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Archeological Human  
Remains

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Scientific, Cultural, and  
Ethical Considerations

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Recent developments regarding the repatriation of human skeletal remains have raised questions of profound significance for both archeologists and anthropologists. The various responses to these questions have tended to focus on the implications of these developments for the future of the academic disciplines and skirted the ethical issues at stake. In addition, little attention has been devoted to the relationship between approaches to human skeletal remains and to dead human bodies. As a result, discussions of skeletal remains tend to occur in isolation and fail to benefit from a consideration of values considered relevant in related areas. From our perspective as anatomists, we will apply a broader analysis to the issue of archeological human remains; in determining relevant values, we will draw on the experience of other disciplines involved in research on human tissue and human material.

### Background

Reflection upon the repatriation of human skeletal remains brings to the fore two opposing forces: the Western scientific values of archeology and a global cultural renaissance among indigenous peoples. Some writers see these as implacable opponents, the one representing sensitivity and the other militancy and obduracy (Gough 1996). Concern has been expressed that destruction of ancient evidence by indigenous communities simply replaces European cultural imperialism (Mulva-

ney 1989, 1991). An additional concern is that physical anthropology as a field of academic study and the freedom of scholarly and scientific disciplines to define their own goals and chart their own courses are being replaced by a repatriation agenda (Meighan 1992, 1993; Maslen 1995).

Views of this nature have emerged against the background of the now commonplace return of skeletal remains from anatomy departments, medical schools, and museums to tribes for reburial. For instance, in 1991 the University of Edinburgh returned nine Tasmanian Aboriginal skulls housed for more than a century in its Anatomy Department to Australian government representatives. Also returned was a collection of over 300 Aboriginal bones, including skulls or cranial fragments and four skeletons (Aldhous 1991). Remains of Aboriginal skeletal material have also been returned from other European universities and museums, including Bradford University, the Pitt-Rivers Museum at Oxford, the Peterborough City Museum, and Dublin University. Australian universities and museums have also returned skeletal material for reburial; particularly contentious was the return of the human remains from Kow Swamp by the Museum of Victoria. These bones were estimated to have been between 9,000 and 15,000 years old (Mulvaney 1990) and raised the issue of where the responsibility lies for bones hundreds of generations removed from living Aboriginal Australians (Mulvaney 1991). Similarly, 14,000-year-old bones from Coobool Creek in the Murray Black collection (1,800 skeletons) were returned to Aboriginal communities (Mulvaney 1989, Ewing 1990).

In the United States, remains of Native American people have been returned for reburial by universities such as Stanford, Minnesota, South Dakota, and Nebraska and by the Smithsonian Institution, which had a collection of 18,000 mostly prehistoric bones (Bahn 1989, Lindley 1989). A bitterly divisive case of repatriation involved the 1991 return by the Smithsonian of 756 sets of skeletal remains comprising an estimated 1,000 individuals and a large collection of associated funerary objects to the people of Larsen Bay, Kodiak Island, off the southwestern coast of Alaska. The bones dated back 2,000 years and had been collected in the 1930s from some 800 unmarked graves. The scale of this repatriation was unprecedented in the history of the museum, and negotiations between the two parties were protracted and sometimes hostile. Within the archeological community the case evoked considerable disquiet (Bray and Killion 1994). Other contentious repatriations include those of remains from the 2,000-year-old Adena mound in West Virginia and a 10,000-year-old skeleton found in Idaho (Meighan 1993). It has been conservatively estimated that between the Mississippi River and the Continental Divide and the Canadian and Mexican borders, 5,124 excavated mortuary sites have so far produced the remains of 52,540 individuals (Rose, Green, and Green 1996). With figures of this magnitude, disputes concerning the correct treatment of skeletal remains and their repatriation will continue.

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The appropriate treatment of ancient skeletal remains will remain highly problematic and contentious. In a very recent example, bones estimated to be 9,300 years old were uncovered in the state of Washington. Since the bones make up one of the oldest and most complete skeletons ever found in the Pacific Northwest, they have the potential to yield important information about the lives and ethnic backgrounds of the first people to colonise America, but current U.S. law requires that they be handed back to the indigenous people of the area, the Umatillas. The likely outcome is reburial of the bones according to their customs and beliefs. Many anthropologists involved in the case believe that since the skeleton's features do not suggest any close relationship to the Umatillas, it is inappropriate for its fate to rest solely with the Umatillas (Lemonick 1996).

The time span of these skeletal remains is crucial, ranging from a few generations to as many as 400–1,200 generations before the present (Mulvaney 1989). At the recent end of this range, one is dealing with spiritual and cultural values similar to those of contemporary societies; at the remote end, the relevant values have to do with their significance for global history.

## Policy Developments

The repatriation of human remains has become an issue of such importance that clearly articulated policy statements are required. Policies have now been issued by the community of archeologists, by indigenous peoples' groups, and by state and federal governments.

In 1991, the World Archaeological Congress outlined a range of ethical principles for approaching the study of human skeletal material. These guidelines include a number of principles for archeologists working with indigenous populations, among them the following (quoted in Powell, Garza, and Hendricks 1993:6–7):

To acknowledge the importance of indigenous cultural heritage, including sites, places, objects, artefacts, human remains, to the survival of indigenous cultures;

To acknowledge the importance of protecting cultural heritage to the well being of indigenous peoples;

To acknowledge that the important relationship between indigenous peoples and their cultural heritage exists irrespective of legal ownership;

To acknowledge that indigenous cultural heritage rightfully belongs to the indigenous descendants of that heritage;

To seek, whenever possible, representation of indigenous peoples in agencies funding or authorising research to be certain their view is considered as critically important in setting research standards, questions, priorities and goals.

A previous World Archeological Congress in 1989 had issued the Vermillion Accord, with its stress on mutual

respect and cooperation between archeologists and indigenous peoples (Bulmer 1991). Included in this accord was respect for the mortal remains of the dead and respect for the wishes of the dead concerning their disposition, on the one hand, and respect for the scientific research value of skeletal remains, on the other.

A number of professional bodies in the United States, including the American Anthropological Association, the Society for American Archaeology, the American Society for Conservation Archaeology, and the Society of Professional Archaeologists, have issued professional ethical guidelines. A review of the details of these policies appears elsewhere (Watkins et al. 1995).

The Australian Archaeological Association has issued a policy supporting the transfer of post-1788 remains to communities (Meehan 1984). It has endorsed the return of Aboriginal skeletal remains of known individuals according to the wishes of the deceased or to an appropriate Aboriginal community. Particular emphasis was placed on fostering a collaboration between the Aboriginal community and the archeological profession with the aim of protecting and preserving prehistoric sites, and the establishment of Aboriginal keeping places and the training of Aboriginal people to maintain these places were recommended. The policy also stressed that all other Aboriginal skeletal remains are of scientific importance and should not be destroyed through reburial or cremation.

In a number of jurisdictions, legislation has been passed to regulate the storage, study, and repatriation of human skeletal material. In 1990 the U.S. Congress passed the Native American Graves Protection and Repatriation Act (NAGPRA), the culmination of more than two decades of lobbying by Native American groups for the return of human remains (for a historical overview of the act, see Ferguson 1996). We do not intend to engage in a detailed discussion of this legislation here, but brief consideration of its general principles is relevant to the purpose of this article.

First, NAGPRA asserts that human remains do not belong to individuals or to institutional or governmental organisations. Secondly, it declares that descendants have the right to determine what happens to human remains. Although the law grants Native Americans the right to repatriate human remains from federal and Indian land, it does not ban excavation of or research on Native American skeletons. What the law does demand is consultation with Native Americans concerning what is done with skeletal material (Rose, Green, and Green 1996). To assist in this aim, institutions are required to prepare inventories of their collections of human skeletal remains. The law provides criteria to assist in assessing which tribal group is the appropriate custodian of given remains. Even so, one of the most difficult issues in relation to this legislation is determining which tribe or tribes are culturally affiliated with the skeletal remains and associated artefacts (Rose, Green, and Green 1996).

In other jurisdictions, Australian federal law states that all remains pre-1770 are by definition Aboriginal

and must be controlled by Aboriginal authorities. In Israel, a new interpretation by the government of the Antiquities Act has led to the reburial of all human remains younger than 5,000 years (Koch and Sillen 1996).

Archeologists and anthropologists in New Zealand are facing the same ethical issues as have arisen in Australia, Britain, and the United States (Gathercole and Lowenthal 1990). The indigenous people of New Zealand, the Maori, are becoming increasingly active in determining the disposition of the skeletal remains of their ancestors and items of cultural significance (*taonga Maori*). In current legislation, excavated material belongs to the crown, and archeologists must apply to the government for permission to excavate. The granting of such a permit is conditional upon the approval of the local Maori people, and, where excavation is approved, researchers hold the material for the museum which is ultimately to store it. Proposed legislation would create a governmental agency with responsibility for the establishment of a register of *taonga* held overseas to ensure that they could not be sold without prior consultation with Maori and for securing the return of skeletal remains or, where this is not possible, seeking to have them removed from display (Inns 1996).

As do other indigenous peoples, Maori groups call for full responsibility for the future control and management of their cultural heritage. In June 1993, a meeting of Maori representatives adopted the Mataatua Declaration on Cultural and Intellectual Property Rights of Indigenous Peoples. This document, since tabled at the United Nations, states that "indigenous peoples of the world have the right to self-determination; and in exercising that right must be recognised as the exclusive owners of their cultural and intellectual property; the first beneficiaries of indigenous knowledge (cultural and intellectual property rights) must be the direct indigenous descendants of such knowledge" (quoted in Inns 1996:14). More recently, the Maori worldview has been stated by participants in a conference held to explore the use of human genetic information. In this forum, Maori in attendance unanimously agreed that tissue and other bodily material taken from Maori always belongs to Maori and that the individual must always be in a position to make informed decisions on how such material can be used. Furthermore, it was stated that "whilst the spirit of science may be independent of commercial, political and religious interests, in reality it is often driven by those forces. Culturally unsafe scientific intrusion precludes acknowledgment of the Maori world view. This alienates Maori in yet another process of colonisation" (Baird et al. 1995:3). Calls have been made for museums to function less as the final resting places for artefacts and to acknowledge the continuing relevance of *taonga* to a dynamic Maori culture and to New Zealand culture in general (Hogan 1995).

Each individual tribe (*iwi*) has responsibility for establishing its own guidelines on the appropriate treatment of archeological remains. One of the larger tribal groups of New Zealand has been the first to produce a definitive policy on the manner in which human

remains (*koiwi tangata*) found in its tribal area (*rohe*) are to be managed (Gillies and O'Regan 1994). As a general principle, the policy specifies that authority and control over ancestral bones should be revested in *iwi*. The tribe regards the collection and possession of tribal *koiwi tangata* by anyone other than the tribe itself as abhorrent and culturally insensitive. Its clear preference is that, wherever possible, *koiwi tangata* in situ should not be disturbed and that the integrity of burial sites should remain intact. Where the *koiwi tangata* have already been removed from the site, the policy calls for the repatriation to the *iwi* of those remains under its jurisdiction. The *iwi* has negotiated the arrangement of secure keeping places in existing museums to which the *koiwi tangata* can be removed pending scientific investigation and a final decision as to the proper place for the remains (Gillies and O'Regan 1994).

Far from advocating wholesale reburial, the policy recognizes that scholarly investigation can play a role in furthering an understanding of tribal ancestry and that appropriate research in this area is a legitimate scientific interest. However, the policy reserves the right of *iwi* to consider and edit for reasons of cultural sensitivity any material proposed for publication. For remains unearthed now, the options are immediate reburial or removal to a safe keeping place pending scientific investigation. The policy does not specify the basis on which decisions of this nature would be made.

## Scientific Interest and Indigenous Concerns

On the surface, tension exists between scientific interest and the provision of valuable clues to humanity's past and the sacred feelings and beliefs of indigenous peoples. In its extreme form, this leads to antipathy between scientists and indigenous peoples, although, as some of the policies already alluded to make clear, antagonism is not inevitable if an awareness of both positions is taken into account (Goldstein and Kintigh 1990, Ortner 1994, Murray 1996). Mulvaney (1991) advocates a custodianship principle whereby the indigenous groups (Aboriginal groups in his discussion) act as custodians of the material rather than as all-inclusive owners of it. For him, this is more in harmony with the ethos of traditional culture and is a reflection of the fact that science and archeology are not white racial monopolies but increasingly amenable to Aboriginal participation. This participation will, in turn, serve as a means of deepening Aboriginal peoples' understanding of their own biological and cultural origins. In South Africa, this custodianship principle underlies the proposal to establish a community-run museum on the site of excavations from which local people could grant scientists permission to study skeletal remains (Koch and Sillen 1996). In New Zealand terms, it is precisely this type of leadership shown by some Maori groups that has led to the insights and valuable possibilities of a policy such as that described above. Issues of sovereignty and frustration at the lack of recognition of unique cultural val-

ues and worldview underpin many of the claims by indigenous peoples for the return of ancestral remains.

On the scientific side, human skeletal material provides essential information on topics ranging from the organization of tribal societies to the origin of diseases such as rheumatoid arthritis. Science as much as any other organized way of thinking can be viewed as a culture with its own system of ethics. Goldstein and Kintigh (1990:586) have written: "Although anthropologists are concerned about the cultural beliefs of the people they study, they also want to pursue the 'truth.'" Data of potential interest include blood groups and other genetic features, which are of considerable importance for tracing interconnections between individuals from different regions. Significant information on dietary and nutritional changes, life expectancy patterns and population density, health and diseases, surgical knowledge, and ritual practices also become available (Mulvaney 1989, 1990). Within a scientific framework, skeletal remains are part of the world's heritage, since the information they yield is relevant to and may even be said to belong to all human communities. In this sense, the remains are of such general interest that they should not be restricted to direct, let alone indirect, descendants.

When viewed alongside these arguments, the position of some indigenous peoples is strikingly different, since it emphasises respect for the remains of tribal ancestors and the religious and cultural importance of such respect. In many instances, this notion of respect is accompanied by a right to determine precisely how the remains are treated—a right that contradicts any general interest others may express in the material. The focus on respect may itself be closely linked with a desire for restitution in the face of past mistreatment (past disrespect) and therefore be part of an ongoing struggle for rights and recognition. At a different level there is the perception that much of the scientific work fails to use the skeletal remains available to investigators or that when it does the information obtained in these studies is not passed on to or shared with indigenous communities (Elson 1989). In view of this, the communities feel that they are little more than bystanders, the remains of their forebears being used as a form of colonialism.

As already indicated, the scientific and indigenous positions are not inevitably poles apart. They represent two extremes that constitute the substratum on which confrontation can flourish. Additional complexities are introduced by the uniqueness of each case, the unwillingness of governments to support science when seeking reconciliation with indigenous peoples, and the increasing pressure to support the politics of indigenous heritage (Murray 1996).

Pullar (1994) believes that the core difference between the scientific community and indigenous peoples is their fundamentally different worldviews. According to him, it is because the two groups do not share concepts concerning time, death, and self-identity and either do not recognise the differences or are unable to comprehend each other's position that repatriation ne-

gotiations can become so emotionally charged. The differences in the concept of time are an excellent illustration of how these worldviews collide. Pullar writes (p. 19):

Western scientists see time as linear . . . a sequence of events containing generations of people. In the western world people are usually concerned with only a very few generations into the past, rarely further back than their grandparents. . . . to indigenous people, time is circular. Those ancestors who may have died hundreds of years ago are . . . still members of the group of people living today.

The Maori understanding of time differs significantly from the traditional Western perspective. From a Western point of view, the past lies behind the individual and the future stretches out in front of him/her. In Maori culture the reverse is true—the past stretches out in front of the individual, because events of the past are well known, while the future is seen as standing behind them, because it cannot be seen and is unknowable. As a result of this worldview, the Maori regard the past as intertwined with the present and feel a spiritual link to their ancestors the extent of which is often seriously misunderstood by those from Western cultures. Ancestors are accorded much higher value than merely signifying part of a historical record and therefore respect for indigenous peoples' cultural beliefs must incorporate respect for the remains of their ancestors.

The significance of this perception is the greater when it is recognised that scientific data are not empirically given but constructed in relation to a specific worldview. According to Bray and Grant (1994:157), "Science should . . . be understood as embedded within a particular socioeconomic configuration and associated with a specific world view. As the ideological and political motivations of scientific inquiry and so-called facts become more transparent, it is possible to see how indigenous interpretations of culture history can be admitted as alternative ways of understanding the past." From this it is a short step to questioning the nature of science from the perspective of archeologists and anthropologists and that of indigenous groups. While discussion is usually based on the premise that this debate centres on science versus non-science (or even anti-science), it may on occasion centre on a clash between alternative approaches to science.

## Assessing the Claims

Assessing these various claims is a complex matter involving permutations of three variables: the age of the skeletal material, the time at which the material was unearthed (ranging from the present to, most commonly, the 18th and 19th centuries), and the manner of death (at its extremes either natural death or murder). These three variables can be thought of as three independently operating sliding scales. A particular instance

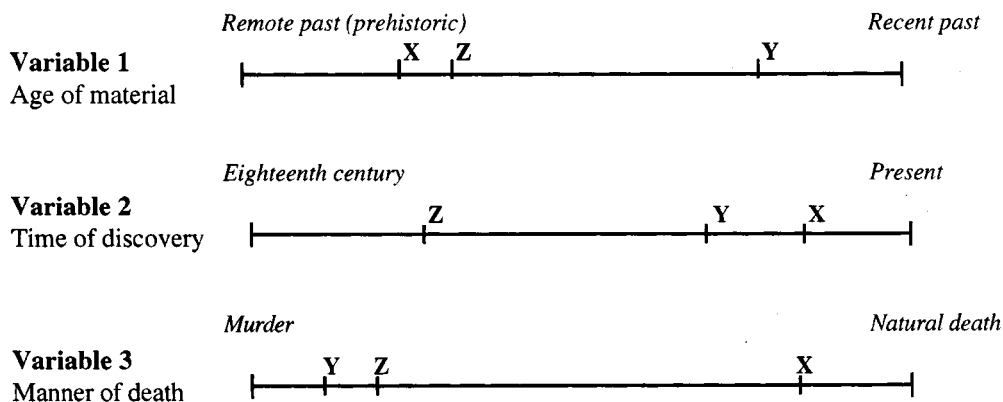


Fig. 1. Three variables which have to be taken into account in assessing claims to skeletal material. X, Y, and Z denote specimens of human remains.

of unearthed skeletal material will fit somewhere on the continuum of each variable (fig. 1), and therefore attempts to devise broadly applicable rules for the handling of human skeletal material are fraught with difficulty.

Specimen X in figure 1 is prehistoric material unearthed recently, and the death of the individual appears to have been due to natural causes. The predominant issue in this instance is its prehistoric dating and whether any indigenous groups should be able to lay claim to it. Specimen Y is from the recent past, was uncovered 100 years ago, and probably resulted from murder. Indigenous groups in the past have sought to have material in this category returned to them for reburial on account of its provenance and association with an atrocity committed against the group. Specimen Z is again prehistoric in origin, has been in a museum for many years, and appears to represent some form of ritual murder. No serious research has ever been carried out on it, and no indigenous group is requesting its return. Each of these hypothetical cases raises ethical issues: who has sovereignty over the material, the relevance of the age of the material for claims of sovereignty, whether any group (including a museum or university) can possess human material, the significance of the manner of death of the individual whose remains are under discussion, and whether the manner in which human remains are kept and what is done with them during this period are of ethical interest.

Our fundamental premises are that respect for the beliefs and feelings of indigenous peoples is implicit in the respect we show them as human persons and that the human dignity of entire groups of peoples is inextricably bound up with a study of the past (see also Bray 1996). Consequently, the basic ethical principles of autonomy, beneficence, non-maleficence, and justice have to be applied to groups of people rather than simply to individuals, and the welfare of the groups involves taking account of the past and not just the present with some extension into the future. Acknowledgment of the autonomy of indigenous peoples confers on them responsibility for deciding what is done with skele-

tal material. In a similar vein, beneficence and non-maleficence require that the scientific community take serious note of the mores of indigenous peoples and acknowledge the importance to them of skeletal remains. The application of justice requires that account be taken of any injustice in the past.

This interpretation of ethical principles may have negative implications for others in the community, including the scientific community, which is claiming to act on behalf of the interests of human beings in general. In our view, a balance has to be attained between these two sets of interests, with preference in this situation given to indigenous groups. This is because the harm done to indigenous peoples by ignoring their interests is greater than any harm that results from ignoring the interests of the community in general or the scientific community in particular. This conclusion does not hold, however, when the skeletal remains are prehistoric and not directly linked to indigenous peoples today. In this circumstance, general human interests should take precedence.

The three specimens depicted in figure 1 highlight the unusual pressures brought to bear on these principles. Consider the autonomy of indigenous people who might have an interest in specimen X. Their interest is dependent on their ability to demonstrate links between this prehistoric material and themselves. In the absence of such links, their autonomy is not jeopardized by the specimen's being studied by others. As we shall see, there may be debate about what constitutes such links (scientific demonstration or cultural appropriation), but this introduces considerations beyond the present narrowly focused ethical ones. With specimen Y, the indigenous group in question has good grounds, on the basis of all four ethical principles alluded to, for sovereignty over the material. By reburial of the material this group is not laying claim to the material but honouring the remains of those now dead. With specimen Z, the ethical principles are not placed at risk as far as any indigenous group is concerned, but it can be argued that maintaining human remains in the absence of any good reason is itself an indignity.

## ethical interest of dead human material

The debate can now be broadened by considering why dead human material is normally considered to be of ethical interest. As demonstrated in discussions on the recently deceased human body, a close association exists between the body and a known human person (Campbell et al. 1997). The rationale underlying this association is based on movement from the living to the dead, from knowledge of them as living persons to respect for those features most intimately associated with them when they were alive and functioning as persons. Even though this argument is based on a knowledge of *individual* persons and their bodies, it can be extended to groups of persons and their bodies. However, can it be extended the far greater distance to the bodies or, more accurately, the skeletal remains of people long since deceased? If it can, what limits are there to this endeavour?

There appear to be certain limits, since most people do not have misgivings about looking at the remains of prehistoric individuals or Egyptian mummies. The anonymity of these remains protects both us and them, in that we do not expect too much of them but at the same time they are sufficiently similar to more familiar human bodies to demand something of us. They evoke awe and reverence. We realize that even in circumstances where no link can be established with a particular living person or group of people, the material is still of human origin; it retains moral value because it has human connotations even in the absence of links with the present.

Consider the ethical framework of a parallel area—the handling of genetic information. In this case a distinction is made between the storage of personal genetic information about a specific person and the storage of anonymous genomic information in data banks. Information about identifiable individuals directly relates to specific people and is relevant to their welfare and well-being. As such, it is generally accepted that it should be obtained only after the person has given his/her informed consent and that the results should be kept confidential by those who gather it and shared only with those to whom it refers. For anonymous genomic information, however, such ethical constraints do not apply, because the information is impersonal and widely applicable to humanity in general, just as information on the structure and function of the liver is impersonal information with wide applicability (Maddox 1992, Campbell et al. 1997).

Similarly, ancient skeletal remains, for which no links can be established with a direct descendant or a group of descendants, should be available for reputable scientific investigation, since the findings will, in the broadest terms, be applicable to all humanity. Using this approach, prehistoric bones from the Murray Black collection and the Larsen Bay collection, for instance, would not be reburied.

It is generally accepted that the study of human material is important for an understanding of human culture

and that, in principle, there are no ethical problems as long as consent has been obtained (Goldstein and Kintigh 1990). Along the same lines, there is a legitimate place for the scientific study of archeological human remains, but does this apply in the absence of adequate consent? Until a few years ago, consent was rarely sought from anyone for the study of archeological remains, even where there were people with a direct interest in them. This either makes study of these remains unethical or renders consent less relevant than when dealing with other human remains.

We accept that consent should be obtained whenever possible. Where this was not done for material collected 50–150 years ago, a compromise position is that, if living descendants can be identified, discussions should now be held with them. The aim is agreement between archeologists and indigenous communities regarding the fate of the material—open availability for continuing study, the establishment of keeping places with agreed-upon access arrangements, or reburial. If the latter eventuates, one possibility is a defined time for scientific study of the remains prior to reburial. Ideally, such cooperative solutions should be reached earlier rather than later and in a context of communion with and sensitivity to the concerns of any descendants (see also Goldstein and Kintigh 1990).

This does not, however, address the matter of remains, especially prehistoric ones, lacking identifiable descendants. In the absence of such, what becomes of consent? The distance of many of the remains from the present and the inevitable lack of clear associations with the living suggest that whatever consent may be required is far less demanding than that required when dealing with identifiable and identifiably related remains. In this instance, consent is of secondary importance, since what now becomes of preeminent significance is the best uses to which the material can be put in terms of its contribution to an understanding of human development and culture. Implicit in this conclusion is another, namely, that this general significance cannot be overridden by the demands of special interest groups (calling, for instance, for reburial). No group can override the material's general interest.

## newly discovered remains

The discussion thus far has revolved around reburial of remains currently in museums or laboratories. But what about newly discovered remains? A frequent assumption appears to be that these should be handed over to living descendants for immediate reburial.

Although the decision is for descendants to make, it is possible that they could themselves benefit from study of the remains. For instance, assistance may be provided with the definitive identification of the material. Beyond this, scientific examination of the material in the field may be able to provide basic identification of the person, indicating height and weight, and an estimate of how long ago the burial took place. This would give an impression of the person/people represented by

the skeletal material. Another possibility, dependent upon a few days' access to the material in a laboratory, might include the provision of data on age, sex, and health status. Measurements could be taken and information (including photographs and radiographs) recorded in a permanent database. Retention of skeletal fragments would open the possibility for future analyses including DNA, isotope, or trace-element analysis (Ross 1992). These benefits reflect the perspective of Western science, and an important step in this process may be discussion of the indigenous groups' perceptions of how science (in their terms) may be expected to benefit them.

Currently in South Africa the scientific study of human skeletal remains is able to offer practical benefits for living indigenous people. The South African government has set the target of returning 30% of the country's arable land to its original owners within the next five years. The commission established to assess the land claims is recognising graves as legitimate evidence of occupation before the introduction of the segregation and apartheid laws, and exhumed bones can be used as evidence in support of the land claim if DNA tests link the remains to living people (Koch and Sillen 1996).

There is a hierarchy of possibilities here, each step depending upon a close working relationship between indigenous groups and scientists (and all dependent on the granting of appropriate permission). Even if such possibilities are rarely acted upon, they are meant to stimulate discussion about the reasoning behind reburial when information of interest to indigenous groups can be elicited. They should also focus attention on the need to specify the nature of the differences, if any, between material that has lingered in museums for aeons and that which has been recently unearthed. We are unable to detect any differences. Recently uncovered material from the prehistoric past is exactly the same as material uncovered many years ago. We believe that the scientists involved in uncovering the material should have a major say in its short-term fate, since its availability is entirely dependent on their efforts.

#### human remains of prehistoric origin

In line with our conclusions, various archeologists and anthropologists have questioned the wisdom of handing back remains to indigenous groups when the age of the material gives it a significance beyond these groups. In assessing ancient remains, Mulvaney (1991:16) adopts the following position:

Kow Swamp bones . . . are rare survivals from the millions of burials which have occurred and vanished across the past 15,000 years. Their kin cannot be presumed to have shared the same cultural values or religious concepts of this generation. . . . this vast time factor, combined with their distinctive physical differences, ensure that any line of descent is to the Aboriginal race everywhere, not to Echuca people alone.

Mulvaney likens the reburial of prehistoric human remains to the destruction of the Egyptian pyramids or the razing of the Taj Mahal. He argues that were these events to occur "people of all races, creeds and cultures would appeal to those same universal human values which govern UNESCO principles. . . . why should Australia's Aboriginal past, or its present indigenes, be exempt from applying considerations of cross-cultural values?" (p. 18). Similar views have been expressed by Meighan (1992) and Mulvaney (1989). Gough (1996: 133–34) writes:

The humans whose remains have been excavated in the past 70 years were the predecessors of modern Aborigines, but not necessarily the direct ancestors of any particular Aboriginal group. Hardly a single one of the famous archaeological sites in Australia was known to modern Aborigines, much less venerated. . . . the sites had been forgotten and deserted for as much as ten or twenty thousand years. . . . it is absurd that one generation of activists . . . should claim the right to hide or destroy material that would be of immense value to future generations of Australians of all racial backgrounds.

Ancient human remains have the potential to explain a great deal about the prehistory of humankind, including information on the nutrition, health, stature, life expectancy, and population density of various peoples. Greater understanding of the ways in which communities were organised, what technologies were available, and the cultural practices of societal groups is also possible from scientific examination of such materials (Mulvaney 1991, Bonnicksen and Schneider 1995, Gough 1996). In some instances, the resulting information has been used by certain groups for specific aims. An example of this is the use of research findings by indigenous Australians of Tasmania to support political and land claim aspirations (Mulvaney 1991). More generally, however, the data are of worldwide interest, since they relate to people who form part of the ancestry of modern humankind.

Our conclusion concerning prehistoric remains should not, however, be taken as support for the view that the results of scientific studies need not be shared openly with those outside the academic community. It is vitally important that, since the research work is of general interest to humankind, any findings be made available to the community at large so that all may benefit. Furthermore, studies must have a legitimate scientific rationale. In addition, our conclusion should not be seen as endorsement of the view that the scientific community has the right to claim ownership of human remains. The scientist's role is akin to that of a custodian who, through well-considered and methodologically sound research, has the potential to enrich the common heritage of all peoples.

Bray identifies those she sees as stakeholders in the past as "physical anthropologists and Native American rights advocates, museum curators and antiquities deal-

ers, tribal government officials and traditional religious leaders, archaeological experts and would-be researchers, government agents and non-Federally recognized tribes, pan-Indian organizations and tribal historians" (Bray 1996:442). We suggest that all peoples, regardless of their ethnic background or cultural affiliation, are stakeholders in the past. From this perspective, when the future of prehistoric human remains is at issue resolving this question is as much a matter for the community at large as it is for any group in particular.

Some have suggested that the view that scientific endeavour benefits all humanity is used to rationalize the scientific community's preemption of power over information and information sources (Grose 1996). One can question exactly what is meant by the "good of humanity" or "humanity as a whole." In many contemporary societies, indigenous communities are reappropriating the power to author their own histories, which often means disputing the scientific version—not necessarily because this is wrong but because it does not contribute to the version of history which the indigenous communities wish to affirm (J. Weiner, personal communication, March 25, 1997). It is possible to dismiss these varying worldviews as "mysticism" lacking solid evidence (Meighan 1992), but such an approach is unhelpful.

Bray (1996) suggests that rather than focusing on establishing an authentic or authorized version of the past, different interpretations should be presented for discussion to ensure that the past not only remains a source of inspiration but also serves democratic goals. Scientists must accept that knowledge need not always be universal and that their own truth will not necessarily be accepted by others. For their part, indigenous peoples must accept that scientists have a legitimate interest in exploring the past. Respect and sensitivity must be shown by those on both sides of the equation (Meighan 1992). The world consists of a collection of different knowledge systems, some big and encompassing, others small and focused. Recognising where the limits of one's own knowledge system are is a step towards tolerance of other systems (Weiner, personal communication, March 25, 1997).

#### past mistreatment and moral complicity

The intellectual environment in which so much extant human skeletal material was obtained, characterized as it was by enthusiasm for craniology, phrenology, and evolutionary ideas concerned with the relative advancement of different races, is far removed from that of today. Even when these interests were not the motivation, the collecting of skeletal material was generally not in accordance with established archeological practice or ethics. The Murray Black collection, for example, was acquired by grave robbing (Mulvaney 1989). The obsession with fitting people into racial categories led to a fascination with collecting skulls, especially those of Australian Aborigines, who were thought to represent a "primitive" race. Investigations into the Aborigi-

nes' status as a possible evolutionary link between humankind and ape became a central concern of anatomists in the latter part of the 19th century and led to the dissection of Aboriginal cadavers and a huge demand from museum curators for Aboriginal skulls (Markus 1990, Monaghan 1991). Studies of the cranial capacities of Aboriginal people were used as evidence of their racial inferiority (Fry and Pulleine 1931). In the United States, a similar research agenda led to the collections of the remains of Native Americans (Powell, Garza, and Hendricks 1993, Ferguson 1996). Delamothe (1991) has stated that "the world's colonisers were using evolutionary theory to buttress their claims to racial superiority over the people they were colonising."

Conclusions drawn from the scientific study of Aboriginal bones were used to sanction and institutionalize 20th-century racism (Monaghan 1991). While the predominant view of indigenous groups' racial inferiority had a direct impact on the lives of all native peoples, the effect was particularly profound in early-20th-century Australia. There, the dominant European culture used Aborigines' supposed racial inferiority as a justification for denying them adult suffrage and for laws that not only forcibly segregated them from the white population but allowed for the removal of half-caste Aboriginal children from their parents (Monaghan 1991). The legal status of the Aborigines at this time was analogous to that of children or the insane (Markus 1990).

It is possible to regard this sequence of events as a historical curiosity. Such erroneous concepts are undeniably tragic errors, but since they are no longer held within anthropological circles, it could be argued that they amount to little more than an unsavoury historical episode in the development of what is now a respectable academic discipline. This response might be satisfactory were it not for the preservation in university departments and museums of the human material on which these ideas were seemingly based. Riding In (1992) is a harsh critic of the history of archeology and insists that researchers should not use data obtained through "immoral" forms of archeological research. Furthermore, he believes that universities and libraries should remove from their collections all works that contain references to such studies. Should the uses to which this material was put 100 or so years ago have repercussions on our view of this material in the present?

Let us suppose that this material had been collected and simply displayed in museums (or left in drawers) without any thought's being given to its purported evolutionary significance. If that had been the case, would the material in question differ in any respect from the material we are considering with its previous use in wayward evolutionary studies? The material itself would be unchanged, but in all probability it would not have been collected in the first place, since it would have had no relevance to supposedly scholarly theories. Hence, the context provided by the material's original collection is significant.

The building of such collections involved grave robbing, contract killing, massacres, and murder (Monaghan 1991). It has been estimated that the graves of 5,000–10,000 Australian Aborigines were opened, the bodies dismembered, and parts stolen for scientific studies. Additionally, bodies were decapitated so that the heads could be added to collections (Monaghan 1991). Aboriginal deaths were often the result of massacres connected with the dispersal of indigenous settlements. As a result, study of the skulls was closely linked to racial inferiority concepts, either because Aborigines were killed on this pretext or because, once they had been killed, their remains were acquired to demonstrate this same point scientifically.

The circumstances surrounding these collections have much in common with the collecting of cadavers in Britain in the 18th and early 19th centuries and even with Nazi experimentation during World War II (Richardson 1988, Jones and Fennell 1991, Proctor 1992). In all these instances, unethical practices were employed in order to obtain the human material required for research and teaching endeavours. Nevertheless, the guiding principles behind these activities varied considerably, from principles with which we have considerable sympathy today (obtaining an accurate picture of the dead human body, as in early anatomy) to those with which we have no sympathy (experiments using living humans without their consent, such as the Nazi experiments).

Where do these anthropological collections fit in? Their original intention was research rather than teaching, and hence some appear to fit more closely with the Nazi work (although comparisons of this nature can be misleading). Now that the collections exist, the only justification for keeping them in laboratories and museums stems from their research potential. Educational reasons are not relevant, since casts of the material are sufficient for this purpose. New research reasons—reasons that could not have been contemplated 50–100 years ago—do exist, among them DNA polymerase chain reaction testing of bone fragments as part of research into the genetics and demography of our ancestors (Hagelberg 1990, Ross 1992). While the detailed prospects for this technique remain debatable, the goal is the testing of hypotheses regarding human evolution, migration, and disease. In addition, since many current anthropological concepts are vastly different from those of years ago, the study of archeological material (or casts) is essential if current concepts are to be tested and elaborated. All scientific studies are theory-driven, and since ideas and interpretations are constantly changing, new generations of anthropologists need access to relevant human material if their academic discipline is to remain scientifically vibrant.

It is at this point that the notion of moral complicity becomes a relevant consideration. According to this argument, those who use material or data obtained unethically are themselves implicated in the unethical practices. As in other areas, two responses predominate. For

some writers, such as Hagelberg (1990:14), moral complicity must be rejected:

The study of skeletal remains can truly enhance our understanding and appreciation of past cultures and make us mourn their destruction. Naturally, scientists have a vested interest in wishing to preserve the integrity of skeletal collections, but the return of these collections to their presumed descendants will not make any oppressed people less oppressed and may only serve to alienate cultural and ethnic minorities even more from the mainstream of modern life.

In a similar vein, Neiburger (1990:297) claims that, far from rectifying the wrongs committed against indigenous peoples, the return of remains will “destroy the heritage of many prehistoric peoples, retard land claim litigation and narrow rights and freedoms . . . [and] harm the very people it is meant to help.”

For others, acceptance of moral complicity and its consequences leads to an emphasis on past atrocities with serious ethical implications for the professions implicated in them, especially anthropologists. Delamothe (1991:1564) writes: “Our medical forebears, particularly anatomists and pathologists, were deeply implicated in this whole gruesome business—from body snatching to racial theorising that ended in genocide. Restitution of the human remains will hardly atone for their deeds, but it seems the least bad option at our disposal.” Acceptance of the moral-complicity argument leads inevitably to reburial of this material not so much because this accords with the wishes of living descendants as because of the inherent evil of the actions that led to its existence. Alternatively, rejection of the argument leaves the way open for serious discussion of how this material may be used within contemporary society.

As argued elsewhere, moral complicity is problematic (Jones 1991). In this instance, its acceptance does not automatically lead to protection of the rights or wishes of living descendants, since it is too blunt an instrument to accomplish this. It leads to reburial of much anthropological material even when there is no suggestion that gross atrocities were committed. It errs in this direction because the material was probably obtained under conditions unacceptable by present-day ethical standards. Those wishing to work on the material today were not responsible for any atrocities committed 80–120 years ago (neither were some anthropologists of the time), and in no way could they have stopped them. They are not, therefore, implicated in the unethical activities of those times. Even though they are now in a position to benefit from them, we can find no moral connection between the killing and grave robbing of 100 years ago and work undertaken today. What is important is the rationale for the proposed contemporary scientific work, the quality of this work, and its potential value to the human community (including the descendants of those whose bones are to be studied).

A case can be made for studying archeological re-

mains in spite of past atrocities and wayward scientific theories as long as the myriad factors relevant to this material are taken into account. The opposing argument, as expressed by Delamothe (1991), is essentially a pragmatic one; it stands or falls on the influence of reburial on race relations. While this may accomplish limited political goals, it lacks a consistent ethical base.

## Guidelines for Study of Human Remains

If wholesale reburial is not advocated, then what? We cannot justify a situation whereby thousands of skeletal remains from the recent past linger unstudied in universities and museums for years on end. If they are in storage for scientific purposes, ongoing (even if sporadic) scientific work is essential to justify their maintenance. However, considerable care is required in imposing time limits for study prior to reburial. Ames and co-workers contend that keeping objects in anticipation of future developments in scientific techniques must be weighed against other scientific considerations, such as the relative uniqueness of the object and its theoretical relevance, as well as more practical considerations such as the physical limitations of museum storage (Ames, Harrison, and Nicks 1988). The expectation that one day someone may want to work on them is not sufficient reason for keeping them. This argument is similar to that opposing the use of 100 rats in a scientific study when the project can only justify the use of 10. Human material can only be kept ethically if the purposes for which it is being kept have ethical justification. Storage per se (except when equated with burial) fails to satisfy this criterion. Nor can educational purposes be used as justification for unlimited storage, since casts of the material are sufficient for teaching.

These are arguments against the indefinite keeping of material obtained in the recent past. The problem is that any studies that could be undertaken within the next 5–10 years will be limited by the techniques available and also by current concepts. We have little idea what might be done with the material in another 50 years. There appear to be two options: reburial or the use of safe keeping places. The reburial of human material will definitely have detrimental repercussions on prospective scientific investigations. The reproducibility of scientific results is crucial, and the availability of raw data and raw material for a number of years is important if checking for fraud is required.

In cases where an individual or group of individuals can be identified as descendants of the human material, there should be agreement between national authorities and those descendants over issues relating to storage of the material in accessible sites and scientific study. Accessibility is a two-way phenomenon, serving the interests of both the scientific and the indigenous community, although preeminence should be given to indigenous communities, since this is their material to “give.” From this it follows that the rights and wishes of the people being studied supersede the research needs of the scientific communities (Zimmerman 1989). Put

negatively, archeologists and anthropologists do not have preeminent rights to human remains and objects considered sacred by living communities (Ucko 1991, Klesert and Powell 1993). Scientific imperialism does not rest on an ethical foundation. The use of human material, especially when it is from the recent past, can be ethically justified only when carried out within the context of human obligations, fears, expectations, and hopes. To ignore this context, as expressed by those having a direct interest in the material itself, does untold damage to the cause of investigating any human material.

Where material is to be held in safe keeping places, its use for scientific purposes will depend entirely on the granting of permission by those indigenous people with responsibility for it. For this to occur, close cooperation and mutual trust between its custodians and scientists (who themselves could belong to the indigenous groups in question) will be essential. Also vital is that the material be treated in a manner which recognises its cultural, spiritual, scientific, and educational importance and regarded with the same respect as given to any grave or burial place.

If scientific investigation is permitted, the results of the studies must be openly shared with those with a direct cultural and/or religious interest in the material. Failure to do this is a reflection of cultural arrogance on the part of the scientific community and an implicit denial of the potential significance of the remains to living people. Indigenous anthropologists may play a role here; against an American background, Trigger (1995:837) has written: “Only attracting an ever larger number of Native Americans to become anthropologists and museologists will terminate Americanist anthropology’s role as a colonizing discipline and help to resolve it from its untenable position on the ‘racial’ firing line.”

When we turn to the case of very ancient remains where no direct descendants can be established, no bias towards returning the material to indigenous groups exists. Material in this category is not left in a vacuum, but it receives less protection than material of known provenance. Where direct descendants are not identifiable, the interests of humanity in general should take precedence, and the remains should be made available for reputable scientific investigation. The lack of clear associations with the living also suggests that consent to undertake scientific study is of secondary importance, since what becomes preeminent is enhancing the material’s ability to contribute to our understanding of human development and culture. These guidelines should apply equally to recently uncovered material from the prehistoric past; scientists involved in uncovering the material should have a major say in its short-term fate, since its availability is entirely dependent on their efforts.

## Concluding Comments

Our proposals here can be illustrated by a set of scenarios concerning a fictitious group, the Iroame, that is

known to have inhabited a region for 500 years. Human skeletal remains are uncovered in each instance, but the circumstances surrounding the discovery vary. The scenarios highlight the ways in which the principles discussed above may be put into practice in determining the disposition of the material.

*Scenario 1.* The remains are found to be approximately 100 years old. Because they are of relatively recent origin, it is possible to identify direct descendants. The descendants are informed of the discovery, take responsibility for deciding what should happen to the remains, and rebury them.

*Scenario 2.* The remains are shown to be around 300 years old. As in scenario 1, a group of direct descendants is identified. The remains are returned to them, and they decide to maintain them in a safe keeping place pending further discussion with local anthropologists.

*Scenario 3.* The remains are 1,000 years old. Given what is known about the length of occupation of the Iroame, this means that they belong to a group predating the Iroame in the region. The Iroame accept that the remains do not have ancestral links with them, since they lay no claim to having inhabited the region for more than 500 years, but they nevertheless claim sovereignty over the material because it is of indigenous origin. Here the remains are of significance to all people, not to one particular group alone. The government grants the Iroame sovereignty over the remains on purely political grounds.

*Scenario 4.* In contrast to scenario 3, in this instance the Iroame reject the scientific view that they have resided in the region for only 500 years. They claim to have been living in the area from the beginning of time and thus deny that the 1,000-year-old bones could possibly predate them. The government grants the Iroame possession of the remains just as in scenario 3.

From these scenarios it is clear that three variables determine the nature of the debate in any given situation: the scientific data, in particular, the age of the bones and the evidence regarding the length of occupancy of the group involved, the cultural values of the group, and the governmental response. Any decision will depend on the balance achieved between these factors. The governmental response to the claims of indigenous peoples is by far the most fickle of the three, and priority must therefore be placed on attempting to find a balance between the scientific data and the group's cultural values.

Our emphasis in this article has been on the scientific data, since it is they that provide insight into the remains. Without the scientific input, in many cases the very existence of the material would remain unknown. In the four scenarios just outlined, the scientific data are a contributing factor in 1 and 2 and a major factor in 3 and 4. At the same time, a cooperative relationship between scientists and the indigenous people is critical. A recognition of the perspective of each party is a precondition for viable discussions, let alone any agreement. In scenarios 1, 2, and 4, the scientific data and cultural values have essential contributions to make to any resolution of the issue. However, in scenario 4,

where there appears to be irreconcilable conflict between the worldviews of the two parties, a political response is required, although it will leave the conflict unresolved at least for the moment. Scenario 3 presents a cautionary lesson in that a political response is imposed when the cultural issues might be resolved through full discussion. An ethically sound way forward may prove possible in this instance, and every effort should be made to ensure that this occurs.

Ethical perspectives provide a basis for mutually beneficial discussions and should be developed further before the debates on repatriation issues have all been resolved politically. In the final analysis, many indigenous cultures have uses for archeological and anthropological study, whether these be learning more about their past or gaining knowledge to assist in the management of their heritage resources. For their part, scientists have an opportunity to add a fresh humanistic dimension to their research by incorporating an appreciation of the power of their work in constructing knowledge of the past (Ferguson 1996). In reviewing the wider implications of the repatriation debate for the discipline of archeology, Murray (1996:219) has written:

Archaeology [has] to leave the safety of "scientific objectivity" and travel to a disciplinary space where archaeological knowledge is de-colonized and the distinction between producers and consumers of that knowledge is broken down. . . . the act of seeking reconciliation between archaeologists and indigenous peoples sets up a process of consultation and interaction which tells us that this unknown post-colonial landscape will be created by us all, in a form as yet unknown. Equally important, it seems clear enough that this process, now that it is begun, has no end-point.

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