Peruvian Archaeology: Its Growth, Characteristics, Practice, and Challenge

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Introduction

In this paper, we present: (1) a summary historical review of archaeology in Peru primarily since the late nineteenth century when it began to be formalized, (2) an assessment of its theoretical stances and debates over the past several decades, and (3) a critique of major trends and foci *in the practice* of archaeology within the context of the social, political, and economic transformations (what may be called the "sociology" of archaeology) that have taken place over the last 15 years. We are particularly concerned with the third and last focus in elucidating future tasks and directions of Peruvian archaeology. Peruvian archaeology is undeniably the fusional product of a cosmopolitan composition of practitioners and, throughout the paper, we aim to represent and balance Peruvian and Peruvianist (i.e., foreign) perspectives and accomplishments. Archaeologists with active research interests in Peru are found in well over 20 countries ranging from most of the European Union member countries, Turkey, Russia, and Japan to Canada, the USA, Cuba, Argentina, and other Andean nations. In recent years, it is not unusual to find archaeologists from half a dozen countries conducting fieldwork in Peru.

Given the above foci, we do not discuss many worthy issues and scholars who have contributed to the growth of Peruvian and Central Andean archaeology. This review, however, should complement other accounts and assessments of its modern history (Bonavia and Ravines 1970; Burger 1989; Castillo and Mujica 1995; D'Altroy 1997; Dillehay 2008; Higueras 2008; Iriarte 2004; Kaulicke 2006; Lumbreras and Mujica 1983; Menzel 1969, 1977; Ravines 1982; Schaedel and Shimada 1982; Segura 2006; Schreiber 2006; Shimada 1990, 1994a; Tantaleán 2006; Willey and Sabloff 1993). Also, highly informative are the obituaries of major archaeologists found in issues of *Arqueológicas* published by the National Museum of Anthropology, Archaeology, and History in Lima, *American Antiquity, Latin American Antiquity,* and other periodicals that cover Peruvian archaeology.

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Brief Historical Overview

The Spanish conquest (1532–1535) of the Inka Empire and the accompanying voluminous documentation of customs, beliefs, resources, and many other aspects of its inhabitants by the soldiers, clergymen, and administrators "has been a mixed blessing for students of Andean civilization" (Shimada 1994a: 13). On the one hand, these documents shed much light on nonmaterial aspects of the Empire and its people which archaeology finds challenging to reconstruct (particularly given the absence of writing in the pre-Hispanic Andes). On the other hand, "the impressive achievements and glory of the Empire [promoted by Inka state propaganda and a few pro-Inkan writers of the Colonial era], together with the sheer amount of written data, have had the long-lasting effect of hindering recognition and serious study of pre-In[k]a cultures" (Shimada 1994a: 13).

Colonial documents of interest to archaeologists have been compiled and critically evaluated by various scholars (e.g., Means 1928; Pillsbury 2008; Porras 1963; Ravines 1970; Rowe 1946; Salomon 1985, 1999). Lorenzo (1982; also see Ramírez 1996) highlights Colonial institutions and practices such as the "royal fifth" and grave looting (that was described as "mining") that have had lingering impacts on the growth of Peruvian archaeology and protection of cultural patrimony.

One late Colonial publication (independence from Spain proclaimed in 1821) by B. J. Martínez de Compañón y Bufanda (1978 [1782–1788]; also see Macera et al. 1997; Pillsbury and Trevor 2008; Schaedel 1949), Bishop of the Diocese of Trujillo, is well worth noting here. His watercolor paintings of diverse archaeological remains, including the Huaca del Sol at Moche (New World's largest adobe construction; Fig. 1) and late pre-Hispanic Chimú elite burials and their offerings, are remarkable for their detail. He inferred social status of the deceased on the basis of variability in their funerary treatment and associated goods.

Archaeological fieldwork (including mapping and "excavation") featuring systematic, empirical observation and recording began in the mid-nineteenth century. Notable among these early archaeologists are the American commissioner to Peru, Ephraim G. Squier (1877), and two German geologists, Wilhelm Reiss and Alphons Stübel (1880–1887; also see Bastian 1889; Bollaert 1860; Hutchinson 1873; Markham 1856; Middendorf 1893–1895; Wiener 1880). This was a transformative era as they not only confirmed the suspected presence of a multitude of important pre-Inkaic cultural developments, but also applied various scientific concepts and methods that later became mainstays of Peruvian archaeology. To demonstrate the presence and antiquity of pre-Inka cultures, Hutchinson (1873: 264–265), for example, urged the application of the stratigraphic principle being employed at that time in the well-publicized excavations of Heinrich Schliemann in search of the City of Ilium.

Near the end of the nineteenth century, the German scholar, Max Uhle (1903; Fig. 2) who had a thorough familiarity with the results of works of Reiss and Stübel at Ancón near Lima and Tiahuanaco (aka Tiwanaku; Stübel and Uhle 1892) on the south shore of Lake Titicaca, combined the results of stratigraphic excavations at

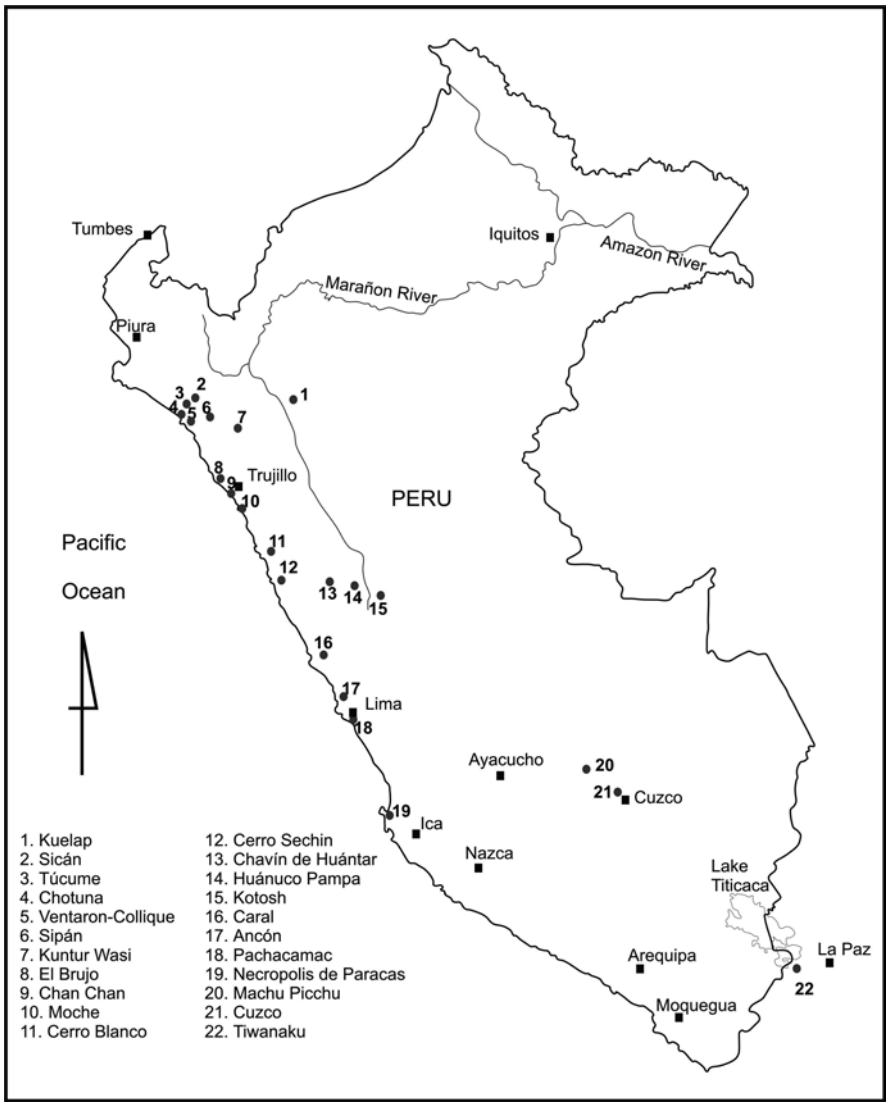

Fig. 1 Map showing the archaeological sites mentioned in the text (black circles) and major modern cities (black squares)

Pachacamac, similarity seriation, the integrative concept of horizons, and ethnohistoric insights to establish a quadripartite pan-Peruvian stylistic chronology. It had two major horizon styles (Tiwanaku [Tiahuanaco] and Inka) and two intermediate (early and late) regional styles (Willey 1945; Willey and Sabloff 1993: 76–79). While there has been a series of refinements, including a better definition of early prehistory, Uhle's chronology remains fundamentally unchanged to this day. It is widely thought that with the pioneering work of Uhle at the end of the

Fig. 2 Funerary bundles excavated by Max Uhle in 1896 at his excavation in Pachacamac. Photograph courtesy of the University Museum, University of Pennsylvania

nineteenth century, scientific archaeology had emerged in Peru (Menzel 1977; Rowe 1954). Uhle benefitted from his interaction with various compatriots who lived or came to Peru from the late nineteenth to early twentieth century (Hoffman 2007), including Arthur Baessler, Heinrich Brüning, Wilhelm Eckhard, Wilhelm Gretzer, Willelm Reiss, Alphons Stübel, and E. van der Zypen.

German antiquarian and subsequent archaeological scholarship is by far the longest tradition of cosmopolitan Peruvianist archaeology and one of the most influential with its long-standing effort to establish comprehensive, referential collections of images, maps, and artifact specimens. Their laudable publication efforts (sometime in both Spanish and German) by the Commission for General and Comparative Archaeology (*Kommission für Allgemeine und Vergleichende Archäologie*; particularly its annual *Beiträge zur Allgemeinen und Vergleichenden Archäologie* [Articles on General and Comparative Archaeology] and occasional *Materialien zur Allgemeinen und Vergleichenden Archäologie* [Materials for General and Comparative Archaeology]) of the German Archaeological Institute (*Deutschen Archäologischen Instituts*) in Bonn and the journal, *Baessler-Archiv,* published by the Baessler Institute of the Ethnological Museum (*Museum für Völkerkunde*) in Dahlem, Berlin, exemplify a rigorous empiricism and thorough attention to detail. In addition, these publication venues have actively sought and published the work of Peruvian archaeologists (Shimada 1990: 222). Artifact and photograph collections compiled and taken to Germany (e.g., those of Baessler [1902–1903, 1906]) are in many ways unique, but remain undervalued. For example, Brüning's photographs (Raddatz 1990; Schaedel 1988) record the traditional lifestyle, archaeological sites, and fauna of the Lambayeque region on the north coast that have since disappeared or been greatly altered.

As seen above, most of the amateur and nascent archaeologists of the nineteenth century were the well-educated, social elites of the Western world from countries

such as England, France, German, Italy, and the U.S. Mariano Eduardo de Rivero, first director of the National Museum in Lima, is a notable exception. He authored an archaeological synthesis of Peru in 1841 and later, together with the Peruvianist scholar, Johann von Tschudi (Rivero and Tschudi 1851), expanded it into a two-volume publication. Although the latter volumes were justifiably criticized for being superficial, limited in first-hand knowledge and failing to venture beyond the historically reconstructed Inka dynasty (Hutchinson 1873: 250–251; Uhle 1903: 8), they offered a glimpse of Peruvian prehistory to the Peruvian public at a time when Peruvianist scholars were publishing the results of their fieldwork only in their home countries and in their native tongues, a practice that regrettably still persists.

The beginning of the twentieth century also marked the initiation of systematic archaeological fieldwork conducted with explicit governmental authorization (Ravines 1989: 20), a practice that continues to this day (authorization issued by the Ministry of Culture). Much of the archaeological endeavor of the first half of the twentieth century focused on defining temporal–spatial frameworks and heretofore unknown cultures, particularly those predating the early regional styles that Uhle had identified. It was also the time when a Peruvian intellectual tradition became firmly established to rival, or complement, the Peruvianist tradition that had dominated the early era of Peruvian archaeology. Lastly, this period saw entrenchment of the basic concepts, approaches, and priorities (e.g., stylistic/iconographic analysis of grave goods) that had come to characterize Peruvian archaeology for better or worse.

Uhle's heavy reliance on gravelot analysis for chronology building and identification of stylistic types undeniably established a corresponding emphasis on burial excavations and stylistic–iconographic analysis in Peruvian archaeology. This is especially apparent in the case of the archaeology of the Moche (aka Mochica) and Nasca cultures, which flourished on the North and South Coast of Peru, respectively, ca. 100–750 C.E. The abundance, largely representational character of decoration, diversity of subject matter represented, and good state of preservation of funerary ceramics all contributed to making excavation of burials (particularly those of social elites) into the primary means of defining grave good associations and enlarging the iconographic corpus for cultural reconstruction and affirming the historicity of artistic representations (e.g., Alva and Donnan 1993; Bourget 2001; Castillo 2000; Donnan 1985a; Donnan and Castillo 1994; Proulx 2006).

Critical to the early search for new cultures and the establishment of regional chronologies is Uhle. Through shrewd selection of excavation sites, he discovered a series of distinct styles that formed the basis for identifying archaeological cultures such as Proto-Chimú [today known as Moche], Nievería, Ica, and Nasca (Rowe 1954). However, it was decades before Uhle's successors from the University of California, Berkeley, such as Alfred L. Kroeber and John H. Rowe and their colleagues and students, systematically described, classified, and refined the relative dates of Uhle's artifact collections (e.g., Kroeber 1925; Kroeber and Strong 1924a, b; Proulx 1970).

Among the new generation of archaeologists to follow Uhle was Hiram Bingham who initiated his study of Inka sites in the south highlands in 1909 and, in 1911,

rediscovered the forgotten Inka royal estate of Machu Picchu (Bingham 1930; Burger and Salazar-Burger 2004). The publicity surrounding his subsequent fieldwork in the *National Geographic Magazine* clearly put Peruvian archaeology "on the map" of the American public, but other than a number of "explorations" (i.e., brief visits to major sites and the purchase of local ceramic collections) into poorly known areas and a few isolated test excavations during the 1920s and 1930s (e.g., Bennett 1939; Kroeber 1926, 1930, 1937), American archaeologists did not again impact the Peruvian archaeology until the early 1940s.

It was not until the active fieldwork agenda (starting in 1915) by Julio C. Tello, the "human dynamo" and medical doctor-turn-anthropologist (Lothrop 1948: 51), that the modern archaeological tradition by Peruvians became firmly established. He and his disciples and/or colleagues excavated many sites (including well-known sites such as Chavín de Huántar, La Copa [also known as Kuntur Wasi], Pachacamac, Cerro Blanco, and Cerro Sechín; Fig. 3) and explored many distant and/or inaccessible areas that had been archaeologically little known until then (e.g., far north coast, Paracas peninsula on the south coast (Tello 1928), Callejón de Huáylas (Tello 1921), and the upper Huallaga and Marañon drainages in the upper Amazonia). He became the leading archaeologist of his time (Lothrop 1948; Mesía 2006) and remained actively involved in field projects until 1947 when he passed away at the age of 67. On the other hand, as Lothrop (1948: 53) lamented in his obituary of Tello, much of his excavation data remained unpublished during his lifetime. In recent years, there has been an effort to redress the situation (e.g., *Cuadernos de Investigación del Archivo Tello* published by the Museum of Archaeology and Anthropology of the San Marcos National University). In addition, it should be noted that his fieldwork under the auspices of various national and foreign institutions

Fig. 3 Julio C. Tello at the site of Pachacamac. Courtesy of the Museum of Anthropology and Archaeology, National University of San Marcos, Lima

(e.g., Institute of Andean Research, Wenner-Gren Foundation, San Marcos National University, and National Museum of Anthropology and Archaeology, Lima) provided opportunities for young Peruvian archaeologists (e.g., R. Carrion Cachot, Jorge Muelle, Julio Espejo Nuñez) who later became leaders of their national archaeology. He is, however, best known for (a) his discoveries of the Chavín and Recuay cultures (in 1919) and the Necropolis of Paracas (in 1927; Tello 1959; Tello and Mejía 1979); (b) along with José Carlos Mariátegui, Luis Válcarcel, and other Peruvian *indigenistas*, championing social causes, especially recognition of the cultural significance of the native Indian populations (reflecting his own roots; see Kaulicke 2006; Mesia 2006); and (c) a unique and complex model of Peruvian prehistory (Tello 1942; also Lothrop 1948; Mesia 2006) that placed the Chavín as the mother culture ("*cultura matriz*") of Andean civilization and argued for the primacy of highland over coastal developments (against which Rafael Larco argued; see below). We consider his developmental model of Andean civilization as tenuous as he circumvented some well-documented chronological data that did not accord with his conception, as Fung (1963) correctly pointed out. Characterizing the relatively early Chavín as the mother culture prejudiced the perception of later cultures as much as Uhle's concept of epigonal cultures that implied inferior descendants or followers. At the same time, Tello's holistic vision of Peruvian history that integrated much ethnographically and ethnohistorically derived information, including that of cosmogony, was insightful and provocative, influencing the thinking of many later scholars, both Peruvian and Peruvianist.

Since the 1940s, Tello's conception of the primacy of the Chavín has influenced generations of Peruvian and Peruvianist archaeologists to focus on the site of Chavín de Huántar (including Hernán Amat, Richard Burger, Federico Kauffmann, Luis G. Lumbreras, John Rick, and John Rowe), its type site, and on the formative stage of the Andean civilization (Schaedel and Shimada 1982: 360–362; see below on the Japanese missions).

Another major figure in the emerging Peruvian tradition was Rafael Larco Hoyle (Fig. 4) who pioneered the archaeology of the north coast, one of the two hubs of long and complex pre-Hispanic cultural developments in the Central Andes (the other being the Titicaca Basin and its surrounding to the south). In contrast to Tello with a humble highland Indian family background, Larco grew up as a privileged member of the powerful and wealthy *hacienda* (a large landed estate that derives from the land grant system used by Spanish conquerors) owner in the Chicama Valley on the north coast (Evans 1968). He was able to excavate sites within his *hacienda* using his own peasants and purchase private artifact collections to augment his own. The resultant collection, predominantly of Moche origin, formed the foundation of the private Rafael Larco Herrera Museum in Lima (Castillo 2001; Evans 1968). A similarly large collection of Moche ceramics compiled by his father is today found at the Museum of the Americas in Madrid.

Larco systematized north coast archaeology by refining and expanding Uhle's basic chronology (Larco 1948) through identification of Cupisnique and Salinar cultures and a five-part seriation of primarily funerary Moche ceramics. The current popularity of the Moche archaeology owes a good deal to Larco's amassing of a

Fig. 4 Rafael Larco at his exacavations in the Chicama Valley. Courtesy of the Rafael Larco Herrera Museum, Lima

massive collection and seriation and "ethnographic reading" of realistic and diverse representations on funerary ceramics (e.g., Larco 1938a, b, 1946, 1948, 2001; see Kutscher 1955, 1983). At the same time, his works also reinforced the heavy dependence on funerary ceramics for chronology building and social and ideological reconstruction that dates back to Uhle (see below for further discussion on this point).

One major methodological development of the intervening years between the two world wars that has had a lasting impact was the aerial survey and photographic documentation of archaeological sites and landscapes by geologist, Robert Shippee, and U.S. Navy pilot, George R. Johnson, in 1931 (Denevan 1993). Their aerial expedition resulted in thousands of clear black-and-white, vertical, oblique, and ground

photographs. American historian, Paul Kosok, effectively took advantage of these and other aerial photographs in his pan-north coast survey (1939–1941, 1948–1949; Schaedel 1951a, b) of pre-Hispanic irrigation systems that he regarded as the cornerstone of the Chimú Empire and its precursors. Although he passed away prior to publishing his pioneering work on irrigation systems, Richard P. Schaedel, who collaborated with Kosok in fieldwork, posthumously published a compilation of numerous aerial photographs (Kosok 1965). This volume with its useful annotations derived from ground-truth checking continues to serve as a highly valuable resource for archaeological investigations, particularly on the northern coast. The Kosok-Schaedel collaboration was also important in demonstrating the value of macroregional surveys (i.e., multiple contiguous valleys as opposed to single valleys) in dealing with irrigation systems and the centralization of political power. Such an approach did not reemerge until the 1970s. Although he was not the first to recognize their existence (Mejía 1942 [1927]), Kosok was also responsible for initiating systematic study of the now widely known Nasca geoglyphs on the south coast (Kosok 1947; Kosok and Reiche 1949), work that was pursued by his German mathematician collaborator, Maria Reiche (1993), until her death in 1998.

The Virú Valley Project, conducted in 1946, marked in various ways a new era in the conception and methodology of archaeological research in Peru (Willey 1946, 1974; Schaedel and Shimada 1982). The project was sponsored by the Andean Research Institute in New York, an institution that was founded in 1936 by a tightly knit group of archaeologists mostly in museums and universities on the eastern U.S. with funds from private donations. It was the first time a holistic study of the entire period of human existence in a single region (an entire coastal river valley) was attempted. Project members made the problematical assumption that the valley served as a microcosm of the broader Central Andes. At the same time, this ambitious, holistic study is largely responsible for giving rise to such important methodological breakthroughs as preceramic archaeology (Bird 1948), paleoethnobotany (Towle 1961), and settlement pattern studies (Willey 1953). The team that consisted primarily of well-established archaeologists working with a few graduate students and specialists in ethnography, ethnobotany, geography, and physical anthropology had an explicitly stated shared goal, although in practice the participants pursued largely their own agendas. In terms of theoretical perspective, spearheaded by Julian Steward, project members held a strong neoevolutionary, functionalist vision of cultural developments (e.g., Bennett 1948; Bennett and Bird 1949; Steward 1949) in notable contrast to renouncing the "search for causes" in favor of the "Superorganic" view advocated by Kroeber (1944, 1948).

Although slow to develop following the pioneering work of J. Bird (1948; Bird et al. 1985), by the early 1970s, preceramic archaeology (see Bonavia et al. 2001) had become a major research focus in the hands of mostly Peruvianists such as Frédéric Engel (1957, 1963, 1966, 1987, 1988), Edward Lanning (1967), Michael Moseley (1968, 1975), Thomas Patterson (1971, 1983; Patterson and Lanning 1964, 1966; Patterson and Moseley 1968, and W. E. Wendt (1964). It became obvious that much of the Peruvian coast had seen precocious cultural developments that included major corporate constructions during the Late Preceramic (aka Late Archaic) period (2500–1800/1500 B.C.E.), if not considerably earlier.

The "maritime foundation of the Andean civilization" hypothesis that was first presented by Fung (1972) and subsequently elaborated by Moseley (1975) – that the intensive exploitation of the rich marine resources formed the foundation for the rise of social complexity – engendered a good deal of debate over the conventionally perceived role of agriculture, as well as the nature and trajectory of early cultural developments both on the coast and in the highlands (e.g., Aldenderfer 1989; Alva 1986; Bonavia 1982; Bonnier 1997; Burger 1992; Donnan 1985b; Feldman 1985; Fung 1988; Moseley 1992; Pozorski and Pozorski 1987; Quilter 1989, 1991a). Although various studies did demonstrate heavy reliance on marine products (e.g., Quilter et al. 1991), other pointed out the likelihood of differential preservation of plant remains and the possibility of inland settlements provisioning coastal fishing communities with agricultural produce (e.g., Matsuzawa 1978; Raymond 1981; Wilson 1981; cf. Quilter 1991b).

Recent fieldwork on the north-central coast of Peru, particularly at the physically imposing inland site of Caral (e.g., Shady 2006; Shady and Kleihege 2008; Shady et al. 2001; Shady and Leyva 2003) and nearby contemporaneous sites (e.g., Creamer et al. 2007; Hass et al. 2005; Vega-Centeno 2004), have significantly altered the above picture. They have shown that (1) their subsistence was based on both marine products and an appreciable variety and quantity of domesticated plants, and (2) supracommunal social complexity as represented by major corporate architecture and their planned layout had emerged by 2500 B.C.E. and perhaps as early as 3000 B.C.E. However, the claim that Caral was the first New World city and state and the foundation of Andean civilization (e.g., Shady 2006, 2008; Shady et al. 2001; Shady and Leyva 2003) has not been widely accepted (e.g., Stanish 2001).

The most notable methodological legacy of the Virú Valley Project was the settlement pattern survey by Willey (1953, 1974; Billman and Feinman 1999), who was enticed away by Julian Steward from pursuing a conventional stratigraphic study. The survey was far from being exhaustive in temporal and spatial coverage and biased toward large, readily visible sites, imposed a predetermined functional classification of settlements, and assumed stable environmental conditions (Schaedel and Shimada 1982). Offsetting these drawbacks, however, it offered an effective method for examining interrelationships between settlements and their ecological settings as well as among local and regional settlements. By the early 1960s, settlement pattern survey was considered the essential first phase of archaeological regional studies, although for some it was a study that could stand on its own without subsequent excavations (Parsons et al. 2000; Wilson 1988).

Although the popularity of settlement pattern study should have been an effective antidote, large ceremonial centers and/or capitals of all cultures and periods dating as far back as 3000 B.C.E. have continued to enjoy a disproportionate amount of attention since the days of Uhle. Kroeber's "small site methodology" (1963; also Moseley and Mackey 1972; Schaedel and Shimada 1982: 364) should have constituted another remedy for this imbalance. The basic idea was that the size and presumed organizational simplicity of small sites would allow the delineation of key artifact and behavioral components that could then be used to study larger and more complex settlements. His approach was rarely effectively applied, however, because of the inherent difficulties in integrating and establishing parity between the single

major-site focus, on the one hand, and small hinterland site and regional study, on the other. Too often an investigation that began with one approach would fail to undertake the other.

As archaeologists became increasingly concerned with the determinants of settlement locations, such as land use and water distribution, it was logical that settlement pattern studies became a launching point of archaeological investigation into paleoenvironmental conditions and processes. In fact, interest in culture–environment interplay has characterized Peruvian archaeology for at least the past half a century. The coexistence of major physiographic features such as the cold Pacific, the Andean Cordilleras, Amazonia, and intertropical front produce an incomparable ecological diversity along both altitudinal (generally East–West) and latitudinal (North–South) gradients. The presence of over 100 domesticated plants and five domesticated animals reinforces interest in nature-culture dynamics in Peru. The German geographer, Carl Troll (1958; also 1968), astutely recognized important interrelationships between the diversity of resources and living and growing conditions, on the one hand, and major cultural developments such as the Inka Empire, on the other. This macroscale vision serves as an effective caution against a strong inherent tendency among archaeologists to overspecialize in a given geographic area (e.g., a single coastal river valley) and overemphasize its uniqueness. Troll, Olivier Dollfus, and other geographers (also biologists; e.g., F. Herrera, H. W. and M. Koepcke, J. Pulgar, J. A. Tosi, A. Weberbauer) have also reminded archaeologists of the importance of elucidating the paleoenvironmental contexts of pre-Hispanic land uses and cultural developments. An ethnohistorical study of renewable resources by Rostworowski (1981; Fig. 5) is an important complement to the above.

Since the 1970s, archaeologists have, in fact, made important contributions to the study of paleoenvironmental conditions, processes, and management, including

Fig. 5 María Rostworowski at her home in Lima. Photograph taken by Yutaka Yoshii

those of Cardich (1975) and Engel (1987, 1988). Shimada and Shimada (1985, 1987) and Bonavia (1996) documented the adaptability, versatility, and wide distribution (including arid coastal regions) of domesticated Andean camelids. Also notable in paleoenvironmental reconstruction are the works of M. E. Moseley and his colleagues first in the Moche Valley on the north coast and later in the Moquegua Valley on the far south coast and elsewhere on the Peruvian coast (e.g., Moseley 1978, 1983a, b, 1987; Moseley et al. 1981, 1983; Ortloff et al. 1982, 1983) documenting the effects of tectonic uplifts and El Niño events on regional irrigation systems. Their works, along with those of various geologists and archaeologists (e.g., Craig and Shimada 1986; Grodzicki 1994; Sandweiss and Quilter 2008; Wells 1987), have shed light on the magnitude and frequency of these major natural quirks. Other multidisciplinary investigations involving analysis of contents (e.g., oxygen isotopes, diatoms, pollens, and/or charcoal and dust particles) of ice cores and lake sediment cores (Ortloff and Kolata 1993; Shimada et al. 1991; Winsborough et al. n.d.) have revealed well-dated regional and/or pan-Andean droughts, El Niño-ENSO, and other major climatic abnormalities of the past 2,000 years or more, allowing us to consider their impacts on the ebb and flow of cultural developments. Although such consideration has raised charges of environmental determinism (Erickson 1999; Van Buren 2001), the quality and the range of environmental data that are available to archaeologists today are far better than those used by earlier scholars (e.g., MacNeish et al. 1975; Meggers 1954; Paulsen 1976). We cannot ignore the well-documented magnitude of the paired late sixth and early eleventh century droughts and mega-El Niño-ENSO events. Although the adverse effects of these events are often emphasized, archaeologists should not forget that there are beneficial impacts of El Niño-ENSO events (Shimada 1994a: 52–54).

Since its nascent era (e.g., Uhle 1903), Peruvian archaeology has been characterized by efforts to maximize ethnohistorical information recorded during the Colonial era to understand the pre-Hispanic past. Early scholars (e.g., Means 1931; Valcárcel 1935) generally relied heavily on Colonial period lists of succession and achievements of Inka and pre-Inka kings as the basis for chronology and cultural reconstruction, although use of Colonial documents has become much more critically applied. J. H. Rowe's (Fig. 6) referential synthesis of Inka archaeology and his critical evaluation of Colonial documents (1946; also see Rowe 1945, 1948; Means 1928; Porras 1963) served as a useful guide for generations of archaeologists in their use of documentary evidence. Rowe's referential work, however, has been largely supplanted by recent publications (Pillsbury 2008; Salomon 1999).

A broader range of and improved access to ethnohistorical information have not made easier the task of implementing well-balanced archaeology-ethnohistory study. Ideally, the two sides are dialectically related so that each verifies its own veracity through the repetitious process of question and answer (Dymond 1974). There is, however, a tendency to favor one perspective over the other even in the face of constant vigilance.

A new era of archaeology-ethnohistory interplay was ushered in with J. V. Murra's (1962, 1970) call to locate and conduct critical and detailed archaeological assessments of early Colonial *visitas* (administrative censuses that involved

Fig. 6 John H. Rowe in Cuzco, Peru, in 1987. Photograph courtesy of Harold Conklin

house-by-house or community-by-community visits by Colonial officials). Murra (Murra and Morris 1976) himself directly collaborated with archaeologists Morris and Thompson (1970, 1985) in their classic study of Inka provincial life and administration in the Huanúco area.

Their study not only served as the model for a series of subsequent works on local–state relationships in the Inka Empire (e.g., D'Altroy 1992; Dillehay 1977; Hayashida 1999; Julien 1983; Salomon 1986; Schjellerup 1997; Spurling 1992), but also helped to focus our attention on provinces and the question of how the Inka Empire really functioned, as opposed to the idealized vision of how it functioned presented to the Spaniards by the Inka elites and their court historians in the Inka capital of Cuzco.

Murra's publications (1968, 1972, 1975) elucidating the late pre-Hispanic "vertical control" of multiple ecological tiers had broad and lasting impacts on Peruvian archaeology. His "verticality" model helped to answer the oft-heard

questions surrounding the impressive productivity and the large population at which the European conquerors marveled, and more importantly, elucidated the economic, social, political, and ideological ramifications of the complex, condensed Andean ecology. Archaeologists began testing the applicability of this model for pre-Inkaic periods (e.g., Goldstein 2005; Masuda et al. 1985; Rice et al. 1989; Stanish 1992), thereby indirectly strengthening interest in paleoenvironment and political economy among Peruvianists from North America. Due to their focus on the eastern and western slopes of the Titicaca Basin, these studies also amplified our understanding of what Lumbreras (1979, 1981) has called the South-Central Andes. Further, they helped to illuminate contrasting forms of ecological complementarity in the coastal region, such as reverse verticality (Rostworowski 1985, 1989), dispersed domain (Ramírez 1985), and horizontality (Shimada 1982).

Another ethnohistorical study that was instrumental in transforming Inka archaeology in the 1960s and 1970s was the original, provocative, and influential vision of Cuzco Inka organization and ideology presented by Tom Zuidema (1964) in his dissertation. Through his exploration of the multifaceted *ceque* system, a set of 41 lines radiating out of the Cuzco center that mapped and organized sacred locations as well as their ritual activities and affiliated social institutions, he challenged conventional visions of Inka royal genealogy and succession and popularized the concept of diarchy, the presence of two parallel kings, each representing one of two royal moieties (Duviols 1979; Gose 1996; Rostworowski 1999). Zuidema's vision spawned various fieldworks that tested and/or refined his model (e.g., Bauer 1992, 1998; Sherbondy 1992).

Over the past three decades, both Peruvian and Peruvianist archaeologists and ethnohistorians have devoted a lion's share of their attention (including a specialized periodical, *Tawantinsuyu*) to diverse aspects of the Inka culture and Empire, including its origins (McEwan et al. 2002), famed masonry technology (Protzen 1993) and *quipu* recording system (e.g., Urton 2003), royal estates and landscaping in the circum-Cuzco area (e.g., Niles 1987, 1999), and settlements in the *ceja de selva* (high Amazonian jungle; Lumbreras et al. 2001; Schjellerup 1997).

Decades of Inka archaeology have not effectively resolved the issue of distinguishing Inkaic from pre-Inkaic innovations and institutions (Schaedel 1977; also Rowe 1982; Wachtel 1982). Was the Empire, the largest indigenous political system ever developed in the Americas, merely pre-Inkaic Andean institutions and principles *writ large* or did it develop something uniquely its own? This is not a minor question as it affects both professional and public conceptions of the Inka Empire and pre-Inkaic Andean civilization as a whole. Since the 1940s, many Peruvian and Peruvianist archaeologists have tacitly believed in the persistence and pervasiveness of deeply ingrained cultural institutions, practices, and beliefs (e.g., asymmetrical moieties, reciprocity, labor taxation, and ancestor cult) – what is commonly referred to as *lo andino* ("Andean-ness"; Bennett 1948; cf. Isbell and Silverman 2006). In reality, these practices and beliefs that are best understood for the Inkaic time thanks to documentary evidence have been sought in the pre-Inkaic era as far back as the Late Preceramic, some 5,000 years ago. Evidence in support of pre-Inkaic dual social organizations, for example, is usually coincidentally gathered during regional settlement surveys or excavations for other

purposes and thus is only suggestive (e.g., the presence of paired, differently sized platform mounds or seats; Burger and Salazar-Burger 1993; Moore 1995; Netherly and Dillehay 1986; cf. Cavallaro 1991). To invoke *lo andino* without independent lines of evidence in its support in essence amounts to tenuous Inka analogy and presumes an unchanging continuity over centuries (Shimada 2003). Effort should be made to go beyond mere documentation of pre-Inkaic precursors to elucidate their developmental trajectories and specific organization and workings.

Thus far, we have offered few observations regarding the different intellectual traditions from diverse areas of the world that converge in Peru. Their different research priorities, outlooks, and approaches are generally complementary and encourage healthy comparison in results and interpretations and collaboration. At the same time, there are sometimes problems of communication, comparison, and even counterproductive competition.

Research priorities and organization, as well as funding, also impact research and dissemination of results. For example, inspired by Tello's vision of the Chavín, Japanese teams under different directors (Seiichi Izumi, Kazuo Terada, and Yoshio Onuki together with Yasutake Kato) devoted decades to elucidating the Formative era of Andean civilization (i.e., the broader contexts and process of the rise and

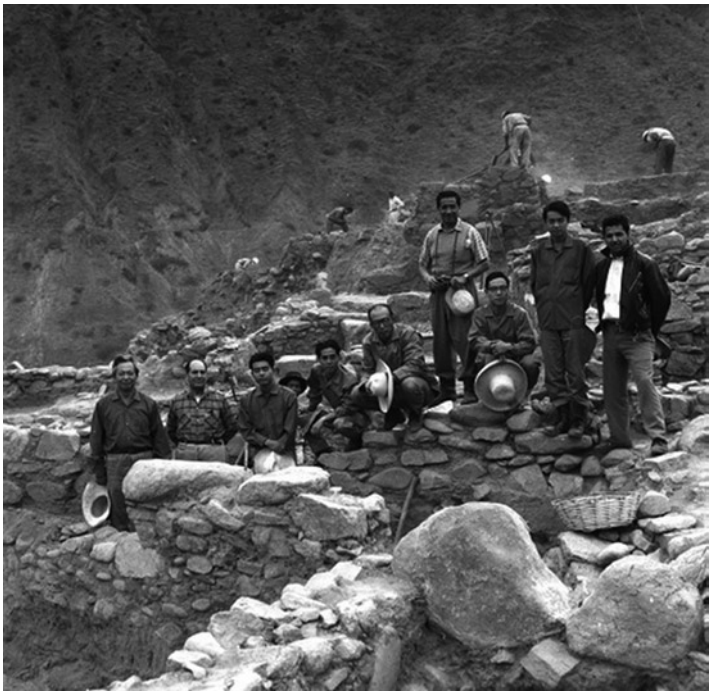

Fig. 7 Members of the 1963 University of Tokyo Andes Mission at Kotosh (from left to right, Seiichi Izumi, Toribio Mejia Xesspe, Yoshio Onuki, Chiaki Kano, Toshihiko Sono, Cirilo Huapaya Manco, Kazuo Terada, Yasushi Miyazaki, and Augusto Cruzat). Immediately behind them is the Temple of Crossed Hands. Photograph taken by Hiroyasu Tomoeda. Courtesy of Yoshio Onuki

spread of the Chavín; e.g., Izumi 1971; Izumi and Sono 1963; Izumi and Terada 1972; Terada 1979; Terada and Onuki 1988, 1982, 1985; Onuki and Kato 1993). Their continuity with a tight research focus and timely publication of a series of highly detailed and comprehensive reports published in English and, later, Spanish – distributed gratis to many investigators and institutions – have been unparalleled in Peruvian archaeology. Only the German (e.g., Reindel and Wagner 2009; see above) and French (e.g., Guffroy 1994; Lavalle et al. 1985; Hocquenghem 1998) projects sponsored by the German Archaeological Institute and French National Center for Scientific Research (Centre Nacional de la Recherche Scientifique [CNRS]), respectively, have approximated the Japanese accomplishment.

The Japanese, French, and German reports together constitute quite a contrast with publications by North American archaeologists that are predominantly in the form of hypothesis- or model-driven individual articles and theses. Data presented in the latter are often restricted to the particular hypothesis or model being tested. Lathrap's (1965) critique of the Japanese report on Kotosh (Izumi and Sono 1963; Izumi and Terada 1972) highlighted the epistemological differences among different intellectual strands represented in the Peruvian archaeology. Most monographs on South American archaeology by major research institutions in the USA (e.g., the American Museum of Natural History, the Field Museum of Natural History, and Peabody museums at Harvard and Yale) were published between the 1920s and 1960s.

This divergence in the character of publications, in reality, reflects "fundamentally different conceptions and approaches to funding and implementation of archaeological research" (Shimada 1990: 222). The funding structure of the Japanese Ministry of Education, Science and Culture, for example, required that one or two field seasons be followed by a season devoted to analysis of recovered data and artifacts and another for writing up its results. Funding for the last stage covered costs of publishing a comprehensive report, and its publication enabled investigators to seek another round of funds.

This funding structure, together with the relatively stable hierarchical academic structure of Japanese universities, to a large measure allowed this long-term commitment to a specific site, and later, region (e.g., Kotosh and the broader Huallaga drainage) and team of professional personnel. Commonly, the North American project, on the other hand, is problem-oriented and individualistic; it has a research organization of a single professor assisted by his or her graduate students, who subsequently write MA and/or doctoral theses on some aspects of the research issue for which the project was funded for 1 or 2 years. With doctorates in hand, these students then "bud off" to seek their own site, valley, or basin to establish their own projects. Since the emergence of large projects (e.g., Chan Chan-Moche Valley Project, Cuntisuyu Project, Upper Mantaro Valley Project) in Peru, we have seen two generations of North American archaeologists budding off to many sites and regions so that, at least for coastal Peru, the clear majority of river valleys currently has at least one active North American project. To gain or maintain a competitive edge for funding and employment, these projects frequently shift their topical and/or geographical foci. In various respects, North American colleagues face a serious challenge maintaining long-term continuity in their fieldwork, despite continuing interest in the regional approach. It is interesting that, with the recent termination

of their long-standing team approach to Formative sites, we now see young Japanese archaeologists dispersed in Peru conducting their own individual projects much as their North American counterparts.

Theoretical Views and Debate

As we have discussed in the above historical overview, Peruvian archaeology has developed various methodological innovations and preferences, such as settlement pattern studies, stylistic/iconographic analysis (particularly of funerary ceramics), and ethnohistory-archaeology dialectics.

At the same time, it has been rather a-theoretical with the notable exceptions of a strong undercurrent of culture ecological, or ecosystemic thinking (particularly among North American Peruvianists) and Marxian "social archaeology" (especially among some Peruvian scholars; see below). We see a significant rise in Peruvianist fieldwork and practitioners starting in the 1970s when much of the advocacy for processual archaeology – and processualism-culture historicism debate – became largely passé. Response to the rise of postprocessualism by Peruvians and Peruvianists has been somewhat muted, but perspectives and concepts such as agency, engendered vision of the past, social memory, and active role of ideology have been increasingly applied by Peruvianists in particular (e.g., Bruhns and Stothert 1999; Gero 1992; Hastorf 2003; Isbell 1997; Jennings 2006; Mantha 2009; Shimada et al. 2004; Sillar 2004; Tung and Cook 2006). Archaeology practiced by Peruvian archaeologists over the last several decades has been in fact a curious blend of the culture historicism, processualism, and Marxian social archaeology without any serving as the dominant or guiding force. It is understandable that Peruvian/Andean archaeology as a whole has been criticized for being insular in character and not contributing sufficiently to the processual ideal of cross-cultural generalizations (Rice 1998). Even some aspects of *lo andino* have been questioned as to whether they are truly unique to the Andes (Carrasco 1982).

The theoretical stance that has received most attention, particularly from Peruvian archaeologists, is called social archaeology. In Peru, this school of thinking is undeniably connected with arguably the most prominent modern Peruvian archaeologist, Luis Guillermo Lumbreras (Fig. 8). Although by no means the first or only Peruvian scholar to employ a Marxian perspective in interpreting Peruvian prehistory (e.g., Choy 1955, 1960; Valcárcel 1927, 1943, 1945, 1959; also see Tantaleán 2006), his importance lay in the fact that he was the first to develop theoretical and methodological bases for practicing Marxian archaeology in Peru.

Lumbreras was trained at San Marcos National University, graduating in 1959 with a doctorate in letters with specialization in archaeology and ethnology, and in 1963, returned home to Ayacucho (born there in 1936) as a professor of the University of San Cristóbal de Huamanga and founded the first Faculty of Social Sciences in Peru. A product of his archaeology of Peru courses taught at Huamanga was published as a book that presented a general panorama of the archaeology of the Central Andes (Lumbreras 1969).

Fig. 8 Luis G. Lumbreras at his home in Lima. Photograph taken by Yutaka Yoshii

This book represented the first comprehensive Marxian approach to the understanding of Peruvian prehistory. As such, it proposed a new chronological scheme as an alternative to the widely adopted periodization developed by John H. Rowe and his colleagues at University of California, Berkeley (Menzel et al. 1964; Rowe and Menzel 1967). The latter was composed of successive periods (as opposed to "stages"; Rowe 1962), each with specific beginning and ending dates and was an attempt to dissociate archaeological chronology from any cultural or evolutionary implications associated with the cultural chronologies that resulted from the Virú Valley Project (e.g., Collier 1955; Steward 1949; Strong and Evans 1952).

Lumbreras' evolutionary approach postulated the existence of seven "periods" – Lithic, Archaic, Formative, Regional Development, Wari Empire, Regional States, and Inka Empire. He also recognized three major stages among these periods: Gatherers (Lithics and Archaic), Village Farmers (Formative and Regional Developments), and Urban, Industrial Societies (Wari Empire, Regional States, and Inka). The configuration of his scheme reflects the clear influence of Childe's views (for example, Childe 1936) on the development of civilizations. In a later

publication, Lumbreras (1987) emphasized the importance of Childe's concepts such as the Neolithic Revolution and Urban Revolution as fundamental in the interpretation of Andean sociocultural processes (cf. Choy 1960).

Today, we see the curious coexistence of these two competing chronological schemes with many Peruvian archaeologists opting for Lumbreras' scheme and Peruvianists generally favoring the Berkeley's periodization. There are also many archaeologists who combine divisions from both schemes ignoring or ignorant of major underlying conceptual differences.

Although Lumbreras' 1969 book already showed elements of historical materialism, it also contained many instances of culture-historical treatment of evidence (see Kaulicke 2006) as reflected in the chapter organization based on cultures and their characterization. No new edition of this book has been published other than the extensively edited English version (Lumbreras 1974a). Apparently, the impossibility of going beyond traditional explanations based on the type of data then available led him to explore alternative approaches to the archaeological record. Thus, 5 years after the original work, Lumbreras (1974b) presented a programmatic proposal for archaeological work. By "programmatic proposal," we refer to the formulation of principles, concepts, and procedures that permit archaeologists to develop a scientific practice.

One major feature of this proposal is that it questioned the appropriateness of the concept of culture as a notion that encompasses the totality of social phenomena. As the alternative, he proposed the concept of social formation as the structural entity out of which culture emerges as an epiphenomenal manifestation.

Assuming the elucidation of social formation as the objective of archaeology, Lumbreras explicated the required methods and techniques that would permit the collection of empirical data as well as their analysis and chronological/spatial ordering. He further explained the different components of social formation (i.e., the mode of production and its constituent components [productive forces and relations of production], the constitution of social classes, and the ideological forms) and their archaeological correlates.

Various authors, however, have pointed out the difficulties of implementing his programmatic proposal without an extensive clarification of linkage between the archaeological record and abstract notions such as "productive forces" and "social classes" (e.g., Oyuela-Caycedo et al. 1997). Self-recognition of these limitations appears to have motivated Lumbreras to broach theoretical and methodological themes in later work.

During the 1980s, by means of brief thematic essays published primarily in the bulletin of the Andean Institute of Archaeological Studies (*Instituto Andino de Estudios Arqueológicos*; INDEA) *Gaceta Arqueológica Andina,* Lumbreras (compiled in Lumbreras et al. 2005) presented a series of ideas related to the forms of data acquisition and analysis that were not developed in the 1974 book. Lumbreras founded the Institute in 1976 to promote his vision of archaeology and stimulate young archaeologists to practice it. The new ideas to which we refer here were attempts to fill existing voids between the archaeological record and "substantive theory" (theory that aims to explain "cultural behavior"). Lumbreras called these related ideas altogether the "Theory of Observation."

While the Theory of Observation did not represent new thinking in terms of approaches to achieving the aims of archaeology, it systematized within a comprehensive proposal a series of principles that began to be widely shared by Latin American archaeologists and diverged fundamentally from the methodological prescription of culture-historical archaeology. The Theory began with discussion of the recovery of empirical data in the field. Lumbreras defined surveying as a means for recovering the "synchronic record" and making contact with the space where traces of a social activity are found and placing it within its environmental context. Subsequently, excavation was defined as the morphological and structural examination of a context of human activity that has been abandoned and buried; that is to say, the observation, description, and analysis of various lines of tangible evidence of human activity that are found articulated with each other by synchronic or diachronic relationships within the space and as such can be isolated in time and space.

Lumbreras further theorized that there exist three basic "principles" (i.e., "relations" or "relational phenomena") that should guide the examination of excavation contexts: association, superposition, and recurrence. He argued that recurrent associations define socially significant units, i.e., recurrent associations would "readily" reveal the social activity that created them. This concept was central to his proposal since reconstruction of social formations rests on the definition of these entities or phenomena.

Lumbreras further suggested a reformulation of criteria for classification of archaeological material. In contrast to culture-historical approaches that emphasized form, he proposed that "function and production" be considered the fundamental criteria. Thus, in his conception, the fundamental variables of classification that he called "morpho-functional" should be related to the use and/or the utilitarian value that given materials had for the society that produced them. He did recognize that form and function were inherently related in that artifact form reflected the design that presupposed a specific function. Once materials were classified using his morpho-functional criterion, they were to be divided by the raw material type or manufacturing processes involved in their creation.

Finally, the criterion of form referred to the external aspects of the object (i.e., silhouette or finishes) and was a third classificatory criterion, subordinate to the first two. The final objective of using these criteria was that the resulting type *not* be a subjective classificatory unit in relation to the society that produced objects, but instead constituted a socially significant unit.

Lumbreras attempted to provide in the above manner a clear and coherent methodological framework that was intended to guide works of various generations of Peruvian archaeologists starting with data recovery in the field to classification of recovered materials. Some Peruvian social archaeologists tended to assume that, following these well-defined steps, one would be in position to readily reconstruct the social formations by combining the information of "socially significant units" that were already identified with the aforementioned substantive theory.

An inherent difficulty with the procedure Lumbreras advocated, however, was that it did not include an appropriate methodology for analysis of the processed information (i.e., determination of the relations among the units or categories generated

in the classification). Due to this omission, a major gap continues to exist between the classified information and the interpretive framework, significantly weakening the soundness of the interpretative proposals. We believe these insufficiencies constitute perhaps the major challenge for the future development of the social archaeology in Peru.

In general, over the past 40 years, social archaeology that has integrated selective aspects of the Marxian philosophy (e.g., mode of production and class struggles) has not been a consistent or dominant force in Peruvian archaeology and its popularity seems to be partially related to the broader political ideology of Peru (Kaulicke 2006; Oyuela-Caycedo et al. 1997; cf. Benavides 2001; Patterson 1994, 1997; Tantaleán 2006).

Peruvian Archaeology in Practice Today: Trends, Foci, and Issues

For over a decade starting around 1980, political violence by the Maoist Shining Path (*Sendero Luminoso;* aka SL) and the Tupac Amaru Revolutionary Movement (*Movimiento Revolucionario Túpac Amaru;* aka MRTA) that was inspired by the Cuban Revolution engulfed much of Peru. Widespread, frequent, and unpredictable attacks by these groups and responses by governmental institutions, as well as self-defense measures taken by the affected communities, made archaeological fieldwork, let alone ordinary daily activities, nearly impossible to be conducted in much of Peru. Both foreign and national archaeologists fled zones of violence, suspending their research, in many cases, never to be resumed. Only a few foreign and national projects remained operational during this period. Many of the former with more financial resources and mobility sought new research locations in safer southernmost regions of Peru such as Moquegua and Ilo and the adjacent south shore of the Titicaca Lake (i.e., Bolivia), thereby spurring rapid archaeological advances in the South-Central Andes (e.g., Goldstein 2005; Kolata 1993, 1996; Stanish 2003). Implicit in the concept of the South-Central Andes was a belief that this region had a cultural ecology and developmental trajectory that were largely distinct from those of the area farther north, particularly the north coast, although the unifying effects of various interregional political and religious expansions that were originally recognized by Uhle remained widely acknowledged (Isbell and Silverman 2006; Moseley 1983b; Rice 1983; Willey 1948).

With the defeat of the aforementioned groups by the end of 1994 (Palmer 1994: 3–4), we saw a resurgence of archaeological fieldwork by both Peruvians and Peruvianists on the Pacific coast and, at a much slower pace, in the highlands. Aside from the establishment of the new geographical foci of fieldwork that was noted earlier, archaeology, or more precisely, the sociology of archaeology of the postpolitical violence era in Peru is significantly different from that of the preceding era. What are these differences? How can they be explained? How do they affect archaeological practice and profession, including the Peruvian-Peruvianist

relationship, as well as the generation and sharing of archaeological knowledge? These are the questions that guide the remainder of this paper.

One of the most important aspects of postpolitical violence era archaeology is the proliferation of archaeological impact assessments of proposed developments, what Higueras (2008) calls cultural heritage management. Notable among these land modification plans are large-scale strip mining of gold and other metal-bearing ores (pretty much the entire span of the highlands), construction of new roads and telecommunication antenna towers, laying of telecommunication cables and pipelines carrying natural gas, petroleum or a slush of crushed ore, and large-scale reclamation of coastal deserts for export-oriented irrigation agriculture (e.g., the Olmos, Chavín-Mochic, and Ilo projects).

In essence, what we have seen over the past 15 years or so (and likely to continue for the foreseeable future) is a notable surge in "contract archaeology" projects. Typically, they entail survey to identify archaeological sites and determine extent by small-scale test excavations. Information thus collected allows the archaeologists to determine whether sites would be damaged by the proposed land modification project. In affirmative cases, such projects should be modified, unless they are considered "public necessity" or "national priority." In those cases, the sites should be fully excavated with funds provided by those planning the project.

Contract archaeology in Peru presents some unique challenges. For one, archaeologists face major logistical and physical challenges from the rugged, sparsely inhabited landscape that often encompasses geographical extremes of arid deserts, snow-capped mountains, and/or dense tropical vegetation. Many of the proposed land modification projects are monumental in scale spanning multiple coastal valleys, strings of mountains, and/or major ecological zones. For example, the well-publicized $1.6 billion Camisea Natural Gas Project that began in August of 2004 entailed laying of at least two separate pipelines (each well over 800 km in length) from the Camisea gas field in the lower Urubamba basin in the southeastern Amazon to Pisco and Lima on the Pacific coast, traversing the Andes (2006 http://www.amazonwatch.org/amazon/PE/camisea/; 2008 http://www.iadb.org/pro_sites/camisea/). The challenges to conducting comprehensive site surveys and excavations in such diverse and often challenging environmental settings are obvious in spite of large operating budgets and multiyear duration.

As expected, the proliferation of contract archaeology has had significant impacts on the formation and practice of Peruvian archaeologists. Camisea and many mining projects have generated correspondingly numerous contract archaeological projects that have offered not only fieldwork opportunities, but also relatively good wages. In the current socioeconomic context of Peru in which stable, gainful employment, academic (i.e., universities, museum, and research institutes) or otherwise, is quite rare, contract archaeology is obviously attractive as it provides well-paid jobs that could last perhaps a year or more, although many such positions are much shorter in duration (i.e., two-three months). Thus, a drove of young Peruvian archaeologists, including university students specializing in archaeology, have been actively involved in contract archaeology projects. In fact, many of them are specializing in contract archaeology, leaving research-oriented

colleagues as a definite minority. Kaulicke (2006) lamented a notable reduction in scientific production in recent years. By our estimation, over 80% of archaeological employment in Peru today is in contract archaeology. Not surprisingly, research-oriented Peruvian and Peruvianist projects are both finding it difficult to attract archaeology students for fieldwork.

An important consequence of the recent surge in contract archaeology is that Peruvian archaeology students are racing to acquire their professional title called *licenciatura,* so that they can direct or, minimally, participate in good-paying fieldwork. The title is *not* an academic degree, but a *certification* that the holder has a minimum technical competence to conduct his or her own archaeological project. Initially, the title was granted when a major manuscript resulting from original research (akin to a master's thesis in American universities) was accepted as demonstrating the aforementioned competence by an accredited university with an archaeology program. While this time-consuming practice continues today at a few Peruvian universities, pressure for a faster and less demanding way to acquire the title has resulted in modifications of university rules, so that today it is possible to acquire it through a qualification exam or completing a number of relevant university courses that last only one-two months. In reality, the criteria and standards for this title are far from uniform, varying considerably from one university to the next along with the depth and breadth of knowledge and understanding of archaeology of those with the title.

The notable increase in contract archaeology and attendant diversification and proliferation of archaeologists in Peru fueled efforts to establish formalized standards of professional qualifications/certification and conduct a related professional association. Additional factors that provided the impetus were the growing recognition of the variable quality of contract archaeology and its divergence from research or problem-oriented archaeology (usually by those with academic employment).

At the initiative of several archaeologists, a law (Nº 24575) was passed in November, 1986, that established the Professional College of Archaeologists of Peru (*Colegio Profesional de Arqueólogos del Perú* or COARPE (2008a, b); http://www.coarpe.org/). It was not, however, until the governmental approval of its statutes by the Presidential Decree (*Decreto Supremo* Nº 014-2004-ED published on 1 September 2004) that COARPE began impacting on the practice of Peruvian archaeology.

In many ways, the establishment of COARPE follows that of the Society of Professional Archaeologists (SOPA) that was established in the U.S. in 1976 and later (in 1998) transformed into the Register of Professional Archaeologists (RPA). To be listed in the Register, the archaeologist must agree to abide by an explicit Code of Conduct, Standards of Research Performance, and Disciplinary Procedures. He or she must "… hold a graduate degree [such as an M.A., M.S., Ph.D., or D.Sc.] in archaeology, anthropology, art history, classics, history, or another germane discipline. … have substantial practical experience and agree to be held accountable for their professional behavior" (2008a; http://www.rpanet.org/displaycommon.cfm?an=1&subarticlenbr=1). Although archaeologists in the original SOPA were

predominantly contract archaeologists, today the RPA includes diverse archaeologists from many areas of the world.

COARPE was the institution that many Peruvian archaeologists had long awaited, as they had struggled and continued to struggle for recognition of their scholarship within the national academic and professional world. Over the past several decades, Peruvian archaeology had seen extensive involvement (e.g., fieldwork, publications, and museum administration) of both national and foreign nonarchaeologists (e.g., architects and medical doctors). Further, important decisions regarding the national archaeological heritage were being made at the National Institute of Culture (INC) by nonarchaeologists. Archaeologists expected the newly established COARPE to resolve these and other concerns much in the same way that the medical, legal, and engineering "*Colegios*" (formally accredited professional associations) had for those professionals.

The COARPE establishment, however, has resulted in much debate within and outside of Peru, particularly in regard to its bylaws which were formulated with little input from either national or foreign archaeologists working in Peru. Among its key stipulations were that, in accordance with Peruvian law, to be a member of COARPE, an archaeologist must hold the *licenciatura* title and that only COARPE members would be allowed to "practice the [archaeological] profession" (including fieldwork) in Peru. The INC issues permit to conduct archaeological fieldwork, but it is COARPE that accredits professionals to practice their profession. Prior to the establishment of this College, the INC appeared to be in charge of all these matters.

Although the bylaws of COARPE were legally applicable only to Peruvian archaeologists, a major problem arose when the above stipulations were imposed on foreign archaeologists and foreign-trained Peruvian archaeologists, nearly all of whom held either master's and/or doctorate degrees in anthropology but not the required *licenciatura*, a title that does not exist in most countries.

As a consequence, for several years after governmental approval of the COARPE statutes, there was a significant drop in the number of foreign projects conducting fieldwork. Although some Peruvianist archaeologists became COARPE members after a complicated, expensive, and time-consuming process (several months to years, in some cases), formal recognition of their master's or doctorate degrees in anthropology as comparable to the *licenciatura*. Many foreign graduate students who were hindered by financial and/or time limitations as well as the protracted and confusing certification process chose either to seek fieldwork opportunities in neighboring countries (i.e., Ecuador and Bolivia), postpone their research, or most commonly, seek licensed Peruvian archaeologists to *officially* direct their fieldwork.

The College was beset by additional problems: a seeming lack of transparency in financial and administrative aspects of the College, internal power struggles (e.g., provincial versus Lima-based archaeologists), various ad hoc rules announced after the establishment of the College, and the difficulty the Board of Directors of the College (as opposed to the College itself) faced in being officially recognized by the National Register of Peru (also see Higueras 2008: 1082–1083).

A memorandum of understanding established in 2007 between the RPA and COARPE to allow RPA members to become COARPE members (Register of Professional Archaeologists 2008b; http://www.rpanet.org/displaycommon.cfm?an=1&subarticlenbr=17) appeared to be an amicable and feasible solution to the difficulty that foreign archaeologists faced in being able to conduct archaeological research in Peru. Before this agreement had any effect, however, the INC made a controversial announcement in 2007 that it is the only institution empowered to issue permits for archaeological fieldwork – choosing to ignore the role and authority of the COARPE in various professional matters.

This announcement was a welcome relief for foreign archaeologists who had faced major uncertainties regarding their future fieldworks in Peru, not to mention the costly degree certification process. However, far from resolving the major issues of professional scholarship in Peru as expected, it has seriously undermined the position of the Peruvian archaeologist as a professional concerned with Peruvian cultural patrimony. The INC rejection of COARPE's authority has left Peruvian archaeologists without the possibility of having, at last, a formal institution that could legitimize and support their scholarship. This situation at present is in limbo now that the INC was subsumed under the umbrella of the new Ministry of Culture of Peru that was created on July 20, 2010 by Law No. 29565.

The above sequence of events surrounding COARPE did not solve various serious issues that face Peruvian archaeology today. Although the COARPE situation served as a forum that, for the first time, involved a large number of Peruvian archaeologists in the debate surrounding professional ethics and standards, the same forum revived widespread resentment toward foreign archaeologists.

Tension between Peruvian and Peruvianist archaeologists can be traced back at least to the post-Virú Valley project era (i.e., the beginning of 1950s; Schaedel and Shimada 1982). Since that time, foreign archaeologists, in general, have not done enough to share results of their research, whether in the form of public lectures, participation in regional or national conferences in Peru, or in publications. As a result, some foreign projects that are well known in their countries are little known in Peru. During the past decade, the number of archaeological projects directed by Peruvian archaeologists was roughly comparable to that of Peruvianists'; however, in general, the former had smaller budgets and were smaller in scale and shorter in duration. In addition, many of the costly analyses (e.g., archaeometric) available to the Peruvianist archaeologist were financially out of reach for the former. Further, foreign archaeologists typically publish their results first in their own language and country and only later, if at all, in Spanish in Peru (Shimada 1995: VII). Regrettably, the pressure to publish for promotion and tenure, for example, in the U.S., is compounded by the fact that many American universities marginalize Spanish publications in Peru or fail to properly weigh the ethical obligation of their archaeologists to share their results with Peruvian colleagues and public. Integration of Peruvian colleagues and students in their fieldwork, other than legally required Peruvian codirectors, is still inadequate. Foreign projects that have a formalized mechanism or a long-term collaborative agreement (i.e., *convenio*) with a Peruvian academic institution to assure such integration are still rare.

These and other factors have engendered resentment among Peruvian archaeologists and fostered their perception that foreign archaeologists come to Peru solely on a self-serving basis (i.e., purely for their personal research) and are not concerned with the protection of the cultural patrimony of Peru or public dissemination of their results. In fact, the Peruvian-Peruvianist relationship faced a major crisis with the controversy surrounding intellectual rights over discoveries (as well as resulting publicity) at the aforementioned, impressive Late Preceramic site of Caral and contemporaneous sites nearby in the mid-Supe valley on the north-central coast of Peru. This culminated in Peruvian requests for various sanctions against the American archaeologists, followed by behind-door mediation attempts. While the controversy involved only a few archaeologists, it clearly had adverse repercussions, particularly in the Peruvian perception of their foreign colleagues.

More recently, a tense impasse with Yale University over the return of objects taken by Hiram Bingham and his team nearly a century ago from the famed Inka royal estate of Machu Picchu east of Cuzco has contributed to the deteriorating climate (e.g., 2006, http://www.npr.org/templates/story/story.php?storyId=5298164; 2007, http://www.nytimes.com/2007/09/17/arts/design/17peru.html; Mould de Pease 2003). The site is a major symbol not only of identity for modern inhabitants in the Cuzco region, but also of the prominent pre-Hispanic cultural heritage of Peru as a whole (Flores 2004). The widespread interest within Peru in the candidacy of Machu Picchu in the 2008 worldwide election of the new Seven Wonders of the World (2008, http://www.new7wonders.com/classic/en/n7w/results/c/MachuPicchu/) is a further indication of its symbolic importance to Peru.

Mending badly damaged Peruvian-Peruvianist relations will take time and a multipronged approach by both sides. For example, Dumbarton Oaks Pre-Columbian Studies under the direction of Jeffrey Quilter and, more recently, Joanne Pillsbury has been cosponsoring with Peruvian colleagues and institutions (e.g., Catholic University of Peru and National University of Trujillo) thematic conferences in Peru, a welcome change of venue that has served as an effective means of sharing and discussing data and interpretations. Similarly, the Sicán Archaeological Project and the Sicán National Museum cosponsored a free-admission conference in 2008 to share with interested public major results of the 30 years of regional research by the project. Successful culture- or period-specific (and, more recently, thematic) conferences and attendant publications (*Boletín de Arqueología PUCP* – starting 1997) of their proceedings under the direction of Peter Kaulicke in close collaboration with foreign colleagues (e.g., Dillehay and Kaulicke 2005) also have served to bridge the Peruvian-Peruvianist divide. The publication of major field reports and syntheses in Spanish by some foreign institutions (e.g., *Kommission für Allgemeine und Vergleichende Archäologie des Deutschen Archäologischen Instituts Bonn*; e.g., Hecker and Hecker 1985; Tellenbach 1986) and archaeologists (e.g., Golte 2009; Hocquenghem 1998; Shimada 1995, Shimada (ed) 1994b) has gone a long way toward informing Peruvian colleagues and the public of current research. Recent deluxe Peruvian books have been written in Spanish and English (e.g., Mujica 2007), although it seems reasonable that any foreign archaeologists with serious and long-term interest in Peruvian archaeology should be well versed in Spanish.

A major issue that has emerged with the expansion of contract archaeology in Peru discussed earlier is the long-term protection and conservation of archaeological sites. In Europe, the U.S., and many other countries, proliferation of "rescue" and contract archaeology has been accompanied by what has come to be called cultural resource management (CRM), archaeological heritage management, or conservation archaeology, which is built upon the conviction that archaeological sites and other forms of cultural heritage constitute nonrenewable national resources that must be protected. It usually counts on governmental legislations and/or policies for support. Peru has already enacted its share of appropriate protective laws (see Higueras 2008; Silverman 2006a). What is at issue, however, is *whether they are effectively implemented,* particularly in the face of the rapidly increasing number and extent of large-scale land modification projects described earlier and the number of sites being discovered through contract archaeology. In many parts of Peru, both on the coast and in the highlands, archaeologists of regional INC offices (commonly without any per diem support or vehicles at easy disposition) are already stretched thin with field inspections and other pressing tasks related to these and other smaller projects. Without a significant infusion of human and material resources by regional and/or national governments, the prospects for archaeological conservation apart from impressive sites look bleak. As Silverman (2006a: 58) notes, the INC and other relevant governmental institutions do not have "an explicit philosophy of cultural stewardship." Long-term policies of cultural heritage management and their consistent application need to be promptly established by these institutions.

"Impressive" sites with the potential to attract tourists have been singled out for infusions of considerable amount of resources by both public and private sectors. PromPeru (*La Comisión de Promoción del Perú para la Exportación y el Turismo* or its antecedent *Comisión de Promoción del Perú*), the governmental organization charged with the marketing and promoting of Peruvian products for export and tourism to and within Peru, has been targeting such impressive archaeological sites as Kuelap (Kauffmann and Ligabue 2003) and Túcume as additional, if not alternate, tourist destinations, in addition to the already widely known Machu Picchu and Nasca geoglyphs (Higueras 2008: 1080–1081). Taking the concept of archaeological sites as touristic resources to a new height, the National Congress of Peru has established a program of direct funding for restoration, conservation, and research at a handful of major sites on the coast by regional museums or Peruvian archaeological teams. These sites include Caral (e.g., Shady 2006) and Chan Chan (e.g., Campana 2006; LivinginPeru.com 2007). Another focus of the governmental effort that merges archaeology and tourism is the *Unidad Ejecutora Autónoma Naymlap*, a consortium of the four museums in the Lambayeque region on the north coast, Brüning, Sicán, Royal Tombs of Sipán, and Túcume. Since 2007, funds from the congress have supported field projects by these institutions at the sites of Chotuna, Cerro Ventaron-Collique, Sicán, Sipán, Túcume, and a few other sites in the region.

While these projects with direct governmental funding include research components, the emphasis is on attracting tourists and stimulating local community

developments. Each project has worked out how to balance and articulate these aims. As noted above, we do not see, however, a national level policy that could guide these and other projects for feasible, sustainable, and productive apportioning of resources to simultaneously achieve all these goals.

We are also concerned about the increasing number of "site museums" that are being built throughout Peru (Silverman 2006b) without long-term support. There is also the worrisome governmental plan to place management of various well-known sites in private hands and to transfer the power to determine which objects, places, and monuments constitute Peru's national patrimony from the National Institute of Culture to the Congress of Peru (Higueras 2008: 1079). In all cases, an optimistic vision is not enough to sustain them and there is strong possibility of *research being relegated to secondary or tertiary importance* and priority given to tourism/commercial concerns.

Private sector management of archaeological sites was proposed during the successive presidencies of Alberto Fujimori (1990–2000), Alejandro Toledo (2001–2006), and Alan Garcia (2006-present) with the idea that private investment and management would bring about improvements in promotion and physical access with a corresponding increase in tourism. However, in addition to a questionable commitment to research and conservation, this financially motivated and externally imposed plan ignores or at least underestimates local sentiments. This point became evident when residents in the Cuzco region united to stop the plan to have Machu Picchu privately managed, which included the construction of a cable car line for easy access to the site (Flores 2004).

It is clear by now that Peruvian archaeologists face constant challenges in financing their problem-oriented research. There are only a few Peruvian institutions that offer such support and they are not accessible to all Peruvian archaeologists and constrain research agenda. Private companies such as Backus and Johnston, the largest brewery in Peru, in return for their patronage of archaeological works, are interested in "restoration projects for touristic enhancement of monuments" (*trabajos de puesta en valor*); that is, sites with some impressive features such as Sipán (e.g., Alva 1994), Túcume (e.g., Heyerdahl et al. 1995, 1996), and El Brujo (Mujica 2007). The last two sites boast such impressive features as large, polychrome friezes and monumental architecture, while all three have yielded sumptuous elite tombs.

The biased funding by both private and public institutions of large sites with prominent features as seen thus far has had some unforeseen effects in regard to archaeological approaches. For example, it has reinforced long-standing, single-site-based research without prior or concurrent regional surveys or multisite testing to provide a good grasp of regional environmental, historical, and social contexts and processes (Shimada 2010). There is also a sense that projects centered at these sites are competing subtly with each other to claim the origins, the earliest dates, and/or the most advanced or spectacular form of certain features as publicity attracts further funding as well as public interest and excitement. These claims and associated discourse often become part of local or regional pride and identity, making them difficult to correct (Segura 2006; see also

Arnold 1992; Kohl and Fawcett 1995). Indeed, they are often tenuous lacking empirical support and/or bridging arguments. We urge greater caution on the part of archaeologists in making these claims, as well as a fuller presentation of their empirical base and reasoning.

Even the governmental foundation established for the promotion and support of teaching and development of science and technology in Peru, CONCYTEC (*Consejo Nacional de Ciencia, Tecnología e Innovación Tecnológica* – akin to the National Science Foundation of the U.S. in its role but of a much smaller scale in budget and support; CONCYTEC 2008; http://portal.concytec.gob.pe/index.php/pagina-principal/quienes-somos.html), imposes serious restrictions. CONCYTEC support ranges over many disciplines, including archaeology, and thus is highly competitive. In addition, eligibility to apply for their grants is restricted to members of established educational, cultural, or scientific institutions (e.g., universities, INC). Thus, nonaffiliated archaeologists (e.g., freelance) are excluded from such support.

The restricted access and highly selective apportioning of funds for research-oriented archaeology is a serious threat to the future of research-oriented archaeology in Peru, particularly in the face of increasing numbers of Peruvian students who are seeking their graduate degrees in archaeology or anthropology in Peru or other countries, particularly the US. What future possibilities are there for those with advanced degrees and foreign training? Will they be content to specialize in contract archaeology? We hope that at least for cases of long-term and/or large-scale contract archaeology, there will be emphasis on a problem-oriented approach so that Peruvian archaeologists will not be constrained from making greater contributions toward the advancement of Peruvian archaeology.

The notable surge in contract- and research-oriented projects during the time period under consideration implies a corresponding increase in quantity of archaeological data collected. But, how can a large corpus of data gathered by contract projects be analyzed, synthesized, and disseminated? Publication of the data collected and analyzed is of the utmost concern to both academic and contract archaeology (cf. Lockard 2009; Wester et al. 2000). Peruvian archaeology has had its share of data hoarding and publication inertia. We urgently need a national policy and mechanism that assure that rapidly accumulating data from contract archaeology are promptly analyzed and published. More than ever, Peruvian archaeology needs reliable, high caliber, stable and timely publication venues. With the number of periodicals declining over the past several decades, we can presently count only a few Peruvian journals that regularly publish archaeological manuscripts of diverse geographical and topical foci (e.g., *Arqueología y Sociedad, Boletín del Instituto Frances de Estudios Andinos, Boletín de Arqueología de la PUC*). All struggle for high-quality manuscripts, readership, and funds to sustain their publication. Implementation of the peer-review process and speedier publication of results by foreign archaeologists in Peruvian journals are two ways that can contribute to a long-term continuity of periodicals.

Conclusions

It is a major challenge to present an insightful and impartial review of the long history of the Peruvian archaeology that grew out of the input and interplay of multiple intellectual strands of Peruvian and Peruvianist traditions. Moreover, as seen in this paper, Peruvian archaeology has been quite dynamic over the past few decades, defying us to appropriately summarize and evaluate it. Undoubtedly, this review has numerous omissions, but the long trajectory of the Peruvian archaeology illuminated here, nonetheless, serves us well in characterizing and understanding current archaeological practices in Peru and defining its future tasks and directions. Such was our basic intent in writing this paper. Thus, we end it by outlining some major issues and tasks that await our attention.

One pressing task relates to improving dissemination of information that would cut across the Peruvian-Peruvianist and contract-academic archaeology divides. The rapid increase in the amount of information generated by the increasing number of contract archaeology projects in recent years has created an urgent need to devise an effective means for such dissemination. One way of accomplishing this task would be to require all authorized field projects to submit digitized field reports to be placed in electronic archives accessible at websites maintained by the Ministry of Culture and/or the COARPE. In order to assure that such archives remain updated and trouble-free, a small portion of the fieldwork permit fee and/or the annual membership dues could be collected to secure operational funds. This would be a relatively impartial, cost-effective, and quick solution to the problem at hand. It would also help address problems stemming from the dwindling number of journals.

Another challenge facing Peruvian archaeology is insularity. Both Peruvian and Peruvianists should become proactive in broad comparative discussions with colleagues working in other areas of the world so that there is a better basis for evaluating the evolutionary and cross-cultural significance as well as the presumed uniqueness (e.g., what is embraced in the concept of *lo andino*) of the past cultural developments in Peru. Greater participation in such discussions would stimulate theory formulation and refinement, whether Marxian, ecosystemic, structuralist, or other school of thinking.

Yet another concern is improvement of the depth and breadth of analysis being conducted. Typological classifications of artifacts (sometimes quite elaborate versions of the type-variety approach) are quite common, but often dissociated from research issues and objectives. The preliminaries of artifact and data analysis are all too often perceived as constituting analysis, resulting in logical leaps often to high-level interpretations. Greater use of statistical and archaeometric analyses, as well as experimental testing of working hypotheses, is needed. In this regard, we see encouraging signs of increasing applications of archaeometry (e.g., Reindel and Wagner 2009; Vetter and Portocarrero 2004) and concerted efforts (e.g., *Congreso Latinoamericano de Arqueometría; Conferencia Internacional de Espectroscopia*) to establish a closer collaborative relationship between archaeologists and specialists in other fields in Peru.

The recent surge in bioarchaeology is yet another encouraging sign that the conventional confines of Peruvian archaeology are falling. In fact, we hope the integration of bioarchaeology in burial excavations and analysis (e.g., Buikstra 1995; Nelson 1998; Shimada et al. 2004; Tung 2003; Verano 2008) will be accompanied by corresponding efforts to better contextualize the burials and a broadening of analytical focus beyond grave associations. As Parker-Pearson (2000: 5) correctly pointed out, funerary practices should not be studied "in isolation but as a set of activities which link with other social practices…." Only with an appropriate background cultural knowledge and understanding, we can make most of the information potential funerary contexts hold. Grave associations are a major source of social and other information (cf. Tainter 1978: 121), but many studies (e.g., Hecker and Hecker 1992; Millaire 2004; Shimada et al. 2004) have shown that they cannot be readily assumed to be synchronous in nature and should be studied in conjunction with the complex and durable dead–living relationship and related rituals.

The last concern is the need for better integration of single-site and regional approaches. Although focusing on a single large site in a given region has been very productive, it leaves lingering doubts regarding the general significance of its findings unless they are placed within the regional, historical, and social contexts. The latter may be defined by means of settlement pattern and landscape surveys and associated excavations at selected sites. Small-site methodology can be quite effective in this regard. Clearly, a regional approach requires a long-term commitment to a given study area as well as secure funding and a good relationship with local communities. At the same time, single-site and regional approaches are undeniably complementary. Peruvian-Peruvianist collaboration would be an effective manner of implementing and integrating both.

Overall, Peruvian archaeology today faces many challenges, some of which are outside of the archaeologist's control. At the same time, improvement and strengthening of COARPE and Peruvian-Peruvianist relationships are essential if we are to meet these challenges.

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