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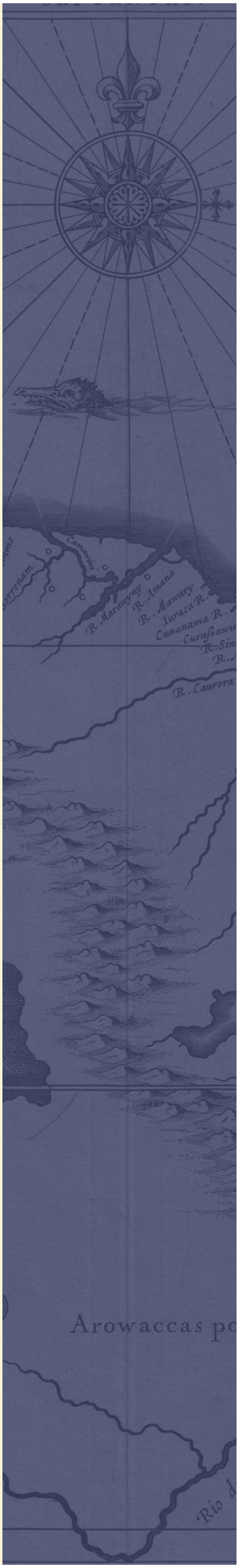

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Archaeology in South America
A Brief Historical Overview

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> Let us come to the rational animals.
>
> We found the entire land inhabited by people completely naked, men as well as women, without at all covering their shame. They are sturdy and well-proportioned in body, white in complexion, with long black hair and little or no beard. I strove hard to understand their life and customs, since I ate and slept with them for twenty-seven days; and what I learned of them is the following.
>
> *1502 letter from Amerigo Vespucci to his patron, Lorenzo di Pierfrancesco de' Medici*

Current archaeological knowledge builds on several centuries of interest in the antiquities and monuments of South America, although interest motivated by very different goals and practices. The first European descriptions of South American objects and sites were the by-products of conquest. Soldiers accompanying **Francisco Pizarro**'s expeditions in 1532–33—such as **Miguel de Estete** and **Pedro Pizarro**—described the towns and monuments of native kingdoms, in the process providing valuable accounts of the Inca Empire. The soldier-chronicler **Pedro de Cieza**, who arrived in America as a fourteen-year-old in the 1530s to seek the riches of the New World, was also an astute observer with an eye for detail, describing ancient road networks, fortresses, temples, and other native constructions between Colombia and Cusco. Catholic priests described the ritual artifacts and sites used by native peoples, usually to replace native religion with Christianity. Father **José de Arriaga**'s 1621 *The Extirpation of Idolatry in Peru* was a descriptive guidebook to Andean religion, listing sacred places and artifacts so local Catholic priests could recognize and eliminate pagan beliefs. A more sympathetic and extraordinarily valuable document was prepared in the early 1600s by the bilingual mestizo author **Guaman Poma de Ayala**, who wrote a 1,400-page document, *The First New Chronicle and Good Government*, in which he argued that the Spanish conquest was unjust and the colonial system cruel, supplementing his argument with hundreds of drawings illustrating Andean culture and Spanish inequities. In the early seventeenth century, Father **Bernabe Cobo** wrote detailed accounts of Inca religion and culture. Although none of these documents were focused on the scholarly study of South American cultures, they are valuable sources of information, particularly about the Incas.

A theme that emerges from these accounts, particularly in the Andean region, was the recognition that—despite the achievements of the Inca

Figure 1.1 A 1558 map of South America

Empire—some sites were the creations of earlier peoples, often vaguely described as the *huaris* (Quechua for "ancestors" or "old ones.") Some of these pre-Inca cultures had been recently assimilated by the Incas just before the Spanish conquest, and their names were still remembered. One of these cultures was the Chimú of the North Coast, who had been conquered by the Inca only a few decades before the Spaniards had conquered the Inca. Earlier cultures, however, were anonymous and unrecorded by Spanish chroniclers.

Exotic Curiosities and Cabinets of Wonder

The study of archaeological artifacts and sites had similarly indirect origins. Some objects were shipped from the New World to European monarchs as evidence of their loyal subjects' conquests, although many artifacts made from precious metals were melted into bullion without regard for aesthetics. As a by-product of Enlightenment concerns, formal collections of natural specimens and other curiosities, so-called cabinets of wonder, were established across Europe, precursors to royal collections and museums (figure 1.2).

In 1752 the Spanish natural historian and diplomat **Antonio de Ulloa** proposed establishing an Estudio y Gabinete de Historia Natural in Madrid that would house objects Ulloa and others had collected on their voyages. Not until 1771 did the Spanish king, Carlos III, establish the Real Gabinete de Historia Natural, issuing a decree to his global empire to collect and send objects of interest to Madrid. The collections included natural specimens, paintings, and other artworks, as well as antiquities. Opened in 1776 and looted by Napoleon's forces in 1813, the Real Gabinete de Historia Natural was transformed into the Real Museo de Ciencias Naturales de Madrid, the institutional ancestor of the current Museo de America.

The Spanish clergyman **Baltazar Jaime Martinez de Companion**, who served as bishop of Trujillo from 1778 to 1790 and whose diocese included the coast, highlands, and jungle regions of north-central Peru, prepared a remarkable nine-volume document known as *Trujillo del Peru*. Lavishly illustrated with watercolors portraying colonial society, documented with detailed maps and plans, and even containing musical scores of folksongs, the ninth volume of *Trujillo de Peru* was dedicated to archaeological sites and discoveries. The volume responded to a royal inquiry asking in part "if there exists some work from those times before the conquest; if it is conspicuous due to its material, form or grandeur or such vestiges of it; if, by chance, gigantic bones that appear human have been found; and if some tradition is preserved that at sometime there were giants; and also of the places from which they came, and of their duration, extinction and its causes; and about what leads to the maintenance of said tradition."[1] The good bishop replied to these and many other questions with words, images, and objects. He prepared a map of the Chimú site of Chan Chan, illustrated native mummies, and created a list of words in several non-Quechua North Coast languages. In 1788 Martinez de Companion shipped twenty-eight boxes of curiosities—dried animals, ceramics, utensils, and other objects—to the Real Gabinete de Historia Natural; these boxes have never been found. In 1790 he shipped another six boxes of the ceramics that

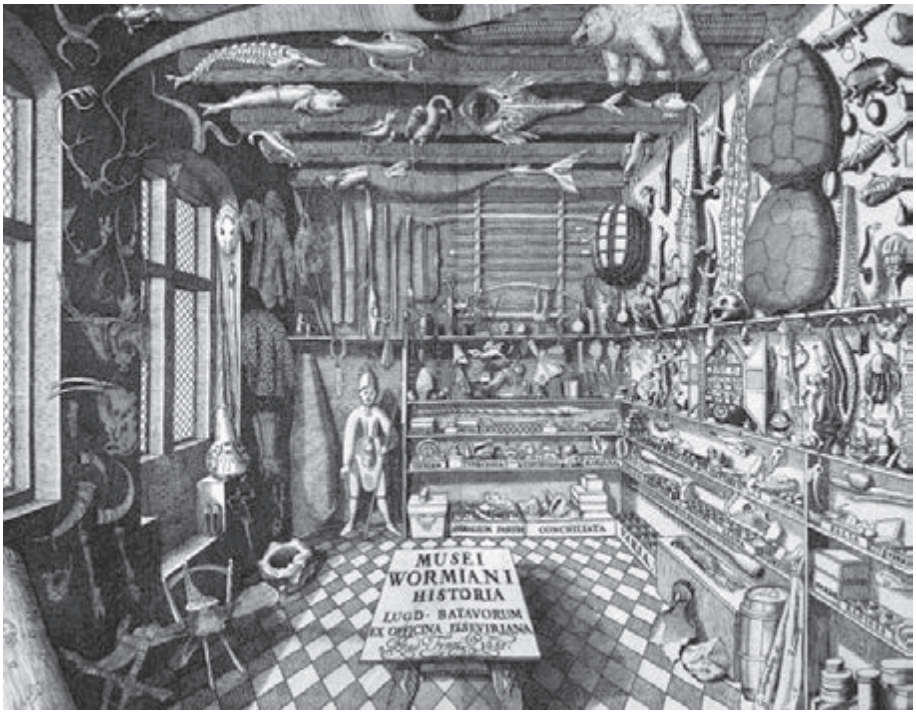

Figure 1.2 A 1655 cabinet of wonder—frontispiece from Museum Wormianum by Danish naturalist Ole Worm (1588–1655)

had figured in his illustrations; some of them have been found and contain nearly 200 ceramic vessels.

South American archaeology originates from the same Enlightenment-era concerns that resulted in the establishment of the first natural history and archaeological museums in Europe but also from the wave of scientific explorations that occurred in the late eighteenth and early nineteenth centuries.

Scientific Explorers, Antiquarians, and Fieldworkers

After the mid-1700s, South America saw numerous scientific expeditions, most focused on fields such as geology, botany, and zoology. For example, some of the greatest scientific explorers in South America—such as **Richard Spruce** (1817–93), **Henry W. Bates** (1825–95), **Alfred Russell Wallace** (1823–1913), and **Charles Darwin** (1809–82)—mentioned the continent's peoples and customs in passing, essentially as brief distractions from the plants, animals, and rocks these natural historians had come to study.

But **Alexander von Humboldt** was different (figure 1.3).

Alexander von Humboldt (1769–1850) was a scholar who encompassed an astounding variety of disciplines, from astronomy to zoology, from botany to political economy. His extensive explorations in tropical America from 1799 to 1804 were not primarily focused on South American antiquities—no one with his


ALEXANDER
von HUMBOLDT

polymathic tendencies could focus on any one topic—but neither did he overlook the traces of the past. Traveling in South America with **Aime Bonpland** and other companions, von Humboldt followed the major Inca roads from the high-altitude paramo near Pasto, Colombia, south through the Ecuadorian highlands and the "Avenue of the Volcanoes," and then south into the northern Peruvian provinces of Piura, Lambayeque, and Cajamarca. En route, von Humboldt studied numerous Inca fortifications, palaces, and way stations (*tambos*), taking measurements and notes that were supplemented by plans and sketches prepared by Bonpland. In summarizing Inca architecture, von Humboldt concluded, "Simplicity, symmetry, and solidity: these are the three characteristic traits that distinguish in a positive way all Peruvian buildings." This was, the Peruvian archaeologist and historian Cesar Astahuaman has noted, "the most brief, but exact, definition that has been proposed to this very day."[2]

During the nineteenth century, travelers with antiquarian interests wrote accounts of South American archaeological sites, writings more focused on archaeology but also interwoven with historical accounts, personal observations, and travelogues. The Peruvian-born mining engineer and natural historian **Mariano Eduardo de Rivero y Ustaríz** (1798–1857)—a scholar profoundly influenced by von Humboldt—also conducted archaeological and historical investigations in Peru. Rivero coauthored *Antigüedades Peruanas* with the Swiss naturalist and diplomat **Johann Jakob von Tschudi** (1818–89); published in 1851, their book was translated into English and French almost immediately.

However, the initial forays into South American archaeology were not evenly distributed across the continent. The Andean region and the Pacific coastal zones were served by steamship lines that called at multiple ports from Panama to Chile, which contributed to the number of archaeologists' and travelers' accounts from this region.

Although few authors had von Humboldt's polymathic scope, they often produced observations of archaeological interest. **William Bollaert** (1807–76), an English chemist, businessman, and writer, incorporated archaeological observations and historical research with his commercial activities in Colombia, Ecuador, and Peru—which he documented in his 1860 book, *Antiquarian, Ethnological and Other Researches in New Granada, Peru and Chile, with Observations on the Pre-Incarial, Incarial and other Monuments of Peruvian Nations*, a tome as prolix in its prose style as its title suggests. Among these nineteenth-century accounts, several classics stand out for their skill in describing and illustrating archaeological sites. The great Italian-Peruvian naturalist and explorer **Antonio Raimondi** (1824–90) incorporated numerous archaeological observations into his magisterial five-volume work, *El Perú* (published 1875–1913), based on meticulous field notes and early watercolors illustrating the weird and intriguing art style at Chavín de Huántar, including an image of the stelae that bears his name.

Another outstanding example is the work of the archaeologist, diplomat, and writer **Ephraim George Squier** (1821–88; figure 1.4).

Squier had an amazing life that ended in tragedy.[3] Encouraged in his anthropological interests by the American anthropologist Lewis Henry Morgan, Squier

Figure 1.3 Portrait of Alexander von Humboldt, 1806, painted by Fredrich George Wietsch (1758–1828)

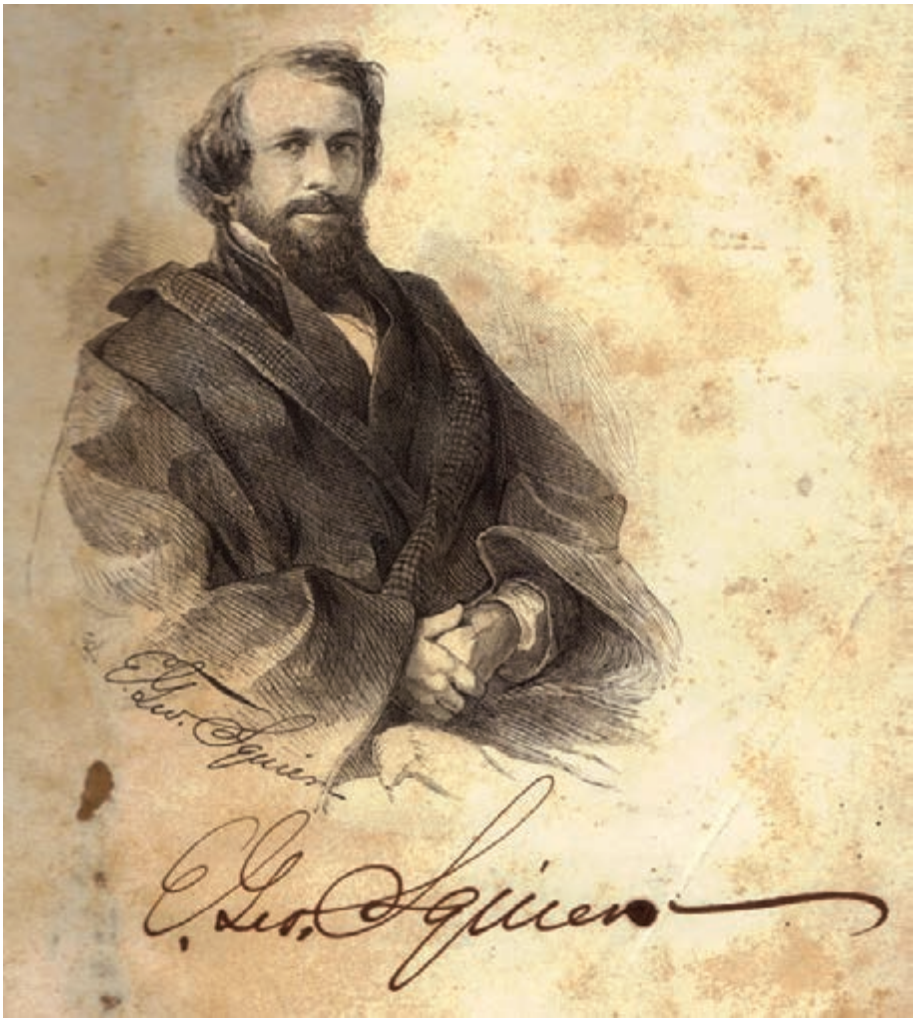

Figure 1.4 Portrait of Ephraim George Squier

began his studies in the northeastern United States. Squier's famous 1848 book, *Ancient Monuments of the Mississippi Valley: Comprising the Results of Extensive Original Surveys and Explorations,* coauthored with Edwin Davis, described hundreds of archaeological sites across the eastern United States and illustrated and classified prehistoric earthworks, concluding that such monuments had been built by cultures other than the ancestors of the Native Americans in the Northeast. Published by the Smithsonian Institution and considered the "first classic" of American archaeology, *Ancient Monuments* transformed Squier from a local newspaperman into a scholar with a national reputation. He combined careers as an editor and diplomat with his archaeological interests. Appointed the US commissioner to Peru in 1863 by President Abraham Lincoln, Squier began extensive travels in Peru in 1863–65, journeying by steamship between coastal ports and taking extended trips on horseback into the hinterland. Squier had an excellent eye

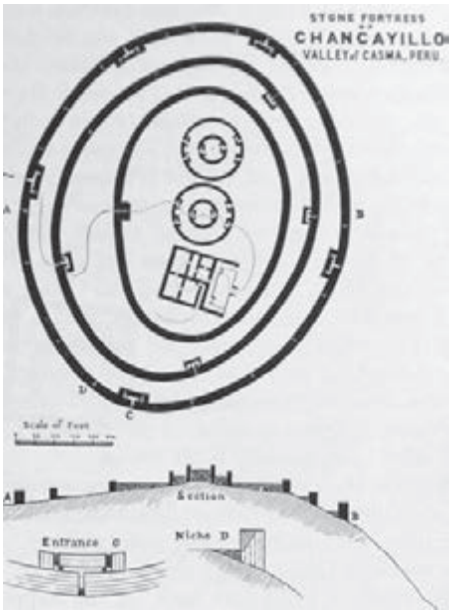

Figure 1.5 Squier's 1865 map of Chankillo, Casma Valley, Peru

Figure 1.6 NASA/IKONOS image of Chankillo, January 13, 2002

for ancient monuments, and most of his maps and plans were extremely accurate (figures 1.5, 1.6).

A notorious exception was Squier's illustration of the Gateway of the Sun, which shows an enormous portal through which a mounted horseman is about to ride (figure 1.7). In fact, the doorway is less than 2 meters (less than 7 ft) tall, and this erroneous figure was probably created as Squier descended into a lengthy illness. Nonetheless, Squier's *Incidents of Travel and Exploration in the Land of the Incas* (figure 1.8) introduced a new standard of precision and accuracy into South American archaeology.

Other scholars followed Squier's lead. The Austrian-French explorer **Charles Wiener** (1851–1913) traveled extensively in the southern Peruvian Andes and Bolivia in 1875–77. His lavishly illustrated 1880 book, *Pérou et Bolivie: Récit de voyage suivi d'études archéologiques et ethnographiques et de notes sur l'écriture et les langues des populations indiennes*, presents a remarkable visual record of archaeological sites and artifacts, as well as of daily life in the nineteenth-century Andes (figure 1.9). Wiener went on to work extensively on the shell mounds of coastal Brazil with the Museu Royal in Rio de Janeiro (discussed below).

One of the most dedicated field investigators was the Swiss-American anthropologist **Adolph Bandelier** (1840–1914). Bandelier had a well-established body of research in the Southwest, having conducted both ethnographic and archaeological research in New Mexico, Arizona, and Sonora. In 1892 Bandelier went to South America, traveling to the remote region of Chachapoyas where he carefully mapped the ruins at the site of Kuelap (figure 1.10).

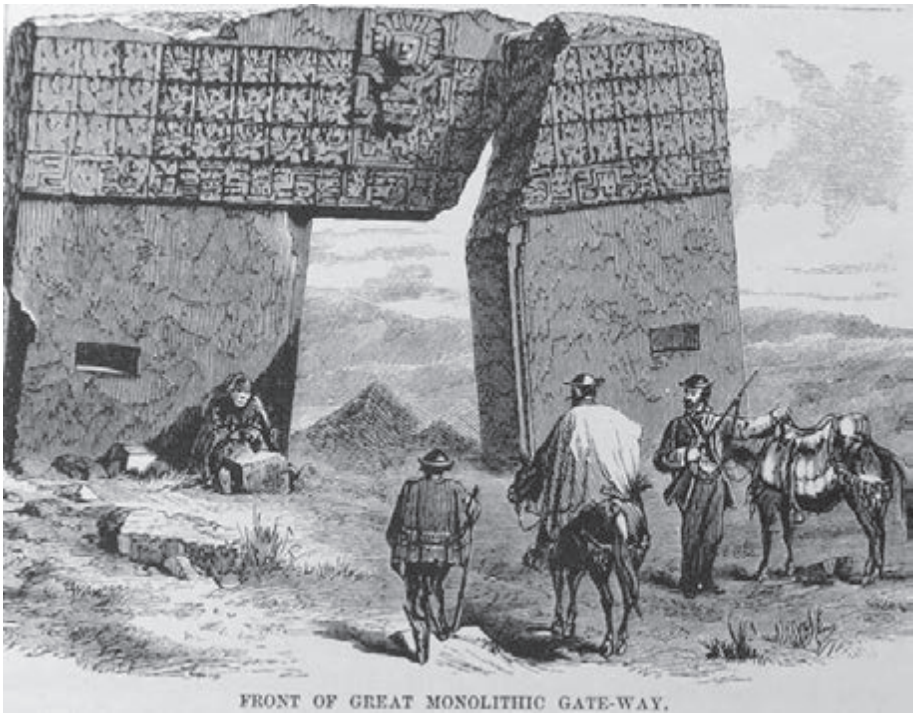

Figure 1.7 Squier at the Gateway of the Sun, Tiwanaku

Figure 1.8 Alphons Stübel at the Gateway of the Sun, 1877

Figure 1.9 Charles Wiener's 1880 drawing of the Staff God at Tiwanaku

Bandelier's notes and plans demonstrate what an energetic and careful fieldworker he was. In 1894 Bandelier and his bride, Fanny Ritter Bandelier, went to southern Peru and Bolivia, where they spent the better part of two years conducting archaeological and ethnographic research (including a three-month stint on the Island of the Sun, when they were cut off from the outside world because of civil war in Peru). In addition to extensive and detailed ethnographic observations on the local Aymara, the Bandeliers mapped the site of Tiwanaku, climbed to 13,000 feet on Mt. Illimani where they found archaeological sites, and made an extensive survey of archaeological sites on the Island of the Sun. Bandelier collected a broad array of artifacts and other objects, including a sample of human skulls that showed trephination and cranial modifications. In the course of this study, Bandelier distinguished between Inca-style ceramics and architecture and the local Chullpa styles of pottery and buildings, although it is not clear that he recognized that the Tiwanaku ceramics he photographed were from a pre-Inca culture. Prehistoric chronology would be a major issue for the next 100 years.

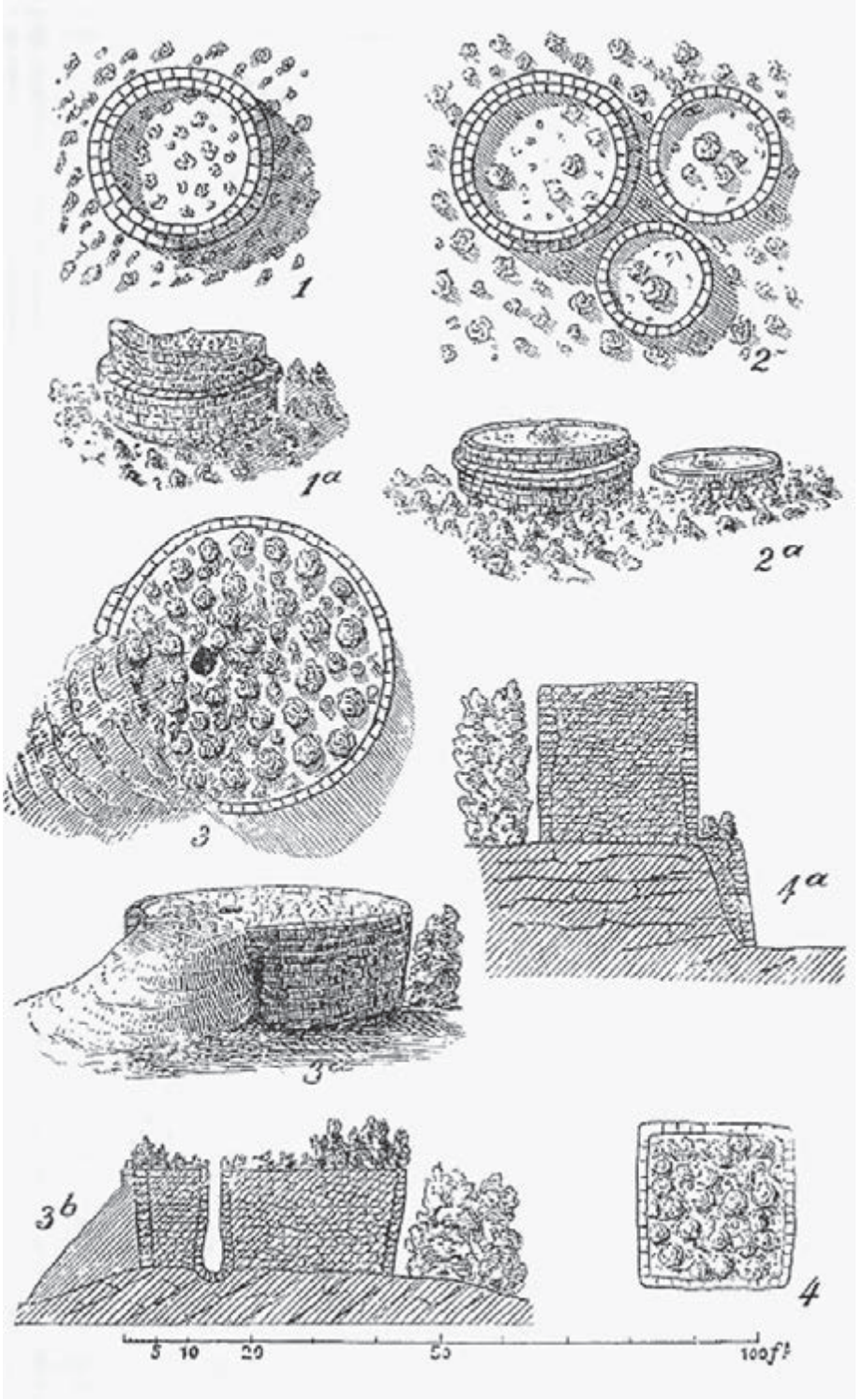

Figure 1.10 Adolph Bandelier's 1893 plans of structures at Kuelap, Chachapoyas

National Museums, National Identities, and Early Archaeologists

The establishment of museums across South America stimulated other investigations, although with somewhat mixed results. However, a factor common to all these institutions was their perceived role in establishing new national identities as Spanish colonies became South American states. Maria Margaret Lopes and Irina Podgorny have written, "The museums of natural history established in Buenos Aires (1812/1823), Rio de Janeiro (1818), Santiago de Chile (1822), Bogota (1823), Mexico (1825), Lima (1826), and Montevideo (1837) were all framed in the process of building new nation states; national museums were founded as former colonies became independent. In the New World, museums were the loci of institutionalization of natural history. But as a standard measure by which to test the scientific culture of a country, they also became symbols of national identity."[4]

In 1822 the newly independent government of Peru decreed that a national museum be established to house "the venerable relics that remain to us of the arts possessed by the subjects of the Empire of the Incas, that are worthy of being brought together in such an institution, before they have been exported away from our territory, as has been done until now, because it is in Spain's interest to erase the vestiges of that ancient and grand civilization."[5] Despite this early and explicit link between archaeology and national destiny, Peru's national museum in Lima did not open until 1826, and it floundered through much of the nineteenth century. The museum lacked focus and stature until the early twentieth century, when **Max Uhle** (1856–1944) was appointed co-director in 1906 (a position he occupied until 1911).[6] It continued to flourish under the leadership of **Julio Tello** (1880–1947), appointed head of the Archaeology Section[7] of the Museo de Historia Nacional in 1913. In 1924 Tello became the director of the newly established Museo de Arqueología Peruana, a post he occupied on two occasions (1924–30, 1937–45) and which was the institutional base for his numerous archaeological investigations (discussed below).

A national museum was established in Colombia as one of the first acts of the independent congress in 1823 and opened in 1824.[8] In 1826 Rivero y Ustaríz, the future author of *Peruvian Antiquities*, was contracted by Colombia to direct the museum, an institution that occupied different buildings before coming to rest in a massive converted prison in the heart of Bogota in 1948. Although the museum's founding collections contained antiquities, only during the second half of the nineteenth century did the collections begin to focus on the prehispanic cultures of Colombia, such as San Agustin, Muisca, and Quimbaya. In the early twentieth century, excavations by **Konrad Theodor Preuss**[9] in San Agustin (1913–14) and by **J. Alden Mason**[10] in the Tairona region (1922–23) resulted in pieces that were displayed in the National Museum of Colombia and in museums overseas.

Brazil's Museu Nacional do Rio de Janeiro (which had its origins as the Museu Real, founded in 1818 when the Portuguese monarch João VI fled Napoleon's armies and reestablished his throne in Brazil) was reorganized in 1876 into a major scientific research center, including anthropology and archaeology.[11] The Museu published archaeological reports on the shell mounds (*sambaquis*) near the mouth

of the Amazon River and on the artifacts they contained.[12] A number of foreign naturalists and scientists were invited to Brazil by the subsequent emperor, Don Pedro II, overthrown in 1889.[13] Similarly, numerous museums were established in the late nineteenth century in Argentina and Chile, public institutions that articulated national worldviews in the selection of objects to display.[14] In these situations it was not uncommon to contrast archaeological objects of "obvious" skill and artistry with the "culturally impoverished" native societies then present in South America—an ethnocentric contrast that led some to suggest that archaeological marvels had been created by "lost civilizations" (much as Squier had concluded regarding the mound builders of the Ohio Valley in the United States).

In Chile, the Museo Nacional de Historia Natural was founded in Santiago in 1830. Like many of its counterparts, it faced numerous challenges in obtaining funding and political support. Initially designed to focus on "the principal vegetal and mineral products of the territory," an Anthropology Section was not established until 1910, shortly before Max Uhle was hired to conduct excavations in 1912 at the site of Chunchurí, near Calama in the Atacama Desert.[15]

In Argentina, the development of national museums stalled as independent provinces seesawed between different forms of government and fought civil wars from 1814 to 1876. National unity was achieved only after the military leader, Julio Argentino Roca (1843–1914), gained control of the presidency after 1880. Roca's popularity was based on his successful conclusion of the "Conquest of the Desert," an expansionistic and genocidal project that extended Argentina's control into Patagonia at the expense of the indigenous peoples who lived in the region. This was hardly a political environment in which archaeology or ethnography would receive government support, and paleontology and other fields of natural history were more significant disciplines in many of Argentina's nineteenth-century museums. Ironically, this emphasis on paleontology led the eminent Argentine scholar Florentino Ameghino (1854–1911) to argue that South America, specifically Argentina, was the place where humans first evolved in his 1878 book, *The Antiquity of the Peoples of La Plata*.

Nonetheless, various Argentine museums sponsored initial archaeological investigations, such as the Museo de la Plata's 1890 report on "Archaeological Explorations in the Province of Catamarca" in which the museum's director, **Francisco Pascasio Moreno**, summarized some archaeological discoveries of ceramics and petroglyphs and argued for the importance of archaeological research from a pan-continental perspective, pointing out that "we should not forget that current geographical divisions are not the same [ones] that separated the ancient precolombian societies"—an observation still relevant more than a century later.[16] These sophisticated archaeological materials contrasted with the "limited" material culture of the Yahgan and Alakaluf indigenous communities, leading Moreno to infer that a lengthy period of cultural decay was suggested by the archaeological materials. Additional work in Argentina was conducted by the Swedish-Argentine archaeologist **Eric Boman** (1867–1924), whose two-volume 1908 book, *Antiquités de la Région Andine de la République Argentine*, combined ethnographic and archaeological data.

Elsewhere, archaeological investigations were undertaken by scientific and historical societies, usually groups of historians and scholarly amateurs who were often members of the well-educated upper classes. **Jacinto Jijón y Caamaño** (1890–1950) was the scion of a wealthy Quito family and heir to Ecuador's largest fortune, who combined a career as diplomat and politician with a passionate interest in archaeology and history.[17] In 1909 Jijón y Caamaño directed excavations on his family's haciendas in Imbabura Province, northern Ecuador, and in 1916 he excavated at Manteño sites in coastal Ecuador such as Cerro Jaboncillo (discussed in chapter 10). In 1918 he conducted surveys and excavations in the southern highlands in the province of Chimborazo, documenting his discoveries in the two-volume, abundantly illustrated monograph, *Puruhá: Contribución al conocimiento de los aborígenes de la provincial del Chimborazo de la República del Ecuador*.[18] In 1919 Jijón y Caamaño invited Max Uhle to excavate in Ecuador. After a 1925 revolution, Jijón y Caamaño went into exile in Peru where he met Julio Tello and Alfred Kroeber and excavated at the multi-phase Maranga site near Lima.[19] He returned to Ecuador, where he was increasingly engaged as a politician—including an unsuccessful presidential candidacy. Jijón y Caamaño's magnum opus, *Antropología prehispánica del Ecuador,* was published posthumously in 1952.

An early attempt at synthesizing South America's prehistory was **Thomas A. Joyce**'s 1912 *South American Archaeology: An Introduction to the Archaeology of the South American Continent with Special Reference to the History of Peru*.[20] Joyce's book was an ambitious overview of the prehistories of a largely unknown continent, an uneven body of data that Joyce acknowledged as such but nonetheless attempted to summarize. A curator at the British Museum, Joyce drew extensively on Spanish, Portuguese, and French chronicles by explorers and priests, summarized the writings of nineteenth-century antiquarians, and mentioned some of Max Uhle's initial excavations. Joyce illustrated the book with engravings and photographs of artifacts from different museum collections (particularly of the British Museum), illustrations he organized based on their nations and regions of origin.

Joyce's work highlights a pivotal problem facing late-nineteenth- and early-twentieth-century archaeology in South America: the uncertainty about time. The distinctive traits of Inca material culture were well-known, such as Inca architecture with its monumental masonry constructions marked by trapezoidal doorways and niches and Inca pottery with polychrome on buff surface decorations or the distinctive jug with a bell-shaped spout referred to as an *aryboloid*. It was also obvious that other classes of architecture and pottery were definitely not Inca. Less clear were the temporal relationships between Inca and non-Inca sites and objects. Were these other types of archaeological materials different from, but contemporary with, the Inca? Did these non-Inca materials pre-date the Inca? If it was known from the Spanish chronicles that the Inca originated in the Cuzco Valley in the southern Peruvian Andes and spread north and south through much of the Andes, where did these other cultures originate? Were they earlier South American cultures or intrusive societies from elsewhere, such as Egypt, China, or Mesoamerica? When Joyce wrote *South American Archaeology*, these questions were very much unresolved.[21]

Issues of chronology and origins were central matters for South American archaeology during most of the first half of the twentieth century. These fundamental questions—How old is it? Where did it come from?—remain essential queries, especially in poorly studied regions but also in zones that have seen significant archaeological research. However, from the 1890s, when some of the first systematic excavations were conducted, until the 1960s—when radiocarbon dating, invented in 1949, became more commonly applied to South American sites—chronology and origins were the two overriding issues archaeologists faced. Two archaeologists who addressed these issues were Max Uhle and Julio Tello.

Max Uhle and Julio Tello, Pioneers in South American Archaeology

As noted, Max Uhle (1856–1944) conducted archaeological investigations for various museums, both in Latin America and abroad (figure 1.11).[22]

Trained in historical linguistics, Uhle had worked as a research assistant to the German geologist and naturalist Alphonse Stübel (1835–1904), and Uhle wrote an account of the site of Tiwanaku based on Stubel's photographs, notes, and maps made in 1876–77—the first systematic study of this important site).

Uhle was also involved in publishing archaeological studies based on collections housed in various German museums, essential training for his South American fieldwork. Uhle's first South American investigations occurred in 1892 with an expedition to Argentina and Bolivia, under the auspices of the Königliches Museum für Völkerkunde (the Royal Museum of Ethnology) in Berlin. Over the next decades, Uhle's investigations were supported by an uncertain chain of patrons, sometimes supporting his research for several years in a row, at other times leaving him nearly penniless.[23] Despite the vagaries of funding, Uhle maintained an active program of fieldwork, working in Argentina, Bolivia, Chile, Peru, and Ecuador over the course of four decades until he retired from fieldwork at age seventy-five. The American archaeologist John H. Rowe observed, "Uhle did more field work in western South America than anyone else who has ever lived."[24] Seventy years later, that may still be true.

Figure 1.11 Max Uhle, 1907

In 1896 Uhle excavated at the site of Pachacamac, near Lima, fieldwork that was initially under the auspices of the University of Pennsylvania Museum and later conducted for the University of California Berkeley. The work at Pachacamac was pivotal for understanding the chronological sequence of prehispanic cultures in the Andes, with broad implications for the archaeology of South America (figure 1.12).

In principle, the process of creating a cultural sequence is simple: different sets of distinctive cultural traits are identified and a relative order is established; Culture A came before Culture B, which came before Culture C, and so on. In practice, the process of creating a cultural sequence can be extremely difficult, especially prior to the development of radio-

Figure 1.12 Mummies from Max Uhle's excavations at Pachacamac

carbon dating and other types of absolute dating techniques. At Pachacamac, Uhle approached the problem of building a cultural sequence by applying two methods, *stratigraphy* and *seriation*. First, Uhle recognized that a stratigraphic sequence—a series of layers in which lower and earlier levels are capped by upper and subsequent levels—provides a relative chronology, a well-established concept in geology that had been applied to archaeological investigations elsewhere.[25] Further, Uhle applied the method of seriation, in which variations in the frequency of different cultural traits—such as stylistic traits or artifacts—are used to create a relative sequence of variations that may reflect changes over time. Uhle did not invent either method, but he was one of the first archaeologists to apply these methods to South American prehistory, a breakthrough that has led some to call him "the father of Andean archaeology."[26]

In 1896 at Pachacamac, Uhle excavated a trench at the base of the monumental constructions, the Old and New Temples (figure 1.13).[27]

It was obvious from the profile exposure that the Old Temple (a) had preceded and been covered by the New Temple (b). In front of the Old Temple was a cemetery (c) that in turn was covered by a sloping layer of debris (d) that contained burials later covered by the extension of the New Temple (b). In front of the terraces of the New Temple was another deposit (e) that had been built up after the terraces were constructed. These observations led to a relative sequence based on stratigraphy, from oldest to most recent, of a → c → d → b → e.

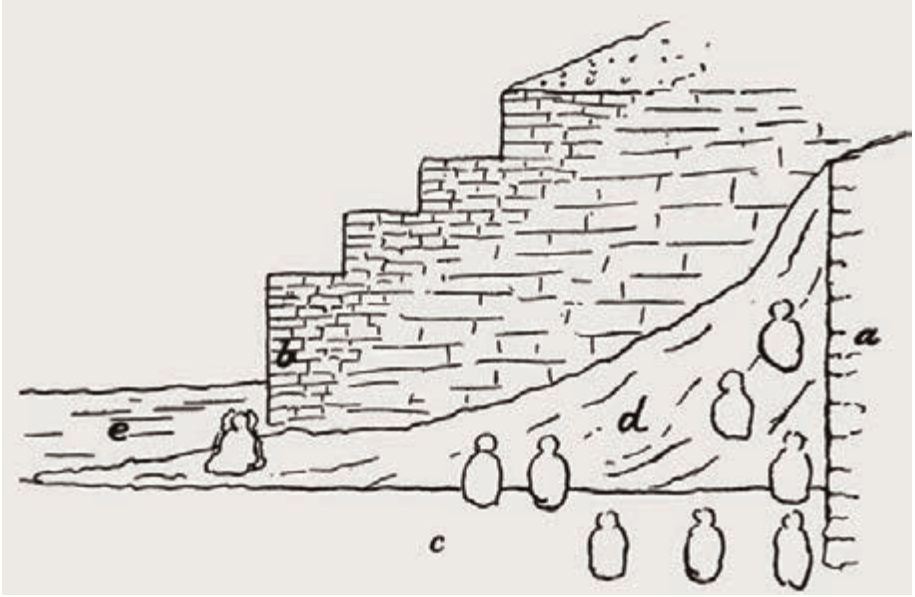

Figure 1.13 Uhle's stratigraphic section from Pachacamac

But Uhle made another set of observations: the different burials contained different types of artifacts, specifically distinct types of pottery. The burials in the oldest cemetery (c) contained pottery similar to what Uhle had observed at Tiwanaku—polychrome vessels in brown, buff, black, and white. The burials found in the debris layer d (which occurred after the construction of the Old Temple but before the New Temple expansion) contained pottery decorated with red and black designs over a white slip. Finally, the burial found in the latest deposit, stratum e, only contained Inca ceramics. Combining the stratigraphy with this seriation, Uhle concluded that the relative chronology from oldest to most recent pottery was polychrome Tiwanaku-style ceramics → red and black on white ceramics → Inca ceramics. In other excavations at Pachacamac, Uhle found some burials that had exclusively blackware ceramics, others that had mostly Inca ceramics but a few blackware ceramics, and other burials with only Inca ceramics. This led him to propose that at Pachacamac these blackwares came after the red and black on white ceramics but before the exclusively Inca ceramics.

Traveling north to the Moche Valley, Uhle excavated at Chan Chan and at the Huacas del Sol and de la Luna at Moche. In these excavations, Uhle determined that the blackwares were older than the Inca wares, and he found a polychrome pottery style at the site of Moche. Uhle concluded: "A practical result of these discoveries was the finding that the Huaca del Sol, near Moche, commonly attributed to the Incas, had been constructed at about the third older period [i.e., the polychrome period he associated with Tiwanaku] and had probably become a ruin at the time of the Chimus, as none of their relics nor those of the Incas

were found upon this venerable monument. In fact, I observed four distinct and successive cultures in the valley of Trujillo."[28]

This discovery had several important implications. First, not only had Uhle provided a relative chronology, but, given that Pachacamac and the Moche Valley are more than 500 km (311 miles) apart, the relative chronology appeared applicable to sites over a broad area of the coast of Peru. This would become extraordinarily important for later Andean chronologies that envisioned the past as consisting of periods of "horizons," in which specific cultures had wide impacts across the Andes, versus "intermediate periods," in which cultural developments were seen as regional manifestations (see chapter 8). Second, Uhle could argue that, contrary to historical accounts and modern legends that attributed all ancient monuments to the Inca Empire, impressive sites pre-dated the Inca, suggesting that Andean prehistory was ancient and deep.

But the depth of the past was unknown. In the early twentieth century, the antiquity of human existence was essentially uncertain in South America. Not only were there no absolute dating techniques that could be applied to ancient sites, but neither were there hominid fossils that suggested a deep antiquity of humanity. In the Americas, the general view among archaeologists was that prehistory was relatively brief, perhaps a matter of a few thousand years at most.[29] Uhle wrote, "It is learned that the process of development and succession of periods of old Peruvian culture has been a long one. Stratum was laid over stratum during thousands of years. Were we to assign four hundred to five hundred years to each of the cultures heretofore discovered, generally four to five in each valley, we should find in this way alone that the development of the old cultures in Peru must have spanned two thousand years at least."[30] His estimate was wrong by at least 11,000 years.

This led to another supposition: the earliest Andean cultures Uhle found were not rude and underdeveloped but rather sophisticated societies who built monuments and crafted elegant and well-decorated pottery. In this, South American cultures seemed similar to the "high" cultures of Mesoamerica—the Maya of the lowlands of Central America and the Aztecs and Teotihuacanos of central Mexico—advanced New World cultures that might have developed from a common, ancestral culture.

The Ecuadorian archaeologist **Jorge Marcos** has observed that Uhle viewed South American cultures as derived from waves of diffusion, in which innovations in one region spread to neighboring areas.[31] Diffusionist theories were influential in the late nineteenth and early twentieth centuries, broadly held by archaeologists in Europe and North America as a theoretical alternative to cultural evolution. Decades after his excavations at Pachacamac and based on his excavations in Ecuador, Uhle would argue that the prehistoric cultures of the highlands of Ecuador were proto-Maya in origin.[32] To repeat, these inferences were made without accurate dates and based on perceived similarities in artifact styles. Further, Uhle correctly identified possible trade items linking northern South America and Mesoamerica. Yet, current data demonstrate that Uhle's idea that South American civilizations were derived from Mesoamerican cultures is incorrect.

Figure 1.14 Julio Tello (1880–1947), standing center

Uhle's hypothesis of Central American origins of Andean civilizations was forcefully rejected by Julio Tello (1880–1947). Tello's life story is compelling (figure 1.14).[33]

Born to a poor family in the sierra of Huarochiri east of Lima, Tello was of "near-pure" Indian blood, a fact that put him at an extreme disadvantage in the racial hierarchies of Peru. Through chance opportunities and diligence matched with intelligence, Tello overcame these obstacles and obtained an education in Lima and later in the United States. He was educated at the Universidad Nacional Mayor de San Marcos—the oldest university in the Americas—where he obtained a degree in medicine in 1908 while also working in the Museo Raimondi and the Biblioteca Nacional del Peru. Tello's dissertation was on the origins of syphilis in Peru, arguing that evidence for prehispanic cranial surgery suggested that the surgery was performed to treat this disease (still a controversial hypothesis). Tello's research on prehistoric skeletal materials came to the attention of Uhle, and Tello's thesis was published to great acclaim, leading to a two-year fellowship to study abroad. Tello chose to study anthropology at Harvard University, where he worked under the Mayanist **Alfred Tozzer** and the ethnographer **Roland Dixon** and obtained an MA degree in 1911. His time at Harvard was followed by a grant for travel in Europe where he toured libraries and museums, bringing this knowledge back to Peru. Tello returned to Lima in 1913. Soon thereafter, Tello was named director of the Museo de Arqueología y Antropología. From this institutional base, Tello conducted archaeological surveys and excavations throughout the Peruvian coast and sierra. In 1918 Tello began to teach courses at the Universidad San Marcos, where he obtained his doctorate in natural sciences that same year. In 1919 Tello conducted archaeological research in the Department of Ancash, including at the important site of Chavín de Huántar—research that would be pivotal for South American archaeology.

Tello's archaeological research articulated with an intellectual movement in Peru, *indigenismo*, an influential position that argued that Peru's national identity had to draw on its indigenous Andean traditions and not solely on postcolonial European legacies. Expressed across a broad array of the literary and visual arts, as well as in political discourse, indigenismo created an appreciative intellectual environment for the development of Andean archaeology.

In this context, it is not surprising that Tello rejected Uhle's notion that Andean civilizations had been derived from Mesoamerican antecedents. The archaeologists Cesar Astahuaman and Richard Daggett write:

> In 1921 Tello published *Introduction to the Ancient History of Peru*, a synthesis of the results of the 1919 expedition and an important theoretical work where for the first time he described Chavín as an advanced civilization with Amazonian origins . . . He proposed the autochthonous and non-imported nature of this Peruvian civilization, which had extended from the east to the west, from the montaña to the coast. Tello's ideas were opposed to the proposals by Uhle, developed between 1904 and 1914, regarding the connections between the cultures of Central America and South America . . . Uhle's ideas and previous diffusionist hypotheses had been welcomed by the dominant ethnic minority [i.e., non-indigenous "whites"] to justify their supposed superiority and foreign origins and to propose that historically indigenous peoples were dependent and without the capacity to develop their own civilization; that they were, further, a problem [inhibiting] the development of the nation, which was necessary to resolve.[34]

Tello's archaeological research resonated at multiple levels. At the scientific level, his hypothesis regarding the indigenous origins of Andean civilizations has been substantiated by decades of archaeological research, while Uhle's idea of Mesoamerican origins has been disproved. This does not imply that no connections or interchanges occurred between Mesoamerica and the Andes but rather that complex societies—including states and empires—developed independently in these two regions. Tello's hypothesis that Chavín was the first complex society in Peru has proved incorrect (as discussed in chapter 7), although his ideas about the connections between Amazonia and other regions of South America remain intriguing but incompletely proven. Also, the investigations and ideas of Uhle and Tello occurred within political and intellectual contexts in which archaeology was incorporated into debates about national identity (a topic returned to in chapter 12.) Finally, Uhle's work was fundamental for the breadth of its scope, the multiple regions in which he worked, and his development of an archaeological program for looking at cultural changes over time.

Twentieth-Century Archaeologies: Chronologies, Culture History, and Shifting Paradigms

The problems of chronology shaped many of the major archaeological projects conducted in the twentieth century. A great deal of archaeological effort was

focused on the north and Central Coast of Peru. **Alfred Kroeber** (1876–1960) and colleagues such as **William D. Strong** (1899–1962) and **Anna H. Gayton** (1899–1977) studied the Uhle collections housed at the University of California Berkeley, a study summarized as designed "to group the graves according to type of artifacts represented in them; to assume that graves containing artifacts of identical type belong to the same period, and that those containing artifacts of consistently different types belong to different periods; and then, from the overlapping of types and whatever other evidence, direct or indirect, may be available, to attempt to establish a sequence of the periods."[35] In a related study, Kroeber and Strong reanalyzed the Uhle collections from the south coast Peruvian valley of Ica, where they recognized a sequence of pottery styles from the Inca conquest of Ica and another half-dozen earlier ceramic styles that Kroeber and Strong thought dated to AD 50–650. Their estimates were based on assumptions about the rate of cultural change: more similar pottery styles implied relatively brief periods of time, while dissimilar styles indicated greater lapses. Kroeber and Strong's ceramic analyses of Uhle's collections led them to accept not only "all the culture phases and periods announced by him, but [also] the establishment of finer subdivisions. In other words, intensive, first-hand re-examination of [Uhle's] evidence both corroborates and extends his conclusions."[36] Subsequent work by **John H. Rowe** (1918–2004) and **Dorothy Menzel** (1924–) refined the Ica sequence and resulted in the extremely influential chronology based on cultural horizons and intermediate periods.[37]

The pace of archaeological research accelerated as the twentieth century progressed. A number of foreign museums sponsored excavations, many with an eye to obtaining objects to display in their galleries. Some of these excavations involved practices that would be illegal or controversial today. In 1906–08, the American archaeologist **Marshall H. Saville** collected an enormous assemblage of stone sculptures—including massive stone thrones from Manteño sites on the coast of Ecuador—for the Heye Museum of the American Indian in New York City, a private museum containing over a million Native American objects later incorporated into the Smithsonian Institution's Museum of the American Indian.[38] In 1911 the Yale University historian **Hiram Bingham** was guided to the site of Machu Picchu by local farmers. He returned in 1912 and 1915, with the support of Yale University and the National Geographic Society (NGS), to excavate and map this most iconic of South American sites, the first archaeological project supported by the NGS. Bingham's "discovery" of Machu Picchu was preceded by several earlier visitors to the site, and the collections he removed to Yale University were the objects of bitter controversy between Yale and the government of Peru, a dispute only recently resolved.[39]

Although many archaeological investigations focused on the acquisition of museum-quality artifacts, other investigators were concerned with defining the temporal and spatial contours of prehispanic South American cultures. A synopsis of archaeological research in 1934–36 mentions research on Tairona sites in Santa Marta and on the San Agustin sculptures in Colombia, research on the similarity between urns collected from the Ecuadorian coast and those reported from

Marajó Island on the mouth of the Amazon, excavations of Tiwanaku-style burials near San Pedro de Atacama in northeastern Chile, the definition of a cultural complex in northern Argentina, an introduction to the archaeology of Bolivia, and extensive excavations at the site of Tiahuanaco, Bolivia, and in various valleys along the coast of Peru.[40]

The author of the review article, **Wendell Bennett** (1905–53), was one of the preeminent American archaeologists of the mid-twentieth century, who conducted archaeological and ethnographic fieldwork in Hawaii and northern Mexico before focusing on the Andes.[41] A curator at the American Museum of Natural History, Bennett excavated at Tiahuanaco and Chiripa in the Titicaca Basin, at Chavín de Huántar and other sites in the Callejon de Huaylas region of the Central Andes of Peru, in the Lambayeque and Moche Valleys on Peru's North Coast, and in the Ecuadorian highlands, Venezuela, and Colombia.[42] In his more substantial monographs—for example, his works on Tiwanaku, Chavín de Huántar, and the North Coast of Peru—Bennett's field investigations were prominently concerned with matters of chronology. A similar concern with chronology was seen in a research project Bennett helped establish, the Virú Valley project.

Bennett was one of the US archaeologists involved in the massive *Handbook of South American Indians*, a five-volume encyclopedic overview under the editorship of **Julian H. Steward** (1902–72) that was begun in 1939, completed in 1945, but not published until 1946–50.[43] The *Handbook of South American Indians* was supported by grants from the US Department of State; as World War II ignited and spread, the US government wanted information about different areas of the world, including Latin America. The volume on cultures in the Andes was shaped by Bennett's ideas, with chapters by him devoted to an introduction to the Andean highlands, the archaeology of the Central Andes, and the archaeology of Colombia—nearly 20 percent of the total text. In addition, Bennett was the volume's major editor, assisted by a slightly younger American archaeologist, **Gordon Willey** (1913–2002).[44]

Bennett, Willey, and Steward were the principal organizers of an archaeological research team that focused on a single valley on the coast of Peru, the Virú Valley, a relatively small region 40 km (about 25 miles) south of the Moche Valley.[45] This 1946 project involved the archaeologists Bennett, Willey, William D. Strong, James A. Ford, Clifford Evans, Junius Bird, John Corbett, and Donald Collier, in addition to the ethnographer Alan Holmberg and the geographer F. Webster McBryde. The Virú Valley project was an intensive archaeological study that resulted in a number of classic research reports, most of which addressed the issues of chronology. Willey explained that "it was recognized that two basic field jobs needed intensive study. One was the relative chronology of the Valley and the other the distribution of archaeological sites, by periods, throughout the Valley area."[46] The goal of the research, Ford wrote, "was to reconstruct the cultural prehistory of a North Coast valley as completely as possible through the application of archaeological techniques, and to examine the present culture of the valley and relate it to the past" (see figure 1.8). Reconstructing the cultural prehistory essentially meant identifying the sequence of prehistoric cultures present in the Virú

Valley. In the late 1940s (before the application of 14C dating), "the principal basis for reconstructing Peruvian prehistory must remain a relative scale in which time is measured by cultural change. This means, principally, ceramics."[47]

In addition to the ceramic analysis, project members tackled other problems. Bennett excavated at the site of Gallinazo, Bird excavated at preceramic sites, Strong and Evans worked on the earlier ceramic periods, and Collier focused on the later ceramic periods.[48] Ford developed the ceramic sequence for the valley based on surface collections of ceramics, while Willey studied the various types of settlements present at different periods, a settlement pattern survey.

The Virú Valley project deserves this extended commentary for several reasons. First, it was a significant piece of archaeological research, a coordinated program in which multiple lines of evidence collected by different scholars were used to illuminate key research problems. Second, the results were pivotal: the chronological sequence was fundamental not only for the North Coast of Peru but also for the development of sequences for the Central Andes. Third, the Virú Valley project simultaneously expressed the dominant mid-twentieth-century archaeological perspective known as "cultural history" while hinting at the shift to "problem-oriented" archaeological research.

In their history of Americanist archaeology, Gordon Willey and Jeremy Sabloff characterize the ideas and assumptions of culture history:

> The central theme of the Classificatory-Historical Period in American archaeology was the concern for chronology . . . Stratigraphic excavation was the primary method in the drive for chronological control of the data . . . The principle of seriation was allied to stratigraphy, and, also serving chronological ends, it developed alongside, and in conjunction with, stratigraphic studies. Typology and classification . . . now became geared to stratigraphic and seriational procedures. Whereas earlier classifications of artifacts had been merely for the purpose of describing the material, they were now seen as devices to aid the plotting of culture forms in time and space.
>
> Beyond the immediacy of stratigraphic, seriational and classificatory methods, the ultimate objectives of American archaeology in the Classificatory-Historical Period were culture-historical syntheses of New World regions and areas. For the most part, they tended to be mere skeletons of history—pottery types or artifact sequences and distributions. Some archaeologists did attempt to clothe these skeletons in more substantial cultural contexts . . . But prior to 1940, these trends were barely in the making; only later did they come into prominence.[49]

This form of culture history was tremendously important throughout Latin America. The Argentine archaeologist **Gustavo Politis** has written:

> In Latin America, culture history was almost the exclusive approach until the 1960s and remains the dominant paradigm structuring archaeological inquiry in the region . . . The North American culture-historical approach had a direct impact on the archaeology practiced in every country of Latin America.

> Archaeological finds were organized into a temporal framework of cultures, periods and phases. Technological divisions, such as those focused on ceramics and lithics, placed sherds and artifacts in seriation sequences, compartmentalized styles, technological complexes, and industries. This work was done mainly by North American archaeologists . . . but in some cases with the collaboration of local archaeologists. The framework for the reconstruction of the past has been, and remains, a complex mosaic in which regional sequences, sites, and interpretive units of integration, such as periods, traditions, subtraditions, and horizons, are articulated within a culture-history dominated approach. Most local archaeologists followed trends established by the dominance of North American culture-history paradigm.[50]

To place this in a different perspective, the culture history approach was the dominant theoretical position well into the 1960s, when a variety of other points of view—such as cultural evolution, cultural ecology, processualism, Marxist archaeology, and post-processualism—gained various followings. The dominance of culture history is implicit in the early works by Uhle and Tello and is clearly evident in the Virú Valley project and beyond. This does not mean that archaeologists from Latin American nations were imitating their North American counterparts, although, as Politis notes, "certainly archaeological practices have adopted theoretical questions and methods from foreign intellectual traditions. This is simply because, as with any research in the Western world, Latin American archaeologists are engaged as part of open scientific communities, exposed to intellectual movements generated in other countries."[51] Thus, the Virú Valley project, on the one hand, was firmly entrenched in the culture history model while Willey's explorations of settlement patterns would serve as a model of more explicitly problem-focused research programs.

These shifting paradigms were accompanied by a variety of new analytical techniques, including 14C dating, a broad array of faunal and floral analyses, and other methods discussed throughout this book. Further, archaeological projects and the development of archaeological projects across South America led to new insights and the revision of long-held assumptions. In turn, the development of university programs in archaeology in Latin America resulted in distinctive research agendas in different nations, producing varied perspectives on the past.

Notes

1. Quoted in P. Cabello Carro, "Pervivencias funerarias prehispánicas en época colonial en Trujillo del Perú: nueva interpretación de los dibujos arqueológicos de Martínez Comapañón," *Anales de Museo de América* 11 (2003): 10, my translation.

2. C. Astahuaman, "La Arquitectura Inca," in *Alexander von Humboldt: From the Americas to the Cosmos*, ed. R. Erikson, M. Font, and B. Schwartz (New York: City University of New York, 2004), 66, my translation.

3. For an excellent biography, see T. Barnhard, *Ephraim George Squier and the Development of American Anthropology* (Lincoln: University of Nebraska Press, 2005).

4. M. M. Lopes and I. Podgorny, "The Shaping of Latin American Museums of Natural History, 1850–1990," *Osiris* 15 (2000): 109–110.

5. Quoted in C. Arellano Hoffmann, "El Museo nacional de arqueología, antropología e historia como espejo de la historia y sociedad peruana," *Revista Museos* 30 (2011): 26, my translation.

6. T. Hempe Martínez, "Max Uhle y los orígenes del Museo de Historia Nacional (Lima, 1906–1911)," *Revista Andina* 31, no. 1 (1998): 161–182.

7. Peru's National Museum of History was organized in four sections: Archaeology, Colony and Republic, Savage Tribes, and Indians of the Sierra.

8. The following is based on information at http://www.museonacional.gov.co/el-museo/historia/Paginas/Historia.aspx (accessed July 19, 2012).

9. See entry on Preuss at http://www.banrepcultural.org/blaavirtual/publicaciones banrep/bolmuseo/1986/bol15/boa0.htm.

10. See L. Satterthwaite, "Obituary: John Alden Mason, 1885–1967," *American Anthropologist* 71 (1969): 871–874.

11. For a succinct critical analysis of the history and development of archaeology in Brazil, see P. Paulo, A. Funari, and L. Menezes Ferreira, "A Social History of Brazilian Archaeology: A Case Study," *Bulletin of the History of Archaeology* 16, no. 2 (2006): 18–27, at http://www.archaeologybulletin.org/article/view/bha.16203 (accessed July 18, 2012).

12. C. Hart, "Contribuições para a ethnologia do valle do Amazonas," *Archivos do Museu Nacional do Rio de Janiero* 6 (1885): 1–174; J. De Lacedra, "O Homen dos Sambiquis," *Archivos do Museu Nacional do Rio de Janiero* 6 (1885): 175–203; L. Neto, "Investigações sobe a Archeologia Brazileira," *Archivos do Museu Nacional do Rio de Janiero* 6 (1885): 257–260. For a brief early account in English, see O. Derby, "The Artificial Mounds of the Island of Marajo, Brazil," *American Naturalist* 13, no. 4 (1879): 224–229.

13. J. Anderman, "The Museu Nacional at Rio de Janeiro," in *Relics and Selves: Iconographies of the National in Argentina, Brazil and Chile, 1880–1890,* exhibit curated by J. Andermann and P. A. Schell (London: Birkbeck College, 2000), at http://www.bbk.ac.uk/ibamuseum/texts/Andermann01.htm (accessed July 18, 2012).

14. See, for example, I. Podgorny, "Vitrinas y administración: Los criterios de organización de las colecciones antropológicas del Museo de La Plata entre 1897 y 1930," in *Relics and Selves: Iconographies of the National in Argentina, Brazil and Chile, 1880–1890,* exhibit curated by J. Andermann and P. A. Schell (London: Birkbeck College, 2000), at http://www.bbk.ac.uk/ibamuseum/texts/Podgorny01.htm (accessed July 18, 2012).

15. Information from the museum's website, at http://www.mnhn.cl/Vistas_Publicas/publicContenido/contenidoPublicDetalle.aspx?folio=3906&idioma=O (accessed February 27, 2014), my translation.

16. F. Moreno, "Exploración arqueológica de la provincia de Catamarca: Primero dato sobre su importancia y resultados," *Revista del Museo de la Plata* 1 (1890–91): 9, my translation.

17. For a brief discussion of Jijón y Caamaño's life and interactions with Uhle, see K. Bruhns, "A Series of Unfortunate Events, or the Best Intentions Thwarted: A Brief History of Archaeological Time in the Northern Andes," *Ñawpa Pacha* 29 (2008): 179–190. For a more detailed biographical account, see "Arqueologico Jacinto Jijón

Caamaño" (1890–1950), at http://www.colejacintojijon.edu.ec/Proyectos/jacintoarqueologo.pdf (accessed November 3, 2013).

18. The studies originally appeared as separate publications between 1921 and 1924 in three volumes of the *Boletín de la Academia Nacional de Historia* (Quito) but were reissued under this title in 1927 by the Sociedad Historica de Estudios Historicos, Quito. Also see Jijón de Caamaño's posthumously published *Antropología Prehispánica del Ecuador* (Quito: La Prensa Católica, 1945).

19. Jijón y Caamaño's 1949 publication on Maranga was reviewed by Gordon Willey in *American Anthropologist* 53 (1951): 112–114.

20. https://archive.org/details/soamericanarchae00joyc (accessed July 28, 2012).

21. As an example of this uncertainty, see Joyce's discussion in chapter 8, "Peru: The Sequence of Cultures," in which he ponders the possible similarities in stone reliefs found at Chavín de Huántar and Maya stela in the Yucatan (176–177) or the chronological relationship between press-molded blackware ceramics and subsequent Inca pottery along the North Coast of Peru (184–186). Given the absence of data from other regions, Joyce limits his chronological discussion to Peru and Bolivia (i.e., Tiwanaku).

22. A detailed biography of Uhle is beyond the scope of this chapter. The essential source in English is the biographical sketch and intellectual assessment by J. Rowe, *Max Uhle, 1856–1944: A Memoir of the Father of Peruvian Archaeology*, University of California Publications in American Archaeology and Ethnology 46 (Berkeley: University of California Press, 1954). An excellent collection of Uhle's articles, accompanied by essays by archaeologists and historians, is *Max Uhle y el Perú Antiguo,* ed. Peter Kaulicke (Lima: Pontifica Universidad Catolica, 1998). Additional essays on Uhle's archaeological contributions across South America are found in the collection "Estudios Andinos: Max Uhle, su obra, y su repercussion," *Indiana* 15 (1998), at http://www.iai.spk-berlin.de/es/publicaciones/indiana/numeros-publicados/indiana-%E2%80%9315.html. For a biographical sketch of Uhle and links to images of his original field maps and other visual documentation, view the information at the Ibero-American Institute in Berlin, which houses more than 150 manuscripts, 175 notebooks, 2,150 letters, 95 plans, and nearly 5,000 photographs by Uhle, at http://www.iai.spk-berlin.de/en/library/papers-manuscripts/individual-collections/uhle-max%E2%80%931856%E2%80%931944.html (accessed August 1, 2012). The site also provides links to Uhle materials and publications at other universities and libraries. A series of monographs analyzing the collections Uhle made for the Hearst Museum at UC Berkeley is available at http://dpg.lib.berkeley.edu/webdb/anthpubs/search?all=&journal=18&volume=21.

23. Rowe, *Max Uhle, 1856–1944*, 3–12.

24. Ibid., 1.

25. For an overview, see R. Lyman and M. O'Brien, "Americanist Stratigraphic Excavation and the Measurement of Culture Change," *Journal of Archaeological Method and Theory* 6, no. 1 (1999): 55–108.

26. Rowe, *Max Uhle, 1856–1944*.

27. M. Uhle, "Types of Culture in Peru," *American Anthropologist* 4, no. 4 (1902): 753–759.

28. Ibid., 757.

29. For a discussion of this so-called flat-past perspective among North American archaeologists, see D. Meltzer, "The Antiquity of Man and the Development of American Archaeology," *Advances in Archaeological Method and Theory* 6 (1983): 1–51; D. Meltzer, "North American Archaeology and Archaeologists, 1879–1934," *American Antiquity* 50 (1985): 249–260.

30. Uhle, "Types of Culture in Peru," 728.

31. J. Marcos, "Max Uhle y la arqueología del Ecuador: precursorm investigador y profesor," *Indiana* 15 (1998): 197–215, at http://www.iai.spk-berlin.de/fileadmin/dokumentenbibliothek/Indiana/Indiana_15/IND_15_Marcos.pdf (accessed February 27, 2014).

32. M. Uhle, "Influencias mayas en el alto Ecuador," *Boletín de la Academia Nacional de la Historia* (1922): 205–240.

33. A recent overview of Tello's life consisting of several excellent essays and English translations of selected writings is *The Life and Writings of Julio C. Tello, America's First Indigenous Archaeologist*, ed. R. Burger (Iowa City: University of Iowa Press, 2009). Samuel Lothrop's obituary, "Julio C. Tello, 1880–1947," appeared in *American Antiquity* 14, no. 1 (1948): 50–56. An especially insightful biographical and intellectual overview is C. W. Astuhuamán Gonzáles and R. E. Daggett, "Julio César Tello Rojas: Arqueólogo: Una biografía," in *Julio C. Tello, Paracas primera parte* (Lima: Museo de Arqueología y Antropología de la Universidad Nacional Mayor de San Marcos, 2005), 17–61.

34. Astahuaman and Daggett, "Julio César Tello Rojas," 27, my translation.

35. A. Kroeber and W. Strong, "The Uhle Collections from Chincha," *University of California Publications in American Archaeology and Ethnology* 21, no. 1 (1924): 5.

36. A. Kroeber and W. Strong, "The Uhle Collections from Ica," *University of California Publications in American Archaeology and Ethnology* 21, no. 3 (1924): 98.

37. See J. Rowe, "Stages and Periods in Archaeological Interpretation," *Southwestern Journal of Anthropology* 18, no. 1 (1962): 40–54; D. Menzel, "Style and Time in the Middle Horizon," *Ñawpa Pacha: Journal of Andean Archaeology* 2 (1964): 1–105; D. Menzel, *The Archaeology of Ancient Peru and the Work of Max Uhle* (Berkeley: Lowie Museum of Anthropology, University of California, 1977).

38. M. Saville, *The Antiquities of Manabi, Ecuador: Final Report,* Contributions to South American Archaeology 2 (New York: Heye Foundation, 1910); C. McEwan and F. Delgado-Espinoza, "Late Prehispanic Polities of Coastal Ecuador," in *Handbook of South American Archaeology*, ed. H. Silverman and W. Isbell (New York: Springer, 2008), 505–535.

39. See K. Roman, "Peru-Yale Center for the Study of Machu Picchu and Inca Culture Opens," *Yale News* (October 2011), at http://news.yale.edu/2011/10/06/peru-yale-center-study-machu-picchu-and-inca-culture-opens (accessed August 2, 2012).

40. Wendell C. Bennett, "Archaeological Work in South America, 1934 to 1936," *American Antiquity* 2, no. 4 (1937): 248–259.

41. For biographical sketches, see Alfred Kidder II, "Wendell Clark Bennett (1905–1953)," *American Anthropologist* 56 (1956): 269–273; G. Willey, *Portraits in American Archaeology: Remembrances of Some Distinguished Americanists* (Albuquerque: University of New Mexico Press, 1988), 121–145.

42. Bennett's monographs were published in the Anthropological Papers of the American Museum of Natural History, available online at http://digitallibrary.amnh.org/dspace.

43. The history of the *Handbook of South American Indians* has been discussed by H. Silverman, "Continental Introduction," in *Handbook of South American Archaeology*, ed. H. Silverman and W. Isbell (New York: Springer, 2008), 3–26. A brief biographical sketch of Steward is R. Manners, "Julian Haynes Steward, 1902–1972," *American Anthropologist* 75 (1973): 886–903. Willey's reminiscence of his work with Steward is found in *Portraits in American Archaeology: Remembrances of Some Distinguished Americanists* (Albuquerque: University of New Mexico Press, 1988), 219–237.

44. Gordon Willey would go on to make significant contributions to the archaeology of the Andes and Mesoamerica. See J. Sabloff, "Gordon Randolph Willey," *Proceedings of the American Philosophical Society* 148, no. 3 (2004): 405–410.

45. G. Willey, "The Virú Valley Program in Northern Peru," *Acta Americana* 4, no. 4 (1946): 224–238.

46. G. Willey, *Prehistoric Settlement Patterns in the Virú Valley, Peru*, Smithsonian Institution Bureau of American Ethnology, Bulletin 155 (Washington, DC: Smithsonian Institution, 1953), xviii.

47. J. Ford, "Cultural Dating of Prehistoric Sites in Virú Valley, Peru," in *Surface Survey of the Virú Valley, Peru,* ed. J. Ford and G. Willey, Anthropological Papers of the American Museum of Natural History 43, no. 1 (New York: American Museum of Natural History, 1949), 31.

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