Archaeology's Cutting Edge

Far Beyond the Science of Rubbish

Brian Fagan

Distinguished Professor Emeritus of Anthropology
University of California, Santa Barbara

Archaeology: forgotten pharaohs, lost tombs, golden treasures—Spectacular archaeological discoveries mesmerized the well-to-do adventurers and often-solitary excavators of yesteryear. The stereotypes endure. Many people still assume that archaeologists are larger-than-life swashbucklers, questing for royal burials and ancient civilizations in remote lands. Hollywood's Indiana Jones and Lara Croft movies have perpetuated the myth of archaeologist as either an eccentric, pith-helmeted professor digging in the shadow of mighty pyramids, or a treasure hunter. At the other end of the spectrum, the distinguished British archaeologist Stuart Piggott observed, perhaps facetiously, over a half century ago that archaeology is "the science of rubbish." A rather glib description, perhaps, but it is much closer to the truth than Harrison Ford as Indiana Jones galloping through the narrow defile at Petra or combatting sinister Nazi competitors.

Today's archaeology is still concerned with pharaoh's tombs and "rubbish," but has evolved into a highly specialized, often arcane, form of research. At the same time, the priorities have shifted away from large-scale excavation, the classic archaeological activity, to what is called nonintrusive archaeology, surveys from space, ground-penetrating radar and intricate laboratory work, to mention only a few activities. Today, more archaeologists may work in air conditioned laboratories than in the field. Today's research is so fine-grained that

we can identify left-handed stone tool makers of two-and-a-half million years ago and reconstruct the life histories of individual people from their bone chemistry. An archer was buried near Stonehenge in southern England 4300 years ago. Oxygen isotope analysis of his teeth revealed that he spent his youth in Central Europe. Not that archeological ingenuity is that new. As long ago as 1960, Joe Ben Wheat of the University of Colorado Museum uncovered the strategy behind an 8,000-year-old bison hunt on the Great Plains, where a group of Paleo-Indian hunters killed and processed almost 200 bison they had stampeded into a small arroyo. Wheat was even able to establish the direction of the wind (south) on the day of the hunt from the orientation of the bison, which had galloped downwind.

Even a half century ago, most people assumed that the chronological span of the human past was little more than a few hundred thousand years. Thanks to the potassium argon dating of dramatic fossil finds in East Africa by Louis and Mary Leakey in 1959 and 1960, and more recent finds by Tim White and others in Ethiopia, we now know that our history extends back at least 3 million years, probably longer.

An archaeologist of the 1930s would be amazed at today's practitioners. We now rely heavily on high-technology science, on researchers from all kinds of academic disciplines, from biology, genetics, and geology to physics and zoology, to mention only a few. For instance, details of rainfall shifts from ancient tree rings in the American Southwest by Jeffrey Dean and others are now so precise that major drought cycles of a half century or less dating from 1,000 years ago can be tracked from southeast to northwest over large areas.

The complex technical overburden of archaeology masks its unique role in today's world. Historians working with documentary sources or oral traditions are limited to a mere five thousand years. Their currency is in centuries, years, even days, hours, and minutes. Archaeologists deal in millennia, in hundreds of thousands of years, and only occasionally in centuries or possibly generations. Our work is never limited by geography or time, for archaeology is what is sometimes called "deep history," the past that extends far further back than the mere 5,000 years of written history. But the deeper human experience is just part of what archaeologists study. Spectacular finds come from more recent times, among them the celebrated terracotta regiment of 210 BC that guards the burial mound of Shihuangdi, China's first emperor, near Xi'an. None other than Her Majesty the Queen inspected excavations that exposed early Colonial houses at Jamestown in Virginia. Other researchers investigate factory sites from the Industrial Revolution. Archaeologist Collen Hamilton recently investigated Cecil B. de Mille's *10 Commandments* movie set from 1923, unearthing its plaster sphinxes buried in the Guadalupe dunes by the Pacific in Central California.

Countless researchers are working on the quite recent history of non-Western societies. I myself spent six years excavating 1,000-year-old farming villages in southern Zambia many years ago. At the Isamu Pati mound, my trenches uncovered a once flourishing community living on a low mound occupied for at least five centuries by people with herds of small, humped cattle. Thanks to excavation, this forgotten village is now part of Zambian history. The archives of deep history and much of not-so-deep history are not documents, but material evidence of the past, such as tools, food remains like animal bones or seeds, inscriptions, art, temples, and the detritus of deserted human settlements. But we are far more than students of rubbish. Alone among all students of humanity, we study human biological and cultural change over the entire span of human existence.

Deep history has a startlingly broad scope, which covers a broad array of major questions about the past. How old were our remotest ancestors and where did they originate? Who were their closest primate relatives? How did human evolution unfold? We currently know of over twenty ancient hominin species, whose histories between 3 million and 300,000 years ago defy easy analysis. When and where did *Homo sapiens* appear in its African homeland at least 3000,000 years ago? How did our advanced cognitive abilities such as fluent speech and the ability to innovate, think, and plan ahead, develop and transform our world? We still know little of the complex migrations that took modern humans out of Africa to other parts of the world after 100,000 years ago. The fast-moving field of molecular biology has added DNA to the study of ancient, complex population movements and shows just how complex some of these population movements became. For instance, our forebears were in Australia by 45,000 years ago (perhaps as much as 20,000 years before that), in China probably even earlier. They settled the Americas from Siberia around 15,000 years ago, at the end of the Ice Age. By 12,000 years before present, modern humans had settled every corner of the world except the offshore islands of the Pacific and Antarctica.

The questions proliferate in later times. Agriculture and animal farming may seem mundane to some, but the development of food production in widely separated parts of the world after 12,000 years ago was one of the great catalysts of human history. Few other cultural developments assumed greater importance. Food production is known to us from subtle archaeological clues—changes in wild grasses that became the barley, wheat, maize, and rice that we recognize today, minute differences in the bones of wild and domestic cattle, goats and sheep, and major changes in human settlements. More importantly, what were the consequences of food production? What social and economic changes resulted? For the first time, people were tied to their land, which raises complex questions about changing male/female roles, inheritance, kin ties, and other issues. Above all, and

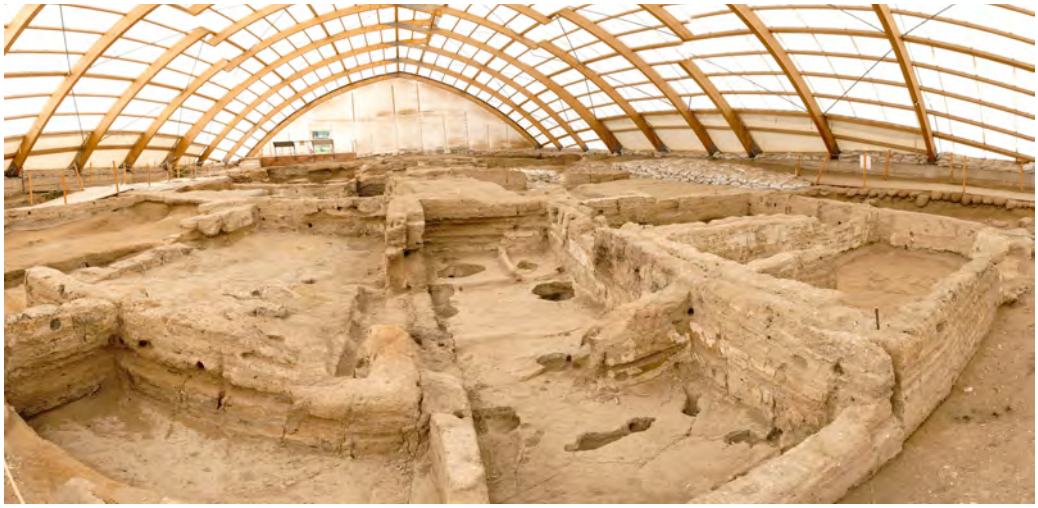


Figure 1 Excavated houses at Çatalhöyük, Turkey, covered with a shelter for visitors. NiglayNic/Shutterstock.

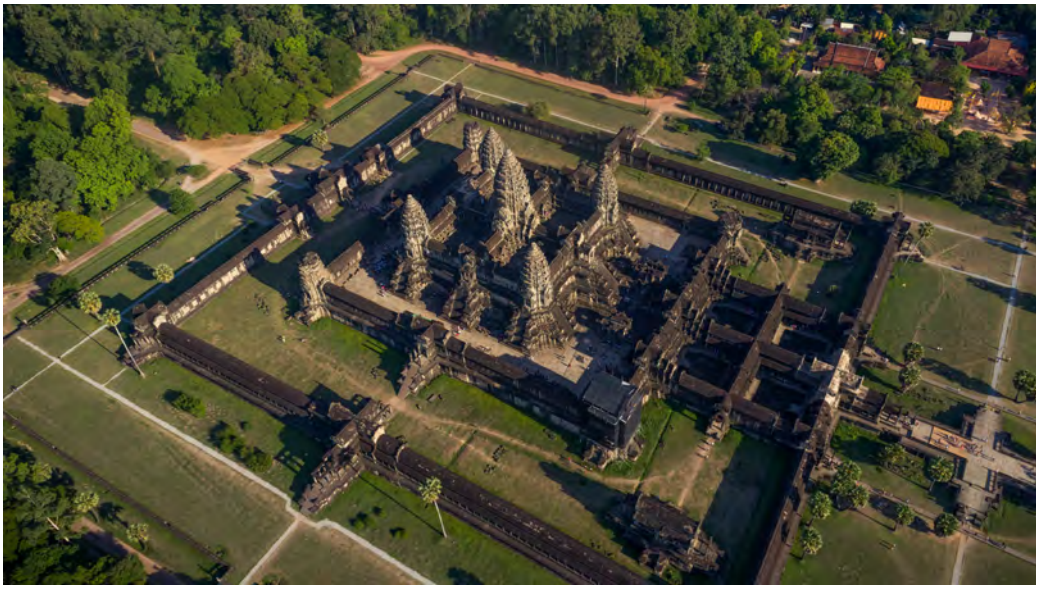
of great relevance today, how did farmers and herds address the complex issue of sustainability? They were not always successful. In about 6,200 BC, the inhabitants of a large farming village, Çatalhöyük, who prospered off a trade in shiny obsidian (volcanic glass) for toolmaking, suffered through drier and cooler conditions for about 160 years, known from glacial cores and other sources over a wide area (Figure 1). Thanks to intensive studies of animal fats preserved in clay vessels by a 10-member research team headed by Mélanie Roffet-Salque, it is as if we are by the side of the people as they responded to the abrupt climate change. When the cold snap came, they reduced their cattle herd sizes and switched to goats, while also increasing the efficiency of butchery, known from telltale evidence of bones broken into tiny fragments, and utilizing grease, both signs of food scarcity and diet stress. Almost simultaneously, the villagers changed from living in multiroomed dwellings to lighter shelters built by more self-sufficient households. But to no avail. Ultimately, Çatalhöyük proved unsustainable and was abandoned by 5700 BC.

Rising population densities, increasingly larger, permanent settlements, and ever more intensive trading connections were among the factors that led to the emergence of the world's first pre-industrial civilizations and cities, around 3100 BC in Egypt and Mesopotamia, then somewhat later in the Indus Valley of South Asia and in China. The same trajectory unfolded in Central America and parts of South America, where flamboyant, volatile states rose and fell with bewildering rapidity. We know a great deal about the common features of pre-industrial civilizations—socially stratified societies, densely

populated or more dispersed cities, elaborate public buildings, and usually some form of written script for record keeping. Pre-industrial states relied on human hands, and, in the Old World, on draft animals, and depended on charismatic, centralized leadership, often in the guise of absolute rulers claiming to be of divine descent, to survive. Almost all of them were driven by compelling ideologies, like that of the Egyptian pharaohs that endured for thousands of years.

With Egypt and Mesopotamia, we cautiously enter the realm of written history, but archaeology still has a vital role to play in deciphering the past. History tends to deal with great leaders and major events. As we mentioned, archaeologists study all kinds of people, from slaves and commoners to skilled artisans, powerful officials, Maya lords, and pharaohs. A powerful member of the historical team, archaeology's concerns extend beyond elite palaces and history's obsession with the lives of kings and queens, to the doings of anonymous folk—farmers, fishers, merchants, priests, and the marginalized. New technologies are providing fascinating and unexpected insights into early civilizations. For instance, a new technology, laser altimetry (LIDAR—light detection and ranging), is helping transform our knowledge of everyday people in the past. Damian Evans and a research team have used LIDAR to peer down at the spectacular ruins of Angkor Wat in Cambodia, the huge palace and temple complex built by the Khmer ruler Suryarvarman II in AD 1113 (Figure 2). Angkor Wat is surrounded by thick forest, which made any form of surface survey at best laborious. LIDAR stripped away the tree cover and revealed a densely populated urban core that covered as much as 15 square miles (40 sq. km) that passed into a landscape of neighborhood shrines, rice fields, and ponds. An elaborate water management system served a huge, dispersed city, virtually unknown before the laser arrived. LIDAR has also penetrated dense forest cover to reveal the intricate hinterlands of great Maya centers like Tikal in Guatemala. Here, and at an increasing number of sites around the world, we dwell among the humble and anonymous, just as we do in the burial grounds of victims of the Black Death in London (AD 1347) or mass graves from the plague of 1666, both revealed during the construction of London's multibillion-dollar Crossrail Project in recent years (Figure 3).

Archaeologists excel at unraveling the lives of the illiterate and anonymous, like the Viking settlers in Greenland, who colonized this then-unknown land during the Medieval Warm Period eleven hundred years ago, when ice conditions in the North Atlantic were less severe. William Kelso and his colleagues have identified the original Colonial fort at Jamestown in Virginia, excavated burials, and even identified some of the prominent settlers buried there. I once spent many weeks in the remote Middle Zambezi Valley in Central Africa excavating a long-forgotten trading village known as Ingombe Ilede,



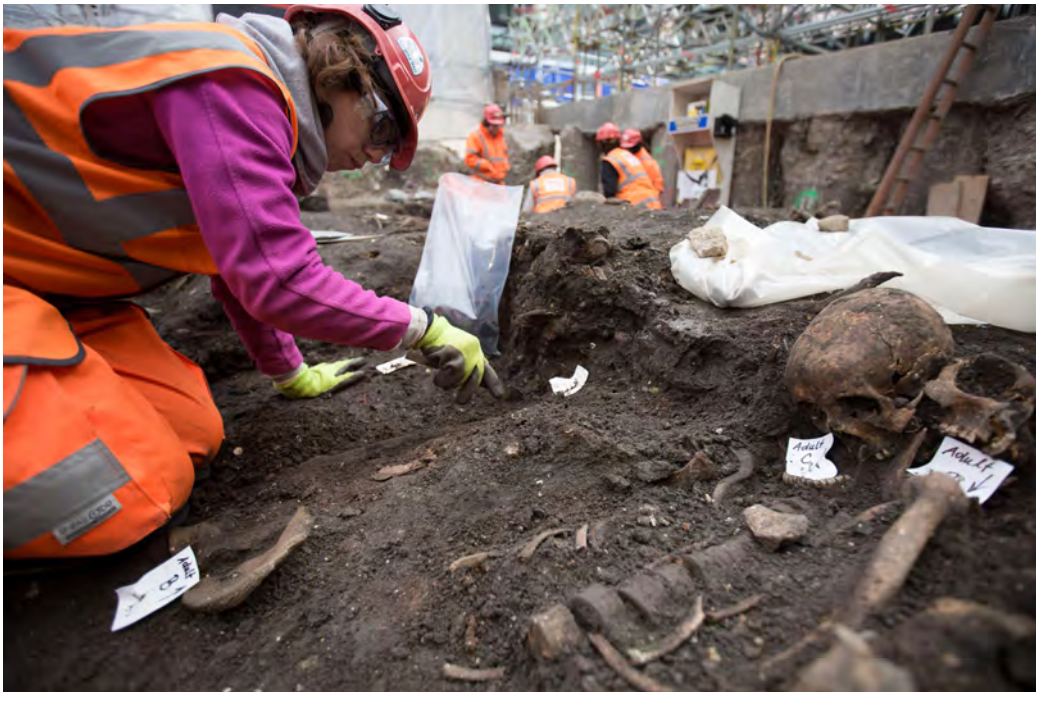


Figure 2 Angkor Wat, Cambodia, from the air. HelloRF/Shutterstock.

Figure 3 London's Crossrail Project. An archaeologist from the Museum of London Archaeology excavates the Bedlam burial ground at the site of the New Liverpool Street station, where over 20,000 Londoners are thought to have been buried between 1569 and 1738. PA Images/Alamy Stock Photo.

where the foundations of a water storage tank yielded the burials of eleven richly adorned traders from the fifteenth century AD. For the first time, archaeologist James Chaplin and I were able to throw light on trade between the African interior and the Indian Ocean along the Zambezi River. The traders brought Indian glass reads and textiles, also prestigious seashells from the East African coast 600 miles away, and received gold, elephant ivory, and perhaps slaves in return. Ivory was the staple, for African elephant tusks are softer and easier to carve than Indian ones.

The range of historical inquiry under archaeology's belt is dazzling. Our research extends from 2.5 million-year-old hominin camps in East Africa's Rift Valley to a 19th-century pickle factory in Victorian London. No other form of historical inquiry tunnels into the base of Maya pyramids and uses deciphered glyphs to reconstruct their architectural history. Today's archaeology is slow moving, and detail-obsessed, perhaps, but all-important because it gives us unique perspectives not just on the socially prominent, but on *all* of us. And this is a vital step on understanding ourselves, why we are different and why we are similar. Archaeologists bring powerful tools to achieving this understanding and make us all stakeholders in the past.

More and more archaeologists are engaging closely with local communities, with the people who often have a direct relationship with those who lived there before. For example, a private organization, the Archaeological Conservancy, acquires and protects archaeological sites in the United States, working closely with local stakeholders. The Conservancy recently took over ownership of Amity Pueblo in the upper Little Colorado region of northeastern Arizona. This is an intensely significant ancestral village for the Pueblo of Zuni, a rubble mound that may contain as many as sixty rooms. The pueblo lies in an area that connects Zuni Pueblo with the people's place of origin in the Grand Canyon. The Conservancy plans to develop a long-term management plan, consulting tribes, local property owners and government agencies, that will include both monitoring the site and providing access to the land for the tribes, who regard this as a sacred place.

Archaeology brings the experience of deep history to bear on the issues of today. Such a perspective has a startling relevance to our lives and to our understanding of ourselves and our relationship to the changing world we live in. For example, humans have adapted to both long- and short-term climatic change for more than three million years. Increasing aridity in tropical Africa may have played a decisive role in human origins. Later prehistoric times unfolded against a background of glacial and warmer interglacial periods that culminated in the last Ice Age glaciation, at its height some 18,000 years ago. A revolution in the study of ancient climate over the past fifty years has transformed our knowledge of the dramatic coolings and warmings of

Figure 4 Pueblo Bonito, Chaco Canyon, New Mexico. William Silver/Shutterstock.

the millennia since the end of the Ice Age. Fifteen thousand years ago, the world's oceans were, on an average, some 300 feet (91 meters) below modern levels. A low-lying land bridge joined Siberia and Alaska; the North Sea was a maze of shallow lakes and wetlands, and open steppe extended from the Atlantic deep into Siberia. There were only a few millions of us around to adapt to these dramatic changes caused by persistent warming. At first, we were all hunters and foragers, living, for the most part, in small bands. We adapted to cold and water shortages simply by moving, or, in the case of the flooding North Sea, to higher ground.

A wide variety of increasingly fine-grained methods are providing startling insights into short-term climatic events such as prolonged drought cycles and El Niños. The latter events have a more profound influence on global climate than everything except the passage of the seasons. Glacial cores from Greenland ice sheets, deep sea cores, long tree ring sequences from sequoias, European oaks, and other species, and cave sediments are but a few of the ingenious ways in which climatologists have reconstructed annual, and even seasonal, climatic shifts, especially over the past two thousand years. For instance, very complete tree-ring sequences from the North American Southwest have chronicled the long drought cycles that caused the twelfth century Pueblo communities of Chaco Canyon, New Mexico, to disperse to better-watered villages some distance away (Figure 4).

Tales of such dispersals abound in Pueblo oral traditions, for movement, as well as careful management of sparse water supplies, were central to sustainability. Climate change did not, of course, "cause" people to turn to farming, or trigger the collapse of part of ancient Maya civilization during the tenth century AD, although a series of drought cycles certainly played a part. Many factors came together to cause traumatic developments such as the near-collapse of Ancient Egyptian civilization when the Nile almost dried up around 2200 BC. But there is no question that monsoon failures, caused in part by powerful El Niños, caused over a million famers to perish in India in 1877, and in northern China during the same year.

Climate change deniers claim in orgies of disinformation that recent warming is just a part of the natural fluctuations of climate we have lived through since the beginning. To claim this, often sometimes almost as an act of religious faith, flies in the face of overwhelming climatological data, which shows beyond all reasonable doubt that the current warming is humanly caused. According to experts, the future holds a much greater incidence of extreme climatic events like prolonged droughts and exceptional storms. Our forebears faced such, then rarer, extremes and provide a sobering chronicle of our increased vulnerability to climatic catastrophe. Thousands perished in the Ancient Egyptian droughts of four thousand years ago; cities like ancient Ur in southern Iraq were decimated when exceptional spring floods, triggered by melting snow and heavy rainfall far upstream, caused the Euphrates River to change course without warning. As urban populations climbed, our vulnerability to sea level rise, drought, and extreme tempests increased dramatically.

Our vulnerability in a world where tens of millions of us live at or near sea level is far greater than that of classical times or Ming China. One of the vital lessons from an understanding of ancient climate change is just how vulnerable we are today. What are our options? To evacuate millions of people in the face of impending hurricanes, to move entire cities to higher ground? How do we cope with the pressing issues of ecological refugees, fleeing from drought and food shortages? The lesson of history is simple. We have to think of climate change from a long-term perspective, and plan today for the changed world of our children and grandchildren.

Archaeology shows us that we are capable of adapting to major climate change, but the cost is rising rapidly as we look into the future. Perhaps the greatest climatic lesson from the past is that people do adapt, but often at a savage cost in lives. In the twenty-first century, we have a priceless asset: the expertise and technology to plan on a much longer term. Much of this planning has to be at the local level, where practical measures against, say, sea level rise, can be engineered with input from local stakeholders such as businesses and homeowners. Our inclination is to shrug and talk of catastrophic

changes being far into the future. But the more forward looking actions we take now, the cheaper and more achievable our adaptations will prove. Unfortunately, we live in a society raised on short-term thinking and preoccupied with short-term election cycles. Fortunately, there are some individuals, local authorities, and governments who are thinking ahead. After all, sea defenses have been a priority in the Netherlands for over a thousand years. The Dutch plan for the long-term accordingly, but at vast cost.

Every nation has a past, which makes it was it is. The same past can be manipulated to justify its existence and its relationship to others. Inevitably, archaeology, like history, becomes involved in the agendas of politics, and its ideologies. The historian Eric Hobsbawm once remarked that historians were to nationalism what poppy growers are to heroin addicts. "We supply the essential raw material for the market." Archaeologists do the same. Today, the modern nation-state is the predominant political form across the globe, with nationalism always at its side. As a consequence, many modern approaches to the past are permeated with nationalist ideologies. Very often such approaches invoke invented national mythologies and mysticism. Claims that the ancient Medes are direct ancestors of modern-day Kurds in Turkey and Iraq, or that the roots of Hindu nationalists lie in the Indus civilization of present-day Pakistan four thousand years ago, cannot be supported by conventional scholarship, but this is irrelevant to the people who create such tales of the past, like climate deniers, almost as religious belief. Similar stories are, of course, told in Europe and America.

Such accounts draw on the nation's imagined ancestral past, linking past peoples with modern-day cultural, "racial", or "ethnic" groups on the basis of belief rather than science. Archaeologists take it as their responsibility to highlight and challenge examples when the past is taken and warped to suit a political or religious agenda. For example, generations of authors, filmmakers, and scholars have described "The Vikings" as ferocious, rapacious warriors set on conquest and wealth, who emerged from their Scandinavian fjords on bold voyages of discovery and adventure. And, of course, all the heroes are men, with women nowhere to be seen, except as romantic interests. These lingering stereotypes go back to nationalist-inspired romanticism in the eighteenth and nineteenth centuries, which envisaged a brave England whose people pulled together against relentless, evil foreign invaders. Fortunately, Scandinavian scholars are setting the historical record straight with far more nuanced, and accurate long-term research. Their portraits of Norse society include both peaceful trade and the roles of women.

Nation-states require a past, so it should come as little surprise that exploited and dominated countries were often denied theirs. To many people in the west, even in these increasingly global

and multicultural days, history still begins with European contact—in South America with Hernan Cortés and his conquistadors as they gazed on Tenochtitlán, the stupendous capital of the Aztecs in the Valley of Mexico, in 1519. In the United States, perhaps a mention will be given to the Norse, but ultimately it all began with the Pilgrim Fathers. Even half a century ago, most history curricula in Britain started with William the Conqueror and the Norman Conquest of 1066. In Central Africa, the history books of the 1950s began with the statement that in 1855, the missionary explorer David Livingstone "discovered" the Victoria Falls and the peoples of the far African interior. Even archaeologists tended to think of a history of "them" and "us," something that was long the case with studying the archaeology of ancient Native American societies in the United States and indigenous peoples in other countries. Circumstances have changed profoundly in recent years, with the passage of federal and state legislation that mandate the repatriation of Native American skeletons for reburial. My early career in Zambia involved excavating archaeological sites that chronicled the hitherto unrecorded history of people who lived there a thousand years or more before David Livingstone.

Today, however, a thriving approach to the past known collectively as "indigenous archaeology" works to develop active and meaningful collaborative relationships with descent groups and local communities as a way to build a more inclusive past. These collaborations unfold throughout a project, from the moment of the first idea, and last through to the conservation and sharing of archaeological findings. This works particularly well in former colonies whose indigenous histories were once ignored, dismissed, hijacked, or completely misinterpreted by westerners. There are many examples of such projects especially in the Americas, Australia, and Africa.

One example is the Chocolá Project in Guatemala, which involves excavations of a long-lived ancient Maya city, occupied between 1000 BC and AD 200. A traditional archaeological attitude to the Maya was that the society collapsed and vanished, but in fact—despite the recent genocides—an estimated six million Maya, with their distinct cultural and linguistic heritage, still live throughout Mexico, Guatemala, Belize, El Salvador and Honduras. The archaeologists of the Chocolá Project, like Jonathan Kaplan and his Guatemalan colleagues, work alongside the local Maya community, and seek to integrate local knowledge, perspectives, history and ideas into what is otherwise a science-based enterprise. Rather than charging into the area and taking away archaeological goodies, or even building a "park" for the enjoyment of western tourists, the project has community development, and uncovering the past for the benefit of the locals, at its core.

Figure 5 Part of Emperor Shihuangdi's terracotta regiment, Xian, China. Anton_Ivanov/Shutterstock.

For all the political ideologies that divide us, we are *all* stakeholders in the past. Our stakes lie in the minute details of a suburban neighborhood or a cemetery of plague victims, or a long-forgotten disaster, which can inspire a special, sometimes passionate, and sometimes very personal, interest in what we unearth. But there's another point that we often miss. All of us, wherever our ancestors come from, are participants in the broad sweep of the human past.

Cultural tourism has created major challenges for archaeologists. The cruise ship and the jumbo jet have unleashed a torrent of visitors on archaeological sites large and small, ranging from the stone circles at Avebury and Stonehenge to Egypt's Pyramids of Giza, the Minoan Palace of Knossos on Crete, and the Parthenon. Group tours flock to the plazas and pyramids of Tikal in Guatemala. The terracotta regiment that protects the sepulcher of the first Chinese emperor Shihuangdi attracts tens of thousands of visitors annually (Figure 5). Over two million visitors visited Cambodia's Angkor Wat in 2018, the stupendous Khmer palace and temple that is on every ambitious traveler's bucket list. Obviously, cultural tourism has major economic value to countries like Cambodia, Egypt, Guatemala, and Mexico, but, for all the will in the world, the amount these countries have to spend on conservation is inadequate. For instance, many of the

pharaohs' tombs in the Valley of the Kings in Upper Egypt are so saturated with crowds of sweating visitors filing through their narrow defiles that you can literally see the paint peeling off the carved and painted walls. Likewise, cave paintings in caverns like Altamira in Spain and Lascaux in southwestern France are much faded and have mold problems since their discovery thanks to similar human pollution. Elsewhere, childish graffiti adorn rock engravings in California, while San hunter-gatherer art on South African rock shelter walls—dating to the past 3,000 years or more—is endangered by neglect and a lack of funds for protective fencing. Our very presence, our breath and perspiration, as well as footprints, are creating long-term problems.

Managing what are often called "cultural resources" involves a difficult balancing act between contributing to world culture by exposing the public to these sites, while supporting national economies, while also ensuring the longevity of these unique locations. How should we manage these sites? Can the public enjoy their past without destroying it? Does one build replicas, or steer people to alternative, lesser known sites? Or does one close them forever? None of these options are attractive. The debate continues.

Cultural heritage is universal. It is much more than a single site, like Ireland's New Grange burial mound, or even an entire abandoned city such as Amarna or Naucratis in Egypt. It's not simply an interest in recording or protecting the material culture of a site such as the city of Teotihuacán or Colonial Jamestown, but it also extends to cultural or sometimes sacred places in the widest sense of the world. Different people, groups, societies, have profoundly diverse perspectives on the past and on what archaeology means to them. The Dreamtime cherished by Australian Aborigines is a classic example of the importance of conserving the intangible spiritual world of powerful forces and mythic creatures for future generations. Much of the Dreamtime has left no material trace, but the giant Uluru sandstone rock in Central Australia, sometimes called Ayers Rock, is a powerful symbol of the revered intangible. Uluru and its surroundings support numerous springs, waterholes, caves and rock paintings. Uluru is sacred to the local Pitjantjatjara Anangu people, who believe that the spirits of ancestral beings, *Tjukuritja*, still live around the rock. Generations of tourists have climbed Uluru, but the local people have now wisely closed it to visitors because of its powerful spiritual associations.

The past surrounds us on every side, offering guidance and precedents, warnings, and sometimes reassurance. Archaeology is not in the prophecy business, but it gives humanity a past. The fleeting, intimate glances of ancient times remind us that we modern people share many behavioral traits with our diverse ancestors. Our research provides some guidance, for understanding why we are different and why we are similar. It's a powerful weapon against bigotry and doctrines of racial superiority.

Many of archaeology's priorities will change significantly in the near- and long-term future. While a decent portion of archaeological work will still be driven by university research and building developments, there will likely be far greater overall global stress on heritage management and tourism, with all the conservation and outreach activities that this implies. We are in many respects fighting for archaeology's survival.

Is archaeology important in today's industrialized world? Surely it matters even more than ever. We are achieving understandings of ancient human behavior, and of diversity that were unimaginable a few decades ago. If we lose our priceless heritage to greed and vandalism, warfare and industrial activity or promiscuous construction, we lose our credibility as thinking human beings. We owe the past not only to ourselves and to still unborn generations, but to those who created it. The only way we can know ourselves is to understand our past. As the late paleontologist Stephen Jay Gould once remarked, we all come from the same human twig. Archaeology celebrates this reality, which is why it matters. A

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