Oaxaca—but only Hongshan society contains both as distinct social phenomena.

While the secular character of Oaxaca’s social hierarchy is most prominent (in residential architecture, household activities, and burial practices), it is by no means disconnected from religious belief. Evidence of religious activity in Oaxaca comes in various forms. Small ceramic figurines are widely dispersed through household remains, suggesting an important role for household-level rituals. Communal ritual probably also played an important role in the formation and integration of social groups from the time of the earliest settled villages. In contrast to the principal Hongshan ritual spaces, or those of the Alto Magdalena, Oaxaca village ritual spaces were small and of restricted access (23). Initially there were single-room structures no more than 4 × 6 m whose architectural form made them conspicuously different from ordinary houses but which could not have accommodated more than a very small proportion of any village’s population. Later public buildings, sometimes raised on platforms 1 or 2 m high, were also small and enclosed. Such buildings sometimes occurred in groups, on the four sides of unroofed rectangular patios. Although these patios were larger than the spaces inside the buildings themselves, they were still much smaller than the plaza areas adjacent to Hongshan or Alto Magdalena burial monuments, and could by no means incorporate entire district (or even local) populations. Admittance to space was highly controlled, since even the unroofed patios could be entered only through restricted openings at their corners. In all three regions, then, public or ritual spaces were created to bring groups of people together, but only in Oaxaca do these spaces seem explicitly designed to set apart these assembled groups from the rest of the population by excluding nonparticipants.

These simultaneously integrative and exclusionary ritual structures were spatially associated with elite residential areas at San José Mogote, and the participation of high-ranking people in this sort of ritual activity surely contributed to the process of social differentiation in Oaxaca. This association culminates in the late Rosario phase conversion of a temple structure at San José Mogote into an unprecedented stone and adobe multiroom elite residence on a platform 22 × 28 m (Fig. 9). Neither Hongshan nor Alto Magdalena elites ever enjoyed a standard of living so far above that of their lower-ranking contemporaries. The strongly economic character of social differentiation in Oaxaca is as clear as its reinforcement in ritual is unmistakable. Hierarchy in Oaxaca has its center of gravity, and perhaps its origins, in the economics of local communities, but it is clearly also strengthened through ritual, especially in its supralocal projection. The relief carving of a naked bleeding body (Fig. 5), walked on by those entering the patio adjacent to the residence of the San José Mogote district’s presumed ruler at the end of the Rosario phase, appears to be a high-ranking person from another community captured and killed by San José Mogote (9, 24, 25). Burned structures at San José Mogote provide additional indications of intervillage warfare and raiding. Supralocal chiefdom organization in Oaxaca, then, may have been a politico-ceremonial structure of relationships between elites at San José Mogote and preexisting communities—relationships that often turned violent as San José Mogote sought to dominate them. This regional-scale elite structure was built on a foundation of economic interdependence and differentiation within local communities. Thus, the unitary and fundamentally economic hierarchy of Oaxaca chiefdoms was laced tightly together with religious belief and ritual, especially insofar as supralocal politics were concerned.

Supralocal Organization and Conflict

The twin hierarchies of Hongshan society (symbolic and economic) represent a rather different dynamic in the relationship between ritual, economy, and politics, and Hongshan districts
did not form in the same way the San José Mogote district did. The comparatively rapid development of craft specialization and social differentiation in Oaxaca during 300 or 400 years produced a growing number of largely redundant independent village communities, usually a few kilometers apart, each with strong economically based internal integration and social hierarchy. Valley-wide politics consisted of relationships, eventually competitive, between the elites of these clearly defined village units. San José Mogote’s early demographic edge finally proved insurmountable, as its elite progressively dominated nearby villages until its domain included well over half the valley’s population. Other chiefdoms were so much smaller that, although raiding from them could have been a thorn in San José Mogote’s side, by the Rosario phase there was no real possibility of their dominating San José Mogote militarily. This entire process of amalgamation of most of the other local communities in the valley into the San José Mogote chiefdom occurred during some 700 years of demographic stability; it cannot have been driven by regional population growth.

The Hongshan districts of the Chifeng region grew by a very different process. Craft specialization and social differentiation emerged only very slowly, after 1,500 years or more of sedentary living before the Hongshan period. Even then, village-level economic differentiation and integration were less strong than in Oaxaca. As chiefly districts formed in Chifeng, there was no amalgamation of preexisting villages. Instead, as villages grew, their relatively low level of internal interaction facilitated fissioning, producing multiple local communities within a very few kilometers of each other. It was these sets of mother and daughter communities that comprised Chifeng’s spatially compact chiefly districts. Growing population, then, was at the heart of the formation of Hongshan chiefdoms. It is difficult to tell whether most of the demographic change occurred rapidly in short episodes, because the periods that provide chronological control in Chifeng are so long, but it is clear that it took the cumulative demographic growth of some 3,000 years after the establishment of sedentary living to arrive at the full development of Hongshan chiefly districts. No one of these districts became very much larger than any other, nor is there any indication that any Hongshan district ever subjugated another one. (And this degree of political fragmentation continued to characterize the Chifeng region for another 2,500 years after the end of the Hongshan period as well.)

The relatively small scale and conservatism of supralocal polities in Chifeng might be attributed to the separation between symbolic and economic hierarchies. Some of the pathways to consolidation of power and its supralocal projection were blocked to either of the Hongshan elites because of the existence of the other, potentially rival, hierarchy. The Hongshan archaeological record has thus far not produced iconography of warfare or violence, or evidence of widespread burning, of weapons, or of clear-cut fortifications. The ditches often found at Chinese Neolithic village sites have sometimes been seen as fortifications. The resolutely small scale and conservatism of supralocal politics in Chifeng might be attributed to the separation between symbolic and economic hierarchies. Some of the pathways to consolidation of power and its supralocal projection were blocked to either of the Hongshan elites because of the existence of the other, potentially rival, hierarchy. The Hongshan archaeological record has thus far not produced iconography of warfare or violence, or evidence of widespread burning, of weapons, or of clear-cut fortifications. The ditches often found at Chinese Neolithic village sites have sometimes been seen as fortifications, but they occur frequently in the absence of evidence for social hierarchy, so the two known instances for Hongshan period sites are difficult to connect to supralocal elite hostilities. Among these less cohesively led communities with less-developed economic integration, there was less potential for the emergence of the kind of conflict between the elites of different communities that provided the milieu in which supralocal political integration was effected in Oaxaca. By the end of the Rosario phase, San José Mogote’s economic elites had consolidated a degree of secular political power supported by religious ritual that enabled them to dominate a much larger territory than that of any Hongshan district in Chifeng. (And they were just on the threshold of 500 years of remarkable demographic, social, political, and economic change that culminated in the city of Monte Albán with tens of thousands of inhabitants—the capital of a conquest empire of well over 10,000 km².)

In contrast to the Hongshan social ranking system, there was no alternate hierarchy as a potential rival to the supernatural authority of Alto Magdalena elites. As in Oaxaca, there is evidence that Alto Magdalena elites used violence in the projection of their position. Sculpted figures accompanying elite burials sometimes carry weapons or even apparent trophy heads. Evidence of violent conflict, however, is not abundant in the remains of daily life from the Alto Magdalena. Flaked stone points, for example, like those on spears depicted in statues are well preserved in the archeological record, but they are extraordinarily rare in Alto Magdalena lithic assemblages (less than 1 per 100,000 sherds). Alto Magdalena occupation does not favor defensible locations; its dispersal does not lend itself to easy defense; and no fortifications are known. Violent conflict in both Oaxaca and the Alto Magdalena, then, seems political, even though the elites engaged in it owed their positions largely to the economics of daily life in Oaxaca and to the supernatural in the Alto Magdalena. Although conflict in chiefdom development has often been attributed to population pressure and scarcity of resources, the two regions with the most evidence of violence have the highest and the lowest population densities (20–40 persons per km² for the Regional Classic in the Alto Magdalena, and not much more than 1 person per km² for the Rosario phase in the Valley of Oaxaca). Chifeng, with little evidence of violent conflict, had an intermediate population density (5–10 persons per km²). Not even the high population density in the Alto Magdalena created serious pressure on resources, and resource scarcity cannot have driven the forcible domination of neighboring communities in Oaxaca, given its extremely low population density (Fig. 10).

Conflict in the Alto Magdalena was not part of a Oaxaca-like process of coercive amalgamation of preexisting neighboring communities into chiefly districts. The central buds from which districts grew are visible earlier as modest concentrations of occupation, which progressively increase in population, density, and degree of concentration through 1,000 years or more. Multiple regional-scale communities of similar size (‘‘peer polities’’ à la Renfrew and Cherry [26]) are often thought to provide a competitive environment that spurs vigorous development of larger-scale and more complex organization. The vigorous urban and imperial growth that follows close on the heels of the San José Mogote chiefdom, however, contrasts with this line of thinking, since it is a rapid expansion of the single very large polity that was already much larger than any neighbor in the Valley of Oaxaca. Hongshan Chifeng and Regional Classic Alto Magdalena also contrast with the usual peer-polity argument, but in the opposite way: they represent peer polities, but at a stalemate. None of these polities ever grew to larger spatial scale, and all remained at approximately the same demographic level as the others in the region. Larger-scale political unification in
both regions came only much later, when they were incorporated into large imperial domains originating from outside.

Long-Distance Networks

Chiefly elites are often seen as seeking social advancement through manipulation of connections to other elites hundreds of kilometers away, especially where leadership is strongly identified with particular individuals and ostentatious displays of wealth, symbols of prestige, or esoteric knowledge. Such long-distance connections, and the importation of prestige goods, are thought to be less important where leadership is less personal, wealth differences are less pronounced, and ritual is more collective or communal than focused on particular individuals. This latter package of traits has been labeled a “corporate” mode of organization to contrast with the former “network” mode (27). All three of the regions compared show stylistic similarities in ceramics and other artifacts that demonstrate that their inhabitants were in contact with distant populations. It is clearly in the Valley of Oaxaca, however, where evidence for long-distance interaction is most abundant. At San José Mogote, some 365 of every 100,000 sherds have been classified as “foreign” ceramic types (from distant regions) (6). In the Alto Magdalena, such foreign ceramic types have not been identified, and only about 1 sherd of 100,000 is not readily classifiable in the local typology. Similarly, at Fushanzhuang, sherds not easily classified as Hongshan are virtually nonexistent. At least some of the green stone used for Oaxaca ornamental objects was of extra-regional origin. The same could be true for Hongshan jade, but at least one local jade workshop is known (28). Marine shell from distant coast occurs in Hongshan and Alto Magdalena sites, but the quantity falls far below that of imported goods at San José Mogote, where preserved remains of animals native to other regions (usually in the form of ornamental or ritual objects) account for some 500 items per 100,000 sherds (6). Craft specialists at San José Mogote made small magnetite mirrors that were traded hundreds of kilometers away. Obsidian is a relatively common raw material for flaked stone tools in both Oaxaca and the Alto Magdalena. The sources for the Alto Magdalena obsidian are not identified, but they might have been quite near or even within the region; and the material itself is of such poor quality that it is an unlikely candidate for long-distance movement. In contrast, Oaxaca obsidian is of high quality, occurs as the product of a sophisticated prismatic blade industry, and is known to have come from as far away as 400 km.

Oaxaca, then, stands out for having the most diverse, intensive, and highly developed interactions with distant regions. Contrary to expectation, leaders in Oaxaca are less conspicuous as particular individuals than in either Chifeng or the Alto Magdalena, where their burial monuments are simultaneously the foci of collective ritual spaces. Symbols of prestige and esoteric knowledge are strongly presented in Chifeng and the Alto Magdalena, even though these are the regions with less developed long-distance connections. Wealth is most readily identifiable in Oaxaca, where interregional interactions were strong, and in Chifeng, where they were weak. The social characteristics, then, laid out as the basis for the distinction between corporate and network strategies, do not, even in just these three cases, form meaningful packages.

Conclusions

Recognition that supralocal communities based on institution- alized social hierarchy have emerged repeatedly in human history was among the central contributions of early cultural evolutionary thinking. Comparing just three trajectories of chieftom development, however, reveals considerable variability in the forms that early hierarchical societies can take and in the ways in which they emerge. The fact that there is not just one kind of chieftom or one pattern of development in no way under-
different chiefdom trajectories. Additional comparative study will be needed even to arrive at a full appreciation of the variety of flavors to be observed. The comparative study of the variation between trajectories thus expands and complements the traditional cultural evolutionary quest for universals seen in similarities between cases. Extracting fundamental principles from patterned variation presents a greater challenge than traditional comparisons in several ways. While it can begin by generating hypotheses from only a few cases, it finally must include a great many cases so that general patterns can be discerned. It must cope with many societal variables, resisting the temptation to dichotomize or oversimplify. It will require an expanded repertoire of analytical tools capable of measuring these societal variables in at least relative terms (a few of which we have attempted to apply here). Perhaps most important, and certainly slowest, it will require the concerted efforts of large numbers of regional specialists to collect numerous sufficiently comparable data sets on which such tools can be used, and to present those data sets in such a way as to make them available for comparative analysis.

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