

In short, archaeologists' investigations frequently pit their interests against those of other people, and the concerns of the present against the possible concerns of the future. As ethical considerations come to matter more, there has been a change in the way the public sees archaeologists, and the way archaeologists see themselves. "We went through a period when we thought 'Hey, we're scientists, we should be the number one priority here'," says William Lipe, an archaeologist at Washington State University in Pullman. "But most of us have now come to see it differently."

Archaeology is now changing dramatically, says Karen Vitelli, an archaeologist at Indiana University. Dr Vitelli also chairs the ethics committee of the Society for American Archaeology (SAA) and is editor of a forthcoming book on archaeological ethics. She was one of the first archaeologists to integrate the study of ethics into archaeological training, and it has now, she says, become a standard part of many degree courses. At the same time, archaeological societies around the world (including the SAA) have adopted codes of ethics to regulate their members. What has brought about this transformation?



Skeletons in the closet

Ethics and archaeology began to collide relatively recently. The modern discipline traces its roots back to the gentleman amateurs of the early 19th century, who brought statues, columns, mummies and trinkets back as souvenirs from their travels around the Mediterranean. Subsequent generations of archaeologists have tended to regard men such as Giovanni Belzoni—a one-time circus strong-man who shipped Egyptian antiquities back to the British Museum in London—as little better than tomb-robbers.

Belzoni was the first European to enter the temple at Abu Simbel. He rediscovered the entrance to the Great Pyramid and found five tombs in the Valley of the Kings, including that of Seti I. An excerpt from his best selling book of 1820 gives a flavour of the antiquarian practices of the time:

Surrounded by bodies, by heaps of mummies in all directions; which previous to my being accustomed to the sight, impressed me with horror. . . I was choked with mummies, and I could not pass without putting my face in contact with that of some decayed Egyptian; but as the passage inclined downwards, my own weight helped me on; however, I could not help being covered with bones, legs, arms and heads rolling from above. Thus I proceeded from one cave to another, all full of mummies piled in various ways, some standing, some lying, some piled on their heads. The purpose of my researches was to rob the Egyptians of their papyri; of which I found a few hidden in their breasts, under their arms, above their knees, or on the legs, and covered by the numerous folds of cloth that envelop the mummy.

By the early 20th century, however, archaeologists had begun to adopt the methodology of science. Increasing emphasis was placed on the accurate measurement and description of sites and publication of results in archaeological journals. Technological advances—such as the advent of radiocarbon dating—led to further refinements, and the "new archaeology" movement of the 1960s promoted quantitative methods such as statistical analysis. The transformation of archaeology, from tomb-robbing by amateurs into a coherent scientific discipline, was complete.

Paradoxically, the ethical arguments over the treatment of human remains, the ownership of artefacts and responsibility to future generations, all stem in part from archaeology's new-found scientific authority. Having eschewed their dubious forebears, archaeologists reinvented themselves as respectable scientists in search of truth. Who could argue with that?

Bones of contention

Plenty of people, it turned out. Archaeologists' most public conflicts have been with indigenous peoples over the appropriate treatment of human remains. The most infamous example is that of Kennewick Man, a 9,300-year-old skeleton found in 1996 in a riverbank near the town of Kennewick in Washington state. Intriguingly, its skeletal characteristics are very different from those of modern Native Americans, making Kennewick Man of particular interest to archaeologists trying to understand the peopling of the Americas.

Five Native American tribes, however, claim Kennewick Man as an ancestor under the provisions of the Native American Graves Protection and Repatriation Act (NAGPRA). This law was passed in 1990 to allow Native Americans to remove ancestors' bones, and objects associated with burials and religious practice, from museum collections. A legal battle has rumbled ever since. Granting the remains of Kennewick Man to the Native Americans would deny archaeologists access to an important source of information; but granting them to the scientists would amount to a direct repudiation of the Native Americans' oral history, which is thought to go back 10,000 years.

The passing of NAGPRA demonstrated that science's authority over the dead is not absolute. However scientifically respectable their methods, archaeologists have been forced to acknowledge that they do not operate in a vacuum, and must take the values of others into account, not least because they will otherwise be denied access to important data. Attitudes are changing as a result. Dr Vitelli says that several of her students who are studying bioanthropology, which involves the examination of skeletal remains, are now questioning whether they want to continue in that field, for both ethical and practical reasons.

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Kennewick Man, and other similar cases, are not entirely representative. In some cases, indigenous peoples and archaeologists have co-operated and reached compromises. Donald Ryan, an archaeologist at Pacific Lutheran University in Tacoma, Washington, gives one example of how things are changing. Working with Egyptian archaeologists, he excavated six tombs in the Valley of the Kings during the 1990s, including one previously explored by Belzoni. Once their work was complete, the archaeologists cleaned up the tombs, many of which had been ravaged by floods and looting. They placed the mummies in new wooden boxes and sealed the entrances. As a result, says Dr Ryan, it was felt that a bit of order and dignity had been restored.

Before they break ground, archaeologists should talk to local people and try to identify areas where their interests coincide, suggests Dr Vitelli. "It's very hard for many of us, since it means giving up control and authority," she says.

Artefacts on eBay

Another area where archaeologists have invoked their scientific authority is to take a firm stand against looting. Looters irretrievably destroy evidence about the context in which artefacts are found, even if the artefacts are subsequently recovered. Similarly, archaeologists have spoken out against the trade in antiquities. Ancient artefacts sold as *objets d'art* fetch high prices and thus provide an incentive for looters—who are armed and violent in some cases.

In addition to the damage and loss of context caused by looting, private ownership of artefacts can prevent archaeologists from gaining access for research purposes. It may also prevent future archaeologists from verifying previous findings. This, notes Mark Lynott, an archaeologist at the National Park Service's Midwest Archaeological Centre in Lincoln, Nebraska, is vital if archaeology is to be truly scientific. To avoid appearing either unscientific or complicit with the activities of looters, many archaeologists choose deliberately to ignore data from objects in private collections—whatever their significance. Archaeologists remain divided over how museums should acquire and display ancient artefacts of uncertain provenance, for fear that this might encourage looters.

A recent twist to the antiquities trade has come with the advent of Internet auction houses such as [eBay](#). A number of archaeological societies, including the SAA and the Archaeological Institute of America, have asked online auction houses to outlaw the trading of antiquities, to little effect. The problem with policing this trade is that many items have been in private hands for decades, or even centuries, and were originally acquired under very different circumstances. As it is not possible to put the objects back into the ground, says Dr Vitelli, the trading of these items is tolerated. But this provides a loophole for unscrupulous dealers: even though many countries now strictly control the export of antiquities, dealers can simply claim that an item is from an old private collection.

In February, Frederick Schultz, an antiquities dealer, was found guilty by a New York court of conspiring to receive stolen Egyptian antiquities. Mr Schultz claimed that the items he was offering for sale came from the 1920s collection of an Englishman called Thomas Alcock. The US Attorney's Office concluded that "the evidence at trial established that the 'Thomas Alcock Collection' was a complete fiction." Mr Schultz has launched an appeal.

This case, though, has heartened archaeologists. The fact that a New York court was prepared to uphold an Egyptian patrimony law banning the trade in antiquities unearthed since 1983 is seen as an important victory for opponents of antiquities trading. Furthermore, says Dr Lynott, the discussion over the ethics of trading antiquities has started to change attitudes. The debate has marginalised the people who are willing to engage in such trade. Even so, says Dr Vitelli, it is not clear that archaeologists' opposition to antiquities trading has helped to save sites or to diminish looting.

Moreover, when it comes to the provenance of antiquities, archaeologists themselves are not always standing on terribly firm ethical ground. Many of the items in museums today were, after all, removed by people like Belzoni. "I look at objects in the British Museum, think about how they were removed, and think that's really horrible," says Dr Lynott. "But had they not been removed at that time, they might not be available for study today."

Belzoni was working within the laws of the period. And at the time he was plundering the Valley of the Kings, local Egyptians were merrily using mummies as firewood. The dilemma for archaeology is that carting off artefacts for display in museums on the other side of the world smacks of cultural imperialism; but so does demanding that indigenous people treat artefacts in a way that western archaeologists approve of.

Between past and future

Alongside the debates over the handling of human remains and artefacts, archaeologists have also been grappling with their responsibilities to future practitioners of their science. A central paradox of archaeology is that discovery involves destruction; investigation requires intrusion. Where should archaeologists draw the line when deciding how much of an important site to excavate, if they are not to hinder future investigations?

If the field is scientifically healthy, says Dr Lipe, archaeologists will ask new questions in future and have better methods. Dr Lipe is one of the pioneers of the "conservation model" of

archaeology. This is a logical outgrowth of the new archaeology movement of the 1960s, and stresses the careful, well justified and frugal use of archaeological resources, in contrast to the exhaustive excavation of important sites.

Most archaeologists, says Dr Lipe, have had the experience of trying to discover something new about a site that was completely excavated—only to find that the question they wanted to ask had not occurred to the original archaeologists. The intellectual health of the field, he says, depends on being able to address new questions or readdress old ones. "Archaeologists must be conservative in how they themselves use the archaeological record, as a matter of ethics."

This approach has been bolstered by the advent of non-destructive geophysical surveying techniques—such as ground-penetrating radar—that enable archaeologists to identify and target small areas of interest. Progress in analytical techniques also means that archaeologists can learn a great deal from small amounts of material, provided it is carefully chosen. The result is a move away from the complete excavation of sites towards a more selective, sampling approach.

Belzoni's last laugh

It is deeply ironic that it has taken so long for archaeologists, investigators of the relics of the past, to recognise that archaeological standards, too, are products of their time. Dr Lynott says these are changing almost from year to year. Changing values mean that every generation of archaeologists inevitably regards its predecessors as crude and insensitive. "We see this looking back just a generation or two—we don't have to go back as far as Belzoni," he says.

Future archaeologists may be less critical of Belzoni. Dr Ryan believes Belzoni has been unfairly vilified. He points out that Belzoni went to the trouble of making detailed measurements, drawings and maps of the tombs he found, which was more than most of his contemporaries did. In a period when there were no archaeological standards whatsoever, Dr Ryan argues, Belzoni was not merely a man of his time, he was far ahead of it.

Today, archaeology is in the midst of a second metamorphosis. Having transformed itself internally—into a science—it is now being reshaped by external social, cultural and political forces. But it is still a work in progress. "What we're seeing now is the emergence of additional voices that have legitimate claims on what is done to and with the archaeological record," says Dr Lipe. Dr Vitelli, meanwhile, insists that her students regard the current debate as a chance to reinvent archaeology. For example, the investigation of first-world-war battlefields (which have yet to receive much attention from professional archaeologists) offers a chance to develop new approaches in which the interests of all parties are taken into account. Such battlefields are unique, notes Dr Saunders, because they provide an opportunity to perform archaeological investigations within the context of an abundance of historical documents—personal letters, diaries, maps, photographs and military records. "We have an opportunity here to create a new kind of archaeology—to make it anthropologically informed from the beginning," he says.

Double standards abound, however. Dr Saunders' suggestion in 1999 that soldiers' remains and artefacts on first-world-war battlefields should be treated in the same way as those of Australian Aborigines or Native Americans was, he says, initially greeted with bewilderment. But things are starting to change. Already, there are signs of compromises between professional archaeologists, and amateur investigators and relic collectors.

Today, amateurs acknowledge the need to seek respectable backing. One amateur group, known as The Diggers, began investigating battlefields near Ypres in 1992. Its members do not claim to be professionals, but the group operates under a licence from Belgium's institute of national archaeology, works with a local museum, and deals with human remains in conjunction with the Commonwealth War Graves Commission.

Widespread public enthusiasm for all things archaeological—another relatively recent

development—also gives archaeologists cause for optimism about the future. To illustrate how much things have changed during the course of her career, Dr Vitelli gives the example of the Franchthi Cave in southern Greece, a site with deposits spanning the period from 30,000BC to 3,000BC. Dr Vitelli worked at the site during the 1970s and, 30 years later, having become involved in archaeological ethics, she returned to the local village of Koilada and offered to give a talk about what had been found. The mayor approved and Dr Vitelli ended up speaking to a packed house in the village school.

"It was standing room only: priests, teachers, schoolchildren. They stayed for an hour-long talk in 98-degree heat," she says. "They were interested in learning about us and why we came to their village. The mayor realised they weren't ready for it 30 years ago. And neither were we. And now we all are."

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