Changing Ritual Landscapes and the Evolution of Early States

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Abstract

This chapter examines the relationship between ritual architecture and theatrical places in the evolution of early states. The rare development of early states across the globe was preceded by elaborate landscapes that were designed to attract people for social, ritual, and economic activities. People constructed pyramids, ground drawings, ritual structures, and roads in selected areas where people could congregate. This pattern was very common throughout the world. In a few places, coercive states emerged and took root as the dominant political form for millennia up to the present day. The origins of early civilizations were intimately tied into ritual and religion that facilitated cooperation among people from a wide geographical area.

1. Introduction

For well over 50,000 years, anatomically modern humans have lived in mobile hunter-gatherer-forager societies. At the beginning of the Holocene, a few peoples in a few locations in the Eastern Hemisphere started building special places on their landscapes marked by monumental architecture. The construction of monuments to indicate ritual centers marked an evolutionary break with our Pleistocene past and constituted a rapid adoption of a new lifeway by our species. These societies were intermediate in terms of scale and organization between the small-scale hunter-gatherer bands and the larger state societies that would appear later. These "middle-range societies" of various types dominated the early and middle Holocene landscape starting roughly 13,000 years ago in the Eastern Hemisphere and continued for another five to seven millennia around the globe. Some of these societies created monumental architecture with areas of feasting and congregation for regional festivals. In these feasts, we also have evidence of craft production, raw material procurement, and the promotion of

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interregional trade. These early monuments were generally not places where people lived permanently. Rather, these were ritual centers that people periodically traveled to for gatherings lasting a few weeks.

In this chapter, I will show how ritual centers marked by large monuments helped organize and coordinate the actions of greater numbers of groups and individuals without strong centralized control. Over time, rising population densities and increasing inequalities led to replacement of these ritual congregation sites by more centralized urban centers that exercised power and were marked by stronger societal distinctions. I will begin by outlining the features of this argument based on comparative information from around the world before focusing in more detail on examples of this process from one of the few areas of primary state formation—the Central Andes of South America.

1.1 Early Monumentality

An example of a very early middle-range site with monumental architecture is Göbekli Tepe in Anatolia. This impressive site is about 11,000 years old. Here we find that there were at least 20 round "temples" scattered across the landscape (Curry 2008; Schmidt 2000, 2003). These temples had massive carved stone stela. There was little permanent settlement at the monument itself.

Around the world, people created similar meeting places on the landscape designed in part to host numbers of people on a periodic basis (Earle 1997; Marcus 2008; Stanish 2017, 2020). These range from Watson Brake and Poverty Point in Louisiana to Avebury, the Ring of Brodgar, Stonehenge, and the Neolithic in Spain, Portugal, Denmark, Corsica, and Malta. Similar societies were described by ethnographers in the Trobriand Islands and the Solomon Islands. From the henge monuments in Europe to North American Mississippian sites to Mesoamerican Early Formative sites, it was not just a single site that our ancestors built. Rather, they created multiple theatrical spaces to attract others and to host special events.

A hallmark of these societies is what Colin Renfrew (2001, 2013) calls "places of congregation." Renfrew (2013, p. 187) notes that "the performance of rituals of congregation … [is] widely seen at very early centres before the development of hierarchically ordered ('state') societies." He further notes that this was common around the world and specifically discusses sites such as Göbekli Tepe and Caral (Shady Solís and Leyva 2003) in Peru as places where group identities were created and perpetuated: "These are places of congregation, where communities of people met together. Indeed, it can be argued that it was in their meeting together, and in their working together to construct these monuments, that these communities were originally established and perpetuated" (Renfrew 2013, p. 193). Empirically, we see around the world that these early places of congregation were not built in isolation. This is an extremely important observation. We must go beyond the individual sites and understand that entire landscapes were transformed by these regional chiefdoms. These ritualized landscapes were key economic features of non-state chiefdoms.

1.2 Complex Chiefdoms

In a few places around the world, some of these middle-range settlements developed into centers with permanent residents (Marcus 2019; Redmond and Spencer 2012). In those places, the monumental architecture is larger and includes different types of buildings such as storage, residences, workshops, and temples. Like their predecessors, these sites were built on the landscape to attract people to grand events. These events included feasting, manufacturing objects, and the exchange of goods in barter fairs. Based on ethnographic analogies, there were marriages, gossiping, exchange of information, religious events, political truces, and everything else that happens when people from distant places congregate for a few weeks (see Kessell 1995; Oliver 1949 for descriptions of historical feasting in nonwestern societies).

Complex chiefdoms are not miniature versions of states in some kind of ladder-like evolutionary sequence. Rather, they rise and fall with some regularity across any cultural landscape and are highly varied around the world. Unlike earlier ceremonial centers that did not have permanent settlers, complex chiefly

centers had a resident population that was most likely made up of controlled prominent kin groups. The earlier pattern where people would periodically gather also continued. Therefore, the ceremonial centers would temporarily see their numbers swell for these elaborate events. Once the festivities died down, however, most people would return to their home villages, leaving the smaller residential population to stay on for the next festival. There are usually dozens of these centers in any region. They are politically autonomous and largely kin-based, with shared political and cultural links.

Based on ethnographic and historical data, we see that social relationships between these groups are regularly negotiated and not dictated by rules backed by force (Stanish 2017). Regional "state" coercive power does not exist; rather, alliances form and fall with some regularity. There is a brisk trade in exotics. Multiple competing centers vie to bring in other groups in what is known as competitive ceremonialism (Swenson 2006). In the Andes and in North America, we see the intensive use of geoglyphs and other ground constructions, such as mounds in various geometric shapes. There is generally organized conflict carried out as raiding, but not war for territory. Alliances serve to dampen conflict, and truces called for regional fairs are a common strategy. We find widespread artistic traditions that developed in portable media such as pottery and textiles. There are regional variations in these art styles, but we see some common motifs and attributes that suggest informal linkages between kin groups in different centers. These similar canons of art were used to signal affiliation with different groups.

Political power in complex chiefdoms is mediated by kinship. Kin groups control land, common resources, and formal links to other kin groups in other centers (see Malinowski 1966 [1922]; Provinse 1937; White 1994). Many of the mound groups that we see archaeologically likely represent the residences of kin groups. Historical and ethnographic data strongly suggest competition between these different groups, and it takes many forms. Elaborate feasts to attract others from both within and outside of the polity are common (Spielmann 2002). Lineage heads get rich not by buying and selling for profit, but rather by increasing the number of allies. Wealth is accumulated by forging a series of deferred debts, repaid usually in labor, with others. Chiefs who can call in that labor for a specific feasting event compete with other chiefs. Using societies like the Trobriand Islanders and the Kwakiutl as analogies, we surmise that there is a constant series of feasts with some lineage heads or chiefs competing with others for fame and larger factions.

1.3 The Context of State Emergence

Much more complex state societies developed in a very few places around 5000 BP in Asia, North Africa, the Mediterranean, and Mesopotamia (figures 1 and 2) (see Renfrew and Bahn 2014). States were very rare, developing in only a handful of areas around the world. They represent a qualitative jump in complexity over complex chiefdoms. They had different institutional features such as planned urban centers, elite palaces, monopolization of interregional trade, workshops, intensive commodity production, specialized military organizations, systematic religious ideologies, intensive agriculture, and professional specialist classes. By 2000 years ago, state societies dominated the landscapes in the Western Hemisphere as well.

The transition in these few places from nonstate societies to state-level ones represented the next evolutionary ratchet in human social organization. There is no inevitability in this cultural evolutionary process, and it is subject to numerous historical factors. However, on a continental and millennial time scale, we see an overall increase in complexity over time, defined as an increase in the number of interactions between people and the number of institutions to mediate those interactions. This transformation entailed profound consequences for humanity, both good and bad.

All first-generation states evolved out of complex chiefdoms. However, the vast majority, probably 98 percent, of chiefly landscapes throughout history did not produce states. Rather, chiefly landscapes were characterized by what Joyce Marcus (1998) calls "dynamic cycling," in which polities rise and fall with great regularity. The earliest states, called first-generation ones, were extremely rare, perhaps occurring no more than

six or seven times in the past. Any states that developed after the first ones are referred to as secondary states. Secondary states are much more common. They were built on the principles first developed by the original complex political and economic organizations in any region.

Figure 1. Culture areas where archaic states first independently developed. Courtesy of Nations Online Project fair use policy. https://www.nationsonline.org/oneworld/continents_map.htm

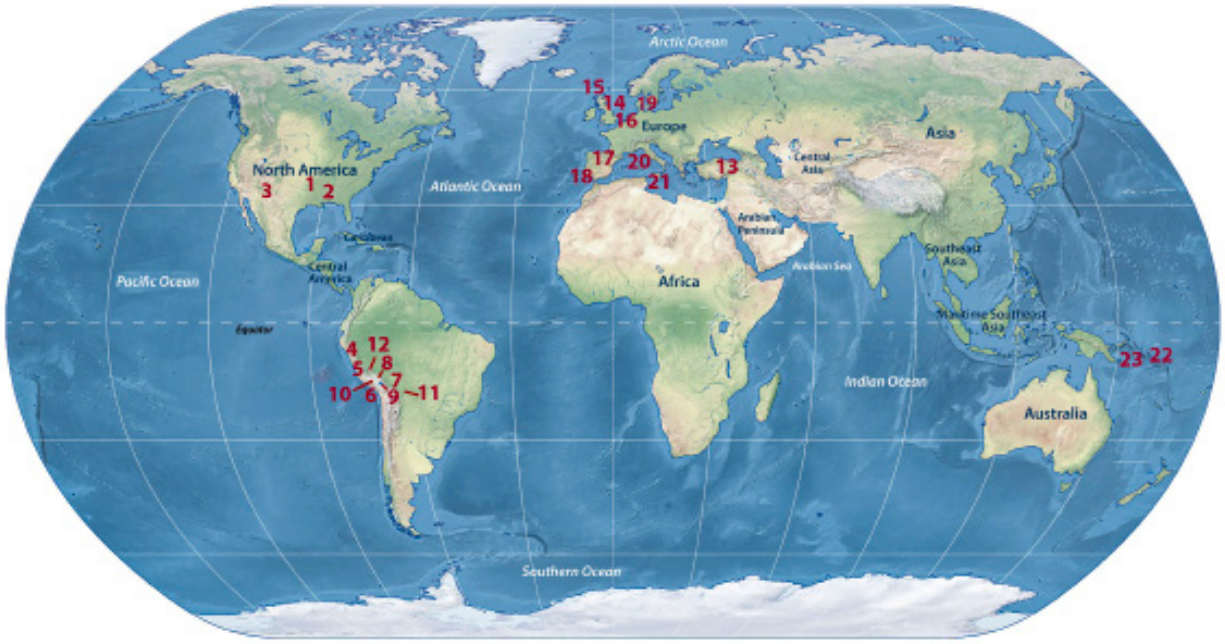

Figure 2. Places mentioned in text.

1. Poverty Point; 2. Watson Brake; 3. Pecos; 4. Caral; 5. Paracas; 6. Cahuachi; 7. Tiwanaku; 8. Pukara; 9. Island of the Sun; 10. Cerro Baul; 11. Cochabamba; 12. Wari; 13. Göbekli Tepe; 14. Avebury; 15. Ring of Brodgar ; 16. Stonehenge; 17. Spain; 18. Portugal; 19. Denmark; 20. Corsica; 21. Malta; 22. Trobriand Islanders ; 23. Solomon Islands

2. What Are States and What Do They Look Like Archaeologically?

The very rare evolution of states is not a simple quantitative increase in size and complexity of chiefly societies, although population densities did indeed increase. Rather, it represents a significant transformation in human lifeways (see Kirch 2010; Potts 2016; Smith 2005; Spencer and Redman 2004). For the first time, we see institutionalized coercion by one group over others. In contrast to the kinship-based institutions of pre-state societies, states are class-based societies that transformed the social structure of chiefdoms and created large political entities that stretched over a vast area. Leadership became more formal and less personal. By this, we mean that there were specific offices that were not tied to individuals such as "head priest," exchequer, and so forth. Populations number into the many tens or even hundreds of thousands. States emerged in bounded geographical areas with population densities well beyond that of chiefdoms. They contain numerous institutions: organized religions with personnel housed in temples, militaries, planned urban areas, elaborate workshops, a class of hereditary elites, and full-time craft specialists like architects, potters, fishers, and so forth. These institutions organize a vast array of human political, economic, religious, and other interactions. The nature of these institutions is surprisingly similar around the world among the first states as well as their successors.

Monumental architecture continued to be an important element in defining the relationships between individuals. However, the most visible hallmark of states is that elaborate monumental architecture was incorporated into permanent, urbanized settlements alongside other specialized buildings (Ando and Richardson 2017; Fattovich 2010; Marcus 2003). It was not uncommon to see urban planning, with grid patterns and centralized plazas in these centers, indicating a stronger central control over domestic and state affairs. For the first time in human history, we see the construction of richly appointed residences for an elite class. These palaces indicate the existence of a ruling class that was able to control labor to build these and other buildings such as temples and elaborate spaces for spectacles. The retainer class, intermediate in status between the elite and the working populations, was housed in more humble, yet notably distinct, structures adjacent to the palaces and temples. This retainer class functioned as craft producers, artists, warriors, scribes, priests, and other specialists within the state society. Freed from labor in the fields, these specialists could reside full time in cities. This created a more bureaucratic set of institutions, where power was centralized. While this division of responsibilities helped create more stable systems of governance for the elites, the retainer class was wholly dependent on the political and economic structure created by the elites to survive. Archaeologically, we see the housing of this specialist group usually near the urban core, but also separated architecturally and metaphorically from the aristocratic elite. Giant walled compounds of the elite were found inside these urban areas. The retainer classes rarely had protected areas. For the first time in human history, therefore, elites and non-agricultural peoples walled themselves off from the rest of the population.

Agriculture, commodity manufacture, and regional trade were the economic foundations of states (Feinman and Marcus 1998; Pohl et al. 1996). Any nomadic way of life promotes the dispersion of people over a landscape. The productivity of hunter-gatherer lifestyles is too low for sufficient local population densities to develop in bounded areas. Therefore, states require agricultural economies in which resources are highly concentrated in an area and that provide high levels of resources per area. Irrigation agriculture is very productive in arid and semi-arid areas. In tropical areas with high rainfall, irrigation and terracing served to significantly increase productivity though the careful control of water, soil erosion, and flooding. States also developed other kinds of agricultural intensification techniques. These include raised fields, paddies, damming of rivers, diversion canals, use of night soil, and the like. All of these functioned to concentrate high-yield agricultural areas near the urban settlements.

High agricultural resource production creates surplus wealth (see Allen 1997). All states redeploy these surpluses to support an artisan class that produces commodities such as pottery, textiles, fermented beverages,

metal objects, and others. States set up a regional exchange network in which raw materials are imported and finished ones are exported and used for internal festivals. These political and economic institutions create a self-reinforcing dynamic. Greater wealth allows the elite to exchange commodities for exotic goods, which in turn support the bureaucracy to produce more wealth. This wealth supports an army that protects the trade routes, effectively creating a regional monopoly controlled by the leaders of the state. Therefore, another hallmark of first-generation states is the establishment of strategically placed military and economic enclaves along roads and near raw material resources.

3. From Chiefdoms to States in the Ancient Andes

We see this process in the prehistoric Andes region of South America, one of the handful of areas in the world where first-generation states independently developed (Stanish 2001). States first emerged in the first few centuries of the first millennium AD along the coast in the polity known as the Moche. Shortly thereafter, two highland-expansive states developed, known as Tiwanaku and Wari (figure 3). These highland states grew quickly out of a context of multiple, competing, complex chiefly centers in which barter markets and fairs drove the regional political economy. Let us briefly look at the nature of Andean complex chiefdoms.

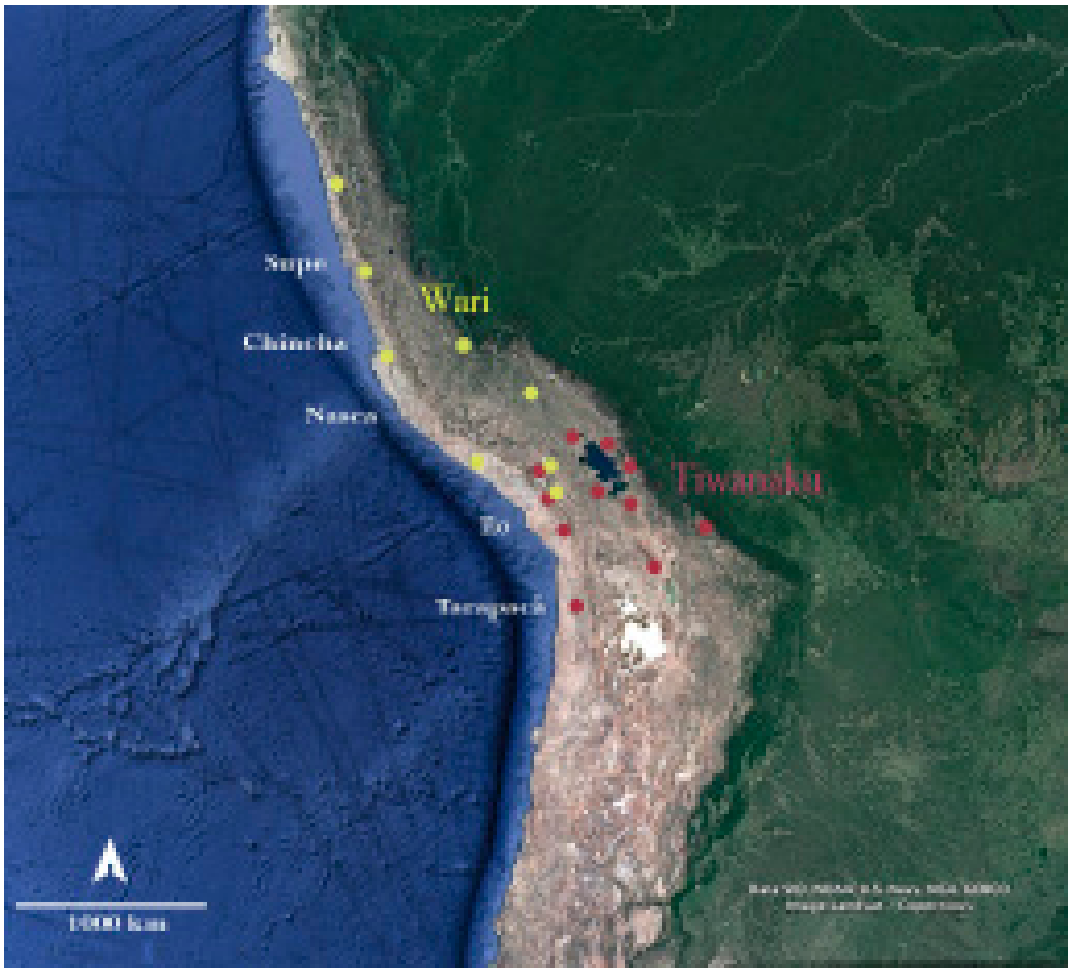

Figure 3. Location of Wari and Tiwanaku in the Central Andes.

3.1 Andean Complex Chiefdoms

Chiefly societies emerged in the very late 4th millennium BCE (circa 3200 BCE) in the north coast of Peru. The site of Caral developed by 2500 BCE as a quasi-urban and complex chiefly society. Each of a dozen or so pyramids at the site was most likely the focus of different groups in the region that would periodically meet. There is no evidence of a large permanent resident population, but there were villages around and near the architectural core that housed a modest population.

Another example of a complex chiefly society is that of Paracas on the Pacific coast of Peru. The Paracas culture began around 1000 BCE and continued for a little over a millennium. The political center of Paracas was the Chincha Valley located 200 km south of Lima. Several very large Paracas pyramid sites were built in the lower valley, each surrounded by villages and other residential centers. Famous elaborate burials from this culture were discovered on the Paracas Peninsula 50 km south of Chincha.

On the desert pampas above the lower valley, Paracas peoples constructed a spectacular landscape consisting of small pyramid mounds, linear geoglyphs, and a series of small mounds. This entire built landscape on the pampa and surrounding hills covered at least 40 km2. There is little doubt that these features marked ritual pathways. The geoglyphs were intended to be walked on and to direct processions. The pathways went from the highlands and adjacent valleys to the edge of the pampa where the smaller pyramids were found. As Karsten Lambers and Martin Sauerbier (2006) argue for another Paracas valley to the south, the geoglyphs were continuously rebuilt as they were regularly used. This is reinforced by Paracas art, which often depicts lines of people and animals in ritual attire.

The people living in the large settlements in the valley bottom constructed elaborate landscapes in the pampas to attract followers and visitors to grand feasting events. The lines converged on ceremonial sites with monumental architecture with evidence of elaborate festivals (Tantaleán and Rodríguez 2021). The elaborate dress noted on the art strongly suggests that forms of costly signaling were extensively employed at these fairs. Costly signaling theory explains extravagant displays that demonstrate patrons' commitment to cooperative relationships (Quinn 2019). In the case of Paracas and for virtually all of the late Peruvian chiefly societies, this signaling reinforced norms of cooperation and strengthened alliances between various groups of people. The archaeological indicators of signaling included offerings of valuable artifacts inside a sunken temple. There were even some human mummy bundles left as offerings suggesting human sacrifice, in many ways the ultimate costly signal. Analysis of the objects in the temple indicates that they originated from a very wide range of territory. In other words, the people who constructed these ritual centers drew on a population up to several hundred kilometers distant (Stanish, Tantaleán, and Knudson 2018).

4. How States Emerge: The Suppression of Places of Congregation

The process of state formation in many places around the world is correlated with the collapse of the systems of chiefly congregation (Feinman and Marcus 1996). One of the key strategies used by elites in their rise is the repression of these chiefly sites. Basically, the elites used military force to coopt the regional trade networks and monopolize them for their own purposes. They secured key resource areas, particularly in the sumptuary goods trade. These include obsidian outcrops, metal ore mines, certain kinds of lithic raw materials, exotica from different ecological zones, and the like. These archaic states also built or formalized the existing road system. We see way stations of various sorts strategically placed on these transport routes. We also see the emergence of urban barrios and a bureaucracy—priests, artisans, military—that created the retainer classes socially intermediate between the elite and the commoners. In order to consolidate their power, elites shifted the location of ritual activities to their own settlements. As my colleague John Janusek (2008) so brilliantly described, the first-generation Andean states created elaborate places for theatrical performances. The retainer

classes and visitors from afar participated in these events. Regional population centers across the state landscape, both far and wide, hosted similar events on a smaller scale.

The economic basis of archaic state societies became increasingly centralized. In short, the largely noncoercive complex chiefly barter fairs were abandoned, repressed, and/or coopted. States took control of the trade routes and established a new kind of political economy in which capitals and provincial centers substituted for the earlier barter market fairs. A rudimentary "world system" was created in which raw materials were monopolized by and transported to state centers and reworked into finished products for export. The states controlled the entire production and redistribution process.

A stark example of this process is seen in an archaeological culture in the northern Titicaca Basin. A complex chiefly settlement, known as Taraco, was composed of a series of mounds connected by roads and causeways that dates from at least 800 BCE into the first centuries of the 1st millennium AD (Levine and Stanish 2020). Numerous stone carvings around the site area attest to its importance in prehistory (Chávez and Chávez 1975). The site of Taraco was one of the numerous complex chiefly centers that emerged at this time in the northern Titicaca region. Throughout the millennium, we see a process in which there were fewer and fewer but larger and larger sites. By AD 100 or so, there were just a handful of centers in the region. All of them had a permanent resident population that swelled during periods of feasts, fairs, and festivals. Taraco was one of these, as was the settlement of Pukara about 50 km to the northeast.

Our work at Taraco discovered a massive burning episode at the site around AD 150. There is little doubt that this site was leveled and burned in a single historical event. This time corresponds precisely to the beginning of the emergence of Pukara. Pukara would go on to be the dominant polity in the Basin for at least two centuries and was most likely the group that sacked Taraco. Organizationally, Pukara had many, though not all, of the hallmarks of a state society including an extensive area of settlement, much of it permanent, elaborate temples, and evidence of a permanent occupation of villagers. Like the other centers in the region, Pukara was a major magnet for people to come and feast, exchange, reinforce social bonds, and generally enjoy the spectacle.

In other words, we can trace the rise of numerous competing political entities in the region over a millennium to the moment when one of the major chiefly centers was leveled, resulting in a significant loss in economic clout and political status for the Taraco polity. It is interesting that the site was burned, but a few people continued to live there. However, the archaeological evidence indicates that after the attack, the Taraco polity did not participate in long-distance exchange. They ceased to host intense periodic festivals or manufacture high-valued objects. Elaborate carved stelae in ceremonial courts were defaced or removed. Defeating opposing chiefly polities and coopting their economic networks and regional prestige was a key strategy of state-building in the Andes and beyond.

5. Andean States

As we noted, states effectively coopted regional economic patterns and suppressed former competing monumental centers in their rise to power. The first Andean states likewise grew by taking over trade routes and key resource areas beginning around AD 200 and ending around AD 1100. These states had the organizational capacity to control any single place they chose in their area but did not have enough power to control all this territory. The result was an archipelago of control in key areas with outposts like the famous Cerro Baúl in the southern valley of Moquegua (see figure 2). The great landscapes of barter fairs and congregation by autonomous and semi-autonomous groups were destroyed. By AD 400 or so, the urban sites of Tiwanaku and Wari exhibited, for the first time, all the indicators of state power such as palaces, controlled plazas, a warrior and artisan class, a hereditary elite, a priestly class, and so forth.

Within a short time, the sumptuary economy and trade in exotic goods were tightly controlled by these state networks. These new institutional arrangements were accompanied and supported by increasing internal coercive mechanisms such as religious ideologies of power and hierarchy, military and policing power, the control of roads, and the like. The urban elite did not have to persuade the masses to follow the rules but could exert a great deal of control over them because in a high population density environment, the cost of non-compliance with the state's rules was huge. In contrast to the coercive power elites held over the masses, elite control often involved cooperative strategies within the elite class. In game theory terms, classes operate as coalitions. These internal coalitions cooperated among themselves while competing with other coalitions and external elites.

The archaic state of Tiwanaku is an excellent example. Founded in the mid-first millennium BCE on the southern side of Lake Titicaca, the site became an urban center about 1000 years later. The settlement history of the Lake region shows a clear pattern of chiefly places starting around the 15th century BCE. These sites were small, composed of square or slightly trapezoidal sunken courts made of stone. These courts housed stone stelae that in turn were located in architectural compounds. We calculate that in the earlier phases there was perhaps one court per 4 km2 throughout the Titicaca region, including the Taraco and Pukara polities discussed above. Over time we see a pattern in which there were fewer of these places of congregation but those that remained became larger. This process represents the absorption of larger territory by chiefly political entities. By the end of this process, there was only one independent and massive settlement in the entire region, the city of Tiwanaku. This region was about 2500 square kilometers, the "metropolitan" area of the state. It was about one day's walk or less from Tiwanaku. The capital was the main settlement, but there were hundreds of smaller farming and fishing villages throughout the area.

At a certain point, the Tiwanaku settlement was rebuilt with a grid pattern and spectacular stone-faced architecture covering at least one square kilometer (Janusek 2008). This new capital was a densely populated urban settlement. The Tiwanaku people built a 16.5-meter-high pyramid, sumptuous palaces, sunken courts, minor elite housing, walled plazas, and 3–4 square kilometers of commoner housing outside of the urban core. John Janusek (2002, p. 43) observes a "concentric gradation of social status" beginning in the architecture of the city and its hinterlands. He furthermore notes that there were barrios of distinct groups of people from many distant lands found in the city core. Evidence for feasting was found throughout the city.

Tiwanaku is the first planned city in the south central Andes, with several square kilometers of formal architecture and many more in nearby settlements (Stanish 2003). Tiwanaku was one of the largest cities in the ancient Americas with an estimated population of over 50,000 in its urban core and heartland in a radius of about 20km around that core. Escalante Moscoso (1997), Janusek (2008), Manzanilla (1992), and Vranich (2001), among others, have described the massive stone architecture in the city. This included a large pyramid, palaces, sunken courts, and areas for performance. Surrounding this core we find workshops for pottery, metal, and almost certainly cloth, wood, and other specialized products that do not survive in the wet and harsh environment of the Titicaca Basin.

Tiwanaku later conquered or incorporated a large territory in the southern Titicaca region. By the 7th century AD they established shrines and administrative settlements around the region and absorbed areas as far north as Lake Arapa. They also conquered enclaves of territories in multiple directions from the capital city. Colonies were established hundreds of kilometers away in Cochabamba in Bolivia, in the eastern region of Lake Titicaca, northwest into the Arequipa area, and west to the Moquegua, where they built an impressive colonial town. They maintained vigorous trade relationships with the indigenous enclave of San Pedro de Atacama in northern Chile. San Pedro is about an 800 km trek from the Tiwanaku capital. The existence of Tiwanaku materials as far north as the Majes River in Peru confirms their vast reach around an area the size of California. The development of the region's first and only archaic state marked the crossing of a great threshold: coercive powers now structured state political organizations. These colonies effectively substituted for the great

fairs and places of congregation in earlier times but now they were under the control of a single political group located in Tiwanaku.

The capital city housed a large class of craft specialists. Tiwanaku artisans produced a vast array of objects in stone, metal, pottery, cloth, and wood (Janusek 1999). These production enclaves were reproduced in their colonial territories. At sites like Isla Estevez and the adjacent Huajje in the Lake Titicaca port of Puno, we see evidence for metal smelting from 100 BCE up to the Colonial Period (Schultze et al. 2009). Tiwanaku first coopted the earlier location from the previous chiefly society and continued with this silver smelting tradition. The Tiwanaku state appears to have strategically placed its colonies in areas to obtain critical raw materials and resources. The settlements in the Arequipa area accessed the Chivay obsidian sources. In Moquegua, the site of Omo produced maize and other highly valued crops and provided access to copper sources. The eastern colonies across the Cordillera Real would have obtained hard woods, hallucinogenic plants, animal pelts, gold, feathers, and other commodities. The colonies in Cochabamba were known to be the breadbasket of later states and would most likely have produced prodigious quantities of maize and other lowland crops.

The ability to amass surplus and labor in the Tiwanaku state resulted in the creation of vast areas of intensive agricultural features known as raised fields. These are basically raised planting beds in swampy land that provide very rich soils for intensive agriculture. Simply put, they are large mounds of earth raised above the lake and water table levels. They were designed to provide a moist planting surface and were built in a variety of physical forms (see Erickson 1988). Fields were built principally along the lake shore, adjacent to rivers, and in the low, swampy pampas of the lake region. Less intensive use of raised fields was actually quite old in the region, going back perhaps to 1200 BCE (Stanish 2006). They are associated with some of the earliest agriculture in the region. In fact, raised fields were one component of a multifaceted economic strategy that included animal raising, irrigation and dryland farming, use of natural depressions in the pampa, and fishing. Throughout prehistory, people would alter their strategies to the changing natural and cultural environments in which they lived.

Economic institutions helped finance the Tiwanaku state economy, which was achieved by mobilizing labor to work these field to produce surplus. Matthew Bandy (2005) brilliantly noted that the environmental characteristics of the Titicaca Basin provided a very narrow seasonal window for dryland agriculture. Raised fields, for a number of reasons, can be worked at different seasons than dryland agriculture. The more intensive raised field agriculture needed to be worked seasonally for short bursts of time, and Tiwanaku brought workers together seasonally in provincial centers. The state had the capacity to organize such labor and the ability to bring people together in an efficient manner, which is limited in nonstate or chiefly societies. In contrast to a tribute-in-kind where a certain portion of goods would be offered by the periphery and the producer class, this classic traditional Andean "labor tax" meant that an agricultural surplus from raised fields was feasible without disrupting work at the village level or placing excess demands on villagers (Rivera 1990). The surplus this labor tax produced helped underwrite the Tiwanaku political economy (Kolata 1986).

The nature of political geography changes significantly in the development of states from complex chiefdoms. In states, the territories are of course much larger and include a variety of groups. The relationship between those incorporated groups and the state capital center varies considerably. The state forcibly incorporates different ethnic groups, coopts others, and makes political and economic arrangements with different groups as the situation on the ground dictates.

Unlike the Inca Empire with its highly regulated provinces and contiguous territories, the lands of Tiwanaku were heterogeneous and noncontiguous. It resembled an archipelago of regions with a narrow control of the road to these holdings (figure 4). Our cumulative research to date indicates that some enclaves were bona fide colonies while others were autonomous polities that traded with the Tiwanaku state. As Smith and Janusek (2014, p. 681) note, "Rather than a core area of continuous control, these [state] processes created

a shifting political mosaic rooted in fluid politico-religious webs." Tiwanaku had a core and heartland territory, with territorial enclaves around the south-central Andes. The state political geography outside its core territory was a mosaic of colonies, poorly controlled territories, roads, and other strategically located state economic institutions such as mines, quarries, agricultural enclaves, way stations on roads, ports on Lake Titicaca, and the like. This early state could control most anywhere that it wanted, but it could not control all of the territory in its reach. This pattern is similar to the counterpart of Tiwanaku to the north, known as Wari.

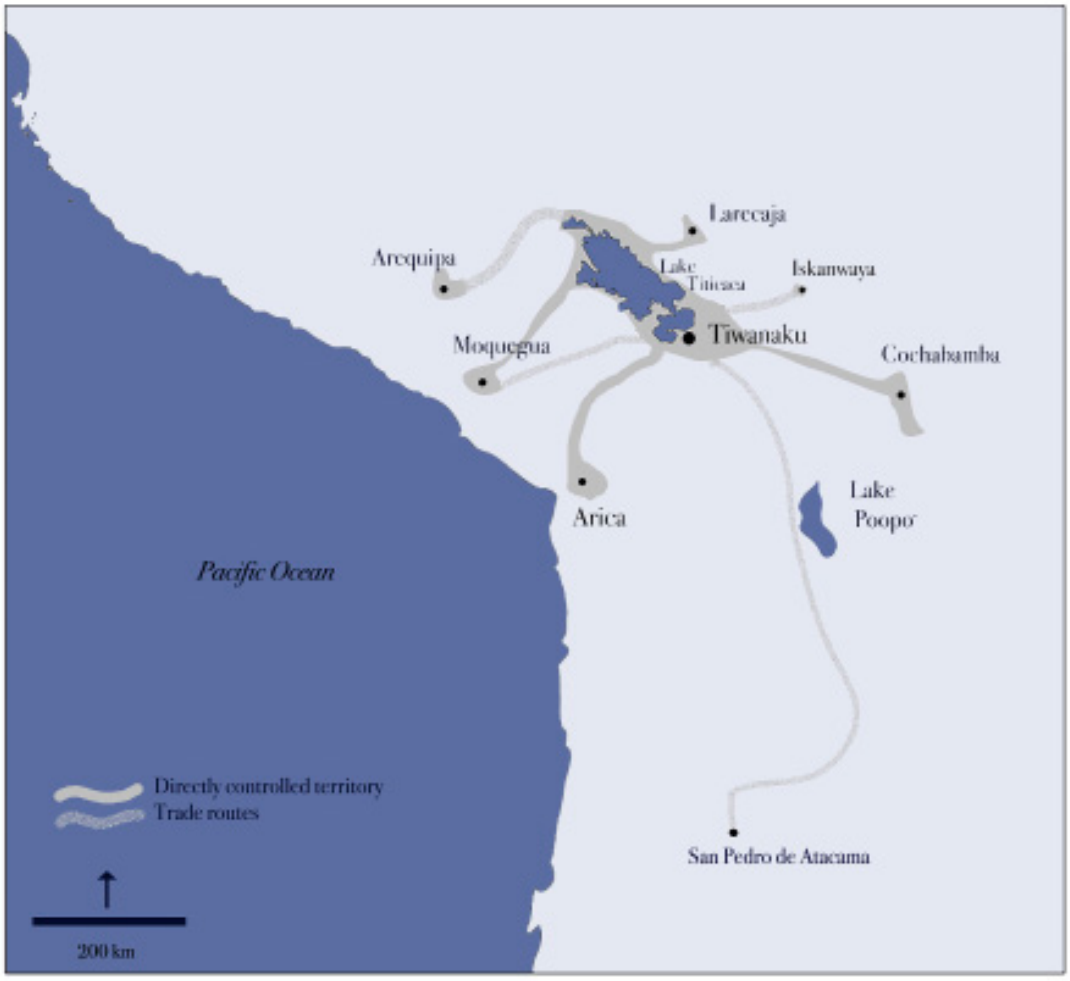

Figure 4. The political geography of the Tiwanaku state.

Grand theatrical spectacle was another cornerstone of Tiwanaku state power. This state theatre developed directly out of the ritualized landscapes of the earlier chiefly societies. With the emergence of the state, however, there were no longer competing centers—all ritual centers were in the service of promoting the Tiwanaku state. In other words, Tiwanaku usurped this previous tradition and built multiple and permanent provincial centers where ritual was central to maintaining state control. Using historical data from the colonial period on the later Inca empire, we know that the rulers of states provided spectacle and feasting in exchange for labor and continued political loyalty. The recruitment and scheduling of agricultural labor, for instance, was almost certainly based on this model. During the critical periods when raised fields had to be worked, local Tiwanaku administrators would host elaborate feasts.

We have very good knowledge about traditional Andean feasting. Feasting is a strategy of chiefdoms and states that is found around the world in virtually all places. One crucial difference is that in chiefdoms, the

elite have to work very hard to persuade people to join their factions. They do so by hosting these sumptuous feasts. This is what we see in Chincha Paracas culture described above. There were five independent sets of geoglyphs that run to separate monuments. This is what we refer to as "competitive feasting" in which different chiefly lineages mobilize their extended kin group and friends to create grand feasts.

In states, however, the elite class has coercive power that it can use to mobilize people. Feasting in the Andes transforms from village level or chiefly persuasion to a symbolic act of reciprocity between the state and its subjects. In chiefly societies, the relationship is largely reciprocal. In states, it is an ideological means of normalizing an essentially unequal relationship between elite and subjects.

Tiwanaku artisans created a suite of artifacts that is linked with feasting. Objects include elaborate ceramic vessels known as a tazones and keros. A tazon is a flat-bottomed bowl with outflaring sides. A kero has been described as a "chalice" or a "tumbler." The first is designed for food and the second for drink. Another artifact that is closely linked with feasting and festivities is the incense burner. When discovered on a site, this suite of artifacts is a good indicator that feasts were held at that locale. It is noteworthy that keros and tazones are found on most Tiwanaku sites; incense burners are generally restricted to important political and religious centers. When found in context, incense burners are located on the steps and sides of doorways to important buildings.

Tiwanaku built an elaborate system of pilgrimages throughout their territory. As commonly seen in ancient state societies, these pilgrimage routes linked different centers where feasts occurred in a manner not unlike medieval Christian and Muslim ones. These rituals included the creation of pilgrimage shrines along the road system (Delaere, Capriles, and Stanish 2019). Ancillary road spurs connected elaborate shrines and other ritually specialized places. It is likely that there was a water pilgrimage on Lake Titicaca as well with a series of shrines on many of the small islands. The Tiwanaku capital and its provincial towns hosted elaborate feasts in return for raw materials and access to specialized labor. The capital itself was home to grand events such as the theatrical performances discussed above. Embedded within these events were more prosaic activities, such as commodity exchange, marriage contracts, and the like.

After around 900 years of statehood, Tiwanaku began to collapse around AD 1000 in the periphery. There was a gradual retraction of Tiwanaku influence as a function of distance from the core territory. By AD 1200, the city itself was in ruins, ultimately becoming a sacred icon of the Inca state. A similar trajectory is seen at the capital and hinterland sites of the Wari state in the central highlands near Ayacucho.

6. Concluding Remarks

Anatomically modern people lived successfully as hunter-gatherer-foragers in small-scale groups for at least 50,000 years. Around 13,000 years ago at the end of the Pleistocene in the Eastern Hemisphere, with increasing sedentism and reliance on domesticated crops, a few peoples built stone structures on the landscape and started interacting in larger groups. This same process happened independently in the Western Hemisphere several millennia later. These structures built on the landscape were places of congregation by disparate groups from around the region. These regional systems were structured by various kinds of ritual. Lacking any coercive mechanisms outside of small kin groups, polities cemented cooperative networks with ritually mediated events and performances. We know that these social events were timed by a simple astronomical calendar of some sort and hosted great feasts, barter markets, and other activities. These places grew over time, and at a certain point, a few transformed into architecturally complex chiefly ritual centers that drew people from vast regions. The shift from a Pleistocene hunter-gatherer lifeway to one in which chiefly societies built complex political economies based on these architecturally complex landscapes represents the first great transformation in the history of our species.

In a few places around the world, the great archaic states evolved out of this chiefly landscape. The shift to societies with institutionalized coercion and economic classes represents the second great transformation in human history. Elite and bureaucratic classes developed in these states focused on cities. Urbanized archaic states created archipelagos of control, suppressing the extensive trade networks of the earlier chiefdoms. They replaced the formerly autonomous regional barter market fairs and festival locations with formalized systems of production and redistribution in their capitals and regional centers. The nature of ritual changed in state societies. For the first time, we can speak of "religions," i.e., institutionalized belief systems supported by a bureaucratic priesthood, temples, and formal practices. Ideologies developed that were consistent with the elite classes. The formerly kin-based social networks mediated by ritual were increasingly replaced with polity-wide ideologies with theological canons, formal belief systems, full-time temples, and various forms of taxation to maintain the religious bureaucracy.

The fact that this happened independently in multiple places around the globe indicates that there is some process inherent in human interaction under similar conditions that leads to the emergence of complex society. Evolutionary thinking and analyses of archaeological and paleo-environmental data give us insights into what those processes are. We are still working out the details, but the factors most likely to be necessary pre-conditions for state emergence include rising population densities, the existence of productive ecological niches, and perhaps post-Pleistocene shifts in the global climate. While these material factors are fundamentally important, we now realize that societies that develop norms and institutions for cooperation and coordination will grow in complexity and size. Ritual and religion are important instantiations of these norms and institutions and thus are causal factors in enabling groups to work effectively on larger scales and aren't just epiphenomenal factors. Ritual is something found in all human societies, and the ways in which individuals and groups have adapted and manipulated ritual practices are central to the evolution of complex society.

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