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6-2004

# Copyrighting the Past? Emerging Intellectual Property Rights Issues in Archaeology1

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## Citation of this paper:

Nicholas, George P. and Bannister, Kelly P., "Copyrighting the Past? Emerging Intellectual Property Rights Issues in Archaeology1" (2004). *Aboriginal Policy Research Consortium International (APRCi)*. 173.  
<https://ir.lib.uwo.ca/aprci/173>

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# Copyrighting the Past?

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## Emerging Intellectual Property Rights Issues in Archaeology<sup>1</sup>

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by George P. Nicholas and Kelly P. Bannister

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Rights to intellectual property have become a major issue in ethnobotany and many other realms of research involving Indigenous communities. This paper examines intellectual-property-rights-related issues in archaeology, including the relevance of such rights within the discipline, the forms these rights take, and the impacts of applying intellectual property protection in archaeology. It identifies the "products" of archaeological research and what they represent in a contemporary sociocultural context, examines ownership issues, assesses the level of protection of these products provided by existing legislation, and discusses the potential of current intellectual property protection mechanisms to augment cultural heritage protection for Indigenous communities.

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1. This paper has benefited from discussions with many individuals, particularly Michael Brown, Julie Hollowell, Jock Langford, Nola Markey, Claire Smith, and Alison Wylie. We are indebted to Larry Zimmerman, Peter Whiteley, and five anonymous reviewers for their useful comments on a previous version. We also extend our appreciation to the numerous Aboriginal groups and individuals with whom we have worked and discussed many of these issues. This work was supported by the Social Sciences and Humanities Research Council of Canada through a post-doctoral fellowship to K. P. Bannister.

British Columbia. Her publications include "Indigenous Knowledge and Traditional Plant Resources of the Secwepemc First Nation," in *Indigenous Intellectual Property Rights: Legal Obstacles and Innovative Solutions*, edited by M. Riley (Walnut Creek: AltaMira Press, in press) and (with K. Barrett), "Weighing the Proverbial 'Ounce of Prevention' versus the 'Pound of Cure' in a Biocultural Context: A Role for the Precautionary Principle in Ethnobiological Research," in *Ethnobotany and Conservation of Biocultural Diversity*, edited by T. J. Carlson and L. Maffi (*Advances in Economic Botany* 15, in press).

The present paper was submitted 3 x 02 and accepted 15 ix 03.

"Intellectual property" is defined by Dratler (1994:1-2) as "intangible personal property in creations of the mind." Intellectual property rights are legal rights to precisely defined kinds of knowledge. In general, intellectual property laws "protect a creator's expression in artistic and literary works, the proprietary technology in inventions, the words and symbols used to identify products and services and the aesthetic aspects of product designs" (Cassidy and Langford 1999:1).

Intellectual property rights are a rapidly expanding topic of discussion in academic and other circles and a major issue in ethnobotanical and other research involving Indigenous communities.<sup>2</sup> Interested parties represent a convergence of natural and social scientists from government, academia, and industry, members of Indigenous communities, lawyers, corporate representatives, environmentalists, and others. Key concerns expressed by these diverse parties relate to the sociocultural, ethical, and economic aspects of current intellectual property rights legislation, among them the implications of patenting higher life forms (e.g., CBAC 2001, 2003). For the most part, archaeologists have yet to find themselves thrust into this complex milieu. We argue that archaeologists should examine whether and in what ways intellectual-property-rights-related issues are relevant to their research, particularly when claims to such rights may be made by Indigenous peoples affected by that research.

The absence of archaeologists from the intellectual property rights debate may be linked to the complexity of the issues and to the challenges of defining "intellectual property" beyond the realm of technological innovation with commercial application. Such is the case with living systems, where what qualifies as intellectual property and is protectable by law is continually being debated and tested, often in the courts.<sup>3</sup> Of particular relevance to archaeology is the application of the idea of intellectual property rights to the protection of the cul-

2. We use "Aboriginal," "Indigenous," and "Native" interchangeably. "Aboriginal" tends to be used more commonly in Canada and Australia. In Canada it includes First Nations, Métis, and Inuit.

3. See, for example, *Harvard College v Canada* (Commissioner of Patents) 2002 SCC 76. File No. 28155 December 5 ([http://www.texum.umontreal.ca/csc-scc/en/pub/2002/vol4/html/2002scr4\\_0046.html](http://www.texum.umontreal.ca/csc-scc/en/pub/2002/vol4/html/2002scr4_0046.html)) and the reexamination of U.S. Plant Patent No. 5,751, the "Da Vine Patent" on the Amazonian rain-forest plant *Banisteriopsis caapi*, issued June 17, 1986, to Loren S. Miller and rejected by the U.S. Patent and Trademark Office on November 3, 1999 (CIEL 1999).

tural knowledge and property<sup>4</sup> of Indigenous societies. This application is complicated by a lack of consistent terminology across interested or affected parties, Indigenous and non-Indigenous alike. For example, what is it that needs protecting and from whom? As Mann (1997: 1) notes, "No one definition [of indigenous knowledge] has been universally endorsed or accepted by either Aboriginal or non-Aboriginal peoples in Canada. What is clear, however, is that indigenous knowledge as a concept concerns information, understanding, and knowledge that reflects symbiotic relationships between individuals, communities, generations, the physical environment and other living creatures, and the spiritual relationships of a people." Likewise, according to the Union of British Columbia Indian Chiefs (Hampton and Henderson 2000:ii), "There is no universally accepted definition for cultural property. . . . Most academic commentators assert that Indigenous knowledge issues are stretching the existing legal categories so that only a fuzzy line exists between intellectual, spiritual and cultural rights." The foregoing largely concerns living people, but what of deceased societies? Archaeological research involving Indigenous societies tends to blur past and present.

National and international laws protecting cultural and intellectual property are often seen as inconsistent with emerging views on what aspects of Indigenous cultural knowledge and heritage require protection. According to Battiste and Henderson (2000:145), the problem involves "negotiating with the modern concept of property" in that Eurocentric legal approaches "treat all thought as a commodity in the artificial market" whereas Indigenous societies tend to see property as "a sacred ecological order" that should not be commodified. They suggest further (p. 250) that intellectual property laws have

problems dealing with forms of knowledge in the area of high art or high technology (e.g., computer software and biotechnology). The major push for amendment of the law comes from the top, so that areas such as computer technology or biogenetic engineering are receiving a lot of attention, and the law is gradually being altered to accommodate these forms of knowledge. Culture and knowledge on the "bottom"—where Indigenous knowledge is so often situated—tend to be ignored.

The perceived inadequacy of applying existing laws to the protection of Indigenous cultural knowledge and heritage has led to recommendations for the expansion of legal definitions and protection mechanisms and calls for alternative and complementary nonlegal ones. For

4. Bell and Patterson (1999:206) define "Aboriginal cultural property" as "movable objects that have sacred, ceremonial, historical, traditional, or other purposes integral to the culture of a First Nations community and may be viewed as collective property of an Aboriginal people" and continue: "Aboriginal perspectives on identification of cultural property and persons with authority to alienate or convey such property may vary in accordance with the laws, traditions and property systems of the claimant group."

example, Janke (1998:3) proposes the term "Indigenous cultural and intellectual property rights" to refer to "Indigenous people's rights to their heritage," wherein "heritage comprises all objects, sites and knowledge, the nature or use of which has been transmitted or continues to be transmitted from generation to generation, and which is regarded as pertaining to a particular Indigenous group or its territory." Artifacts, archaeological sites, and some types of information generated by archaeological research clearly fit this definition. In fact, there is a notable similarity between a statement from Hampton and Henderson's discussion paper that "generally, cultural property is anything exhibiting physical attributes assumed to be the results of human activity" (2000:ii) and definitions of an archaeological site as "any place where objects, features, or ecofacts manufactured or modified by human beings are found" (Fagan 1997:478) and "any place where material evidence exists about the human past" (Thomas 1998:95).

In this paper we explore the concept of Indigenous cultural and intellectual property rights in an archaeological context. The central questions posed are: What relevance do intellectual property rights have to archaeology? What forms do these rights take? How might future claims to intellectual property affect archaeology? We begin by describing the "products" of archaeological research and explaining what they represent in a contemporary sociocultural context. We assess the level of protection of these products provided by existing legislation (specifically, cultural heritage acts) and the potential of current intellectual property protection mechanisms to augment that protection. Our focus is on knowledge and its physical manifestations (such as images and "art") that are derived from or otherwise pertain to the past.

We consider also whether and in what way our understanding of these emerging issues in archaeology can be informed by trends in related disciplines such as anthropology and ethnobotany. One possibility is that Indigenous peoples may seek control of the knowledge and other products of archaeological research conducted in their traditional lands—perhaps much as they have of the results of ethnobotanical research on their traditional knowledge and plant medicines (Bannister 2000, Bannister and Barrett n.d., Brush and Strabinsky 1996, Greaves 1994, Posey and Duffield 1996). In our final section we turn to this related academic field for insights and comparative examples.

The scope of this paper ranges from local to international. Our examples are drawn from Canada (particularly British Columbia, where intellectual property rights are an important topic in current treaty negotiations), the United States, Australia, and elsewhere. The implications for archaeology are of regional significance and global interest.

Michael Brown's (1998) article "Can Culture Be Copyrighted?" provides an initial point of reference for

our discussion.<sup>5</sup> Copyright is one of several legal instruments under statutory and common law that can be used to enforce exclusive rights in the marketplace in creations that meet certain legal criteria (i.e., novelty and material fixedness). In particular, copyright protects the physical expression of ideas but not the ideas themselves or any substantive or factual information. Ownership of copyright is established by the author's fixing the work in a material form and is used to protect rights to novel literary, artistic, dramatic, or musical works (as well as computer software). Protection is for a limited term (e.g., in Canada, the life of the author plus 50 years).<sup>6</sup> Rather than suggesting that copyright is the only—or the most appropriate—tool for protecting rights to intellectual property in archaeology, our title questions the common perception that this is the case. Other forms of intellectual property protection that may be relevant to archaeology include patent, trademark, industrial design, and trade secret.<sup>7</sup> Arguably, some of these mechanisms already have approximations in Indigenous societies—for example, family or clan ownership of songs, stories, or motifs and possession by healers of specialized medicinal knowledge that is not widely shared within the community. While ownership is not a Western<sup>8</sup> concept, these examples of Indigenous ownership are not given legal status in most countries. It is important to distinguish between creations that are legally protectable under current legislation and those that are not. Opportunities or pressure (internal or external) to exploit ownership rights and privileges for commercial purposes present challenges to many Indigenous communities—particularly elders, traditional healers, storytellers, and other knowledge holders, who must often reconcile their reservations about sharing cultural knowledge with the wider society (thereby contributing to recognition and potential commercial development, as well as misappropriation or misuse) with cultural beliefs and responsibilities that embody sharing. Such challenges are complicated by a widespread lack of understanding of what can and cannot be legally protected. Archaeology will not move beyond being a colonialist enterprise unless it actively seeks to understand the underlying issues of ownership and control of material and intellectual property as related to cultural knowledge and heritage.

5. This theme is expanded upon in Brown's book *Who Owns Native Culture?* (2003), which is highly recommended as a comprehensive review and discussion of many key issues.

6. Copyright Act. R.S., c. C-30, s. 1, Canada (<http://laws.justice.gc.ca/en/C-42/37844.html>).

7. A patent is the right to exclude others for a defined period of time (e.g., 20 years in Canada) from making, using, or selling an invention that involves a new process, structure, or function. A trademark is a word, symbol, picture, or group of these used to distinguish the products or services of one individual, organization, or company from those of another. An industrial design protects the shape, pattern, or ornamentation of an industrially produced object. A trade secret is practical knowledge that has commercial value, provides a competitive advantage, and is not widely known (Industry Canada 1995, Posey and Dutfield 1996, Stephenson 1999).

8. However limited the term is, we use "Western" here in its usual colonial/post-colonial sense, as in the distinction between "the West and the Rest" (Sahlins 1976).

Material property issues have certainly arisen in archaeology and will continue to frame key aspects of the discipline. Especially contentious are the repatriation of artifacts and reburial of human remains (e.g., Bray 2001, Ferguson 1996, Mihesuah 2000, Rose, Green, and Green 1996). Issues related to intellectual property have been less prominent,<sup>9</sup> although trends in other fields suggest that this will soon change. This is particularly true in former colonized lands such as the Americas, Africa, and Australia, where the archaeological record is mostly the product of the ancestors of the present Indigenous population(s) and not that of the dominant culture. Archaeological research in the latter context is often seen as appropriating Indigenous knowledge and rights or affecting the sanctity of Indigenous beliefs—even when the archaeologists involved believe that they are working to the benefit of Indigenous communities.

## The Products of Archaeological Research and Their Protection

Archaeology is the study of human behavior and history through material culture. It is concerned with what happened in the past, when it happened, and the processes by which things changed and with the application of that knowledge in the modern world. The archaeological record is made up of both the individual and the cumulative responses of humans to a suite of social, demographic, cultural, and environmental opportunities over the course of hours, years, or millennia. Archaeologists seek to discover and explain this record and the cultural diversity it represents. The products of archaeological research thus constitute scientific knowledge in the sense of understanding the (past) world in new ways and at the same time reflect the knowledge of Indigenous cultures. Archaeology is also very much a contemporary socio-cultural phenomenon that seeks to locate, create, classify, objectify, interpret, and present the past in ways that reflect the particular views of its practitioners (see Pinsky and Wylie 1995).<sup>10</sup> A key concern in contemporary archaeology is the degree of participation and control that Indigenous peoples have over the archaeological *process*. In Canada, for example, control issues have centered on the limitation of access to sites in traditional territories by way of a permit system (e.g., Denhez 2000). Little attention has been paid to the *products* of archaeological research.

Aside from unearthed artifacts, what is it that archaeological research produces? In its many forms, archae-

9. Asch (1997) has examined the issue of ownership of cultural property in an archaeological context but not that of intellectual property rights per se.

10. We are very much aware that archaeology has frequently been conducted in the context of an unequal power relationship in which descendant communities have had little participation or say. This has been true for Native Americans (e.g., Jemison 1997, Watkins 2000) and African-Americans (e.g., McDavid 2002, Singleton 1995). The situation has changed notably in recent years (see e.g., the Code of Ethics of the World Archaeological Congress).

ology establishes chronology and precontact history (as a supplement or a corollary to oral history) and illuminates the processes by which things have changed. Specific products of archaeological research take the form of site reports, site, artifact, and feature descriptions and classifications, radiocarbon dates, and faunal remains, among other materials. These are analyzed to produce information on past technologies, dietary patterns, land-use patterns, environmental settings, demographic trends, social relationships, and other topics. Such studies may have a very short-term focus (e.g., reconstruction of life at a particular time and place) or a very long-term focus (e.g., shifts in dietary practices over millennia). A central question raised by consideration of intellectual property rights is whose property these products are and how they are protected.

The lack of explicit consideration of these issues in archaeology to date is partly the result of a societal perception that the outcomes of archaeology have limited practical application. While information of substantial public value may be produced, archaeologists often have difficulty communicating the contemporary relevance of their field.<sup>11</sup> Intellectual property rights issues may be especially relevant in cases where the benefits of archaeological research are based directly upon Indigenous cultural knowledge, such as the recognition and restoration of raised-field farming (Erickson 1998) and *chinampas* farming (Coe 1964) in Central and South America. In such cases, the issues faced by archaeologists may include (1) publication and ownership of copyright in books, reports, and articles, (2) access to, public disclosure of, and ownership of copyright in photographs of artifacts, (3) fiduciary duties related to the secrecy of sacred sites, which could also include copyright in maps, (4) ownership, secrecy, and publication of traditional knowledge that may result from archaeological research, and (5) ownership of, copyright in, or trademarks related to the artifacts, designs, or marks uncovered during archaeological research.

Archaeological sites represent the major physical manifestation of cultural heritage for all human societies. Despite broad concerns with preserving sites, buildings, and objects of historical or cultural value, the degree of preservation and protection varies from country to country and between different states, provinces, and territories. In the United States, for example, there is extensive federal cultural heritage legislation, but archaeological sites on private property are generally not protected (Patterson 1999). The Native American Graves Protection and Repatriation Act (NAGPRA), which protects human remains and "associated funerary objects, unassociated

funerary objects, sacred objects, and cultural patrimony," also excludes private property.<sup>12</sup> In Canada, federal legislation is very limited, with most heritage protection being conducted at the provincial level. For example, under the British Columbia Heritage Conservation Act of 1996, all archaeological sites, whether on public or private lands, are protected in principle. There is no provision for site identification surveys for all proposed developments, and therefore many sites are lost. Likewise, artifacts are not covered and are openly bought, sold, or traded at flea markets, auctions, and other venues.<sup>13</sup> Whatever the level of legislated heritage protection, protection of archaeological materials in the United States and Canada is based exclusively on the notion of physical property (e.g., artifacts and sites).

General legislation protecting intellectual property is, however, extensive in both countries. Thus, it is worth exploring intellectual property rights from the perspective of determining whether any aspect of them offers additional protection to archaeological resources and/or provides new avenues that Indigenous peoples can pursue to protect their cultural and intellectual property. Certain products of archaeological fieldwork and research are the result of the creative works of past Indigenous societies. Do they qualify as intellectual property in a legal sense? Should the descendants<sup>14</sup> of those responsible for the archaeological record have rights to that record?

To date, applications of intellectual property rights in fields closely related to archaeology such as anthropology and ethnobotany have largely been concerned with protecting traditional knowledge and the related biological resources (see Bannister 2000, Bannister and Barrett n.d., Brush and Stabinsky 1996, Greaves 1994, Posey and Duffield 1996). Is access to a site by archaeologists any different from access to traditional knowledge and plant resources by ethnobotanists? From the point of view of archaeology, traditional knowledge can be understood as incorporating historic/modern land-use and health practices, oral and written histories, and expressions of worldview. One reason that little attention has been paid to archaeology may be that only limited material expressions of potential intellectual property are preserved in the archaeological record and even that material tends to be so old as to make issues of ownership moot from

11. For example, the long-term study and excavation of landfills in the United States by William Rathje has demonstrated their ineffectiveness and contributed to their redesign (Rathje 1991, Rathje and Murphy 1992). Carlson's (1995) study of fish remains from archaeological sites in northeastern North America correlates the substantial—and anomalous—historic salmon population with the Little Ice Age cooling, thereby explaining why many expensive salmon restoration projects may be unlikely to reach projected goals.

12. "Cultural patrimony" is "an object having ongoing historical, traditional, or cultural importance central to the Native American group or culture" (NAGPRA 1990:sec. 2).

13. Export of artifacts out of the province is prohibited by the British Columbia Heritage Conservation Act, while the export of many materials out of Canada is regulated or prohibited by the Cultural Property Export and Import Act.

14. We must be careful about making assumptions as to who the descendants of a particular population are. In the Kennewick Man case, there is little scientific evidence that the 9,000-year-old skeletal remains can be directly related to modern Umatilla and other claimants. In the case of the Navajo claim to association with Anasazi sites, archaeological data indicate that it is the Pueblo tribes that are strongly linked to those sites, the Navajo having moved into the Southwest only relatively recently.

a legal perspective. For example, Brown (1998:196) notes,<sup>15</sup>

The principal goal of intellectual property laws . . . is to see that information enters the public domain in a timely fashion while allowing creators, be they individuals or corporate groups, to derive reasonable financial and social benefits from their work. Once a work enters the public domain, it loses most protections. I am free to publish *Uncle Tom's Cabin* or to manufacture steel paper clips without paying royalties to their creators, whose limited monopoly has expired. The same principle applies to prehistoric petroglyphs or to the "Mona Lisa," both of which have become part of our common human heritage, whatever their origins.

Brown's comments raise two important points that require further examination. First, many Indigenous groups simply do not accept that their archaeological past is first and foremost part of a shared human heritage—at least at the expense of their claims to it. Second, intellectual property protection has a limited time span after which the intellectual property becomes part of the public domain. If "time" is considered largely a Western construct (Gould 1987, Zimmerman 1987), the phenomenon it represents may be perceived differently in Indigenous cultures. In Western society time is viewed as linear and worldview is characterized by a series of clear dichotomies: past/present, real/supernatural, male/female, good/evil, and so on. In many Indigenous societies, however, not only is there greater flexibility in classifying the world but the basic conception of time may be significantly different (e.g., Williams and Mununggurr 1989).<sup>16</sup> Where there is no cognitive separation between past and present, ancestral spirits are part of the present. This conceptual difference requires us to avoid an exclusively Western orientation in interpreting prehistoric lifeways (as in evaluating site significance and the implications for cultural resource management practices), and this presents a major challenge to the fundamentals of intellectual property law. In other words, the petroglyphs that Brown refers to may be *timeless*. Thus, intellectual property laws that are constrained by Western conceptions of time may be severely limited in utility and appropriateness to Indigenous cultures.

Given the products of archaeological research, what are potential points of concern with regard to intellectual property rights? If other academic disciplines are any indication, the concerns of the descendants of the people responsible for the archaeological record may include appropriation, misrepresentation, or misuse of knowledge,

loss of control of knowledge, and loss of access to the products of research or their benefits. Non-Indigenous researchers,<sup>17</sup> for their part, fear loss of control, censorship, or restrictions on use of knowledge—concerns that relate to suppression of academic freedom and restrictions on publication, which, in turn, may affect academic credentials, promotion, and continued research funding. The issues are not limited to efforts of Indigenous peoples to control their own past but also surface in religious contexts. In Israel, archaeology and related research have been severely limited by objections of ultra-Orthodox Jewish groups over the sanctity of human remains. As a result of a 1994 ruling by the Israeli Attorney General, all human remains must be "immediately handed over to the ministry of religious affairs for reburial" (Balter 2000:35). This has effectively halted most physical anthropology, and it extends to remains not affiliated with the modern Israeli population, including early human remains.

The issue of censorship will likely be raised more frequently as Indigenous peoples in many parts of the world regain greater control over their affairs. Academics are often complacent about their "freedom" until it is threatened. With freedom, however, comes responsibility. Most problems relating to publication of archaeological data can likely be avoided with some conscientious forethought and proactive effort. For example, where the potential for conflict exists, researchers will do well to work closely with community participants from the start and make clear what the project goals and products will be. Researchers should also be clear about how the products of their research may constitute intellectual property and whose property this will be.

Claire Smith (1994:96) offers the following position:

My view is that Barunga people have the right to censor any aspect of my research that they find distressing or offensive. However, in order to avoid extensive censoring of the research I designed its parameters in consultation with them. Having done this, I do not believe that Barunga people have the right to decide whether the research as a whole should be published, unless we had negotiated this provision prior to the research being undertaken. . . . Nor do I agree with some Aboriginal people who maintain that results of research should be owned by indigenous people. . . . In my opinion the intellectual property arising from the research belongs to the researchers involved though they have an overriding responsibility not to offend the people with whom they work.

The question raised is whether the intellectual value or creative contribution of the cultural knowledge being disclosed exceeds that of the research or transcription

15. The "Mona Lisa," however, is owned by the Louvre and may not be entirely in the public domain in a copyright sense. The museum controls access to it and access to quality reproductions. Petroglyphs have been trademarked (as official marks) in British Columbia and therefore are not necessarily part of our common human heritage.

16. Morris (1984:11), for example, notes that "ancient peoples believed that time was cyclic in character," ignoring the fact that many contemporary Aboriginal peoples also believe this.

17. Concerns faced by Indigenous researchers would presumably include some elements from both of these points of view and be further influenced by whether they were members of the communities in which they were working. Such individuals may also expose themselves to criticism for having "sold out."

process. This issue is at the heart of editorial control, restrictions on publication, and claims to intellectual property. Who owns the intellectual property arising from the research is in some cases institution- or funder-specific. The policies of most academic institutions may be characterized generally as "institution as owner" or "inventor as owner," the former clearly limiting the discretionary power of an individual researcher on the matter (Bannister 2003).

The desire of many Indigenous peoples to control or censor information about their past may have two triggers. One is the largely political motivation to regain control over their own affairs; the other is a response to the unwillingness of some archaeologists to listen to and/or integrate Indigenous perspectives and interpretations into their own. As Whiteley (1997:203) notes, "Archaeologists . . . have more often than not systematically excluded the knowledge and interpretations of living Pueblo descendants—as they have with non-Western indigenous peoples worldwide. . . . The intellectual grounds for exclusion, particularly in the now-old 'new archaeology,' exalt cold 'scientific analysis' of mute material remains over indigenous oral histories: Natives need not apply." Essentially, the validity of the power inequities inherent in the conventional academic research approach (i.e., the archaeologist as expert on Indigenous culture) is in dispute. It is instructive to examine some commonalities between academic and Indigenous communities in the general concerns noted previously. The ultimate risk to both sides is *loss of control* of knowledge. An obvious tension between the different actors exists in terms of the importance, potential utility, and meaning of knowledge. In archaeology at least, this tension is better understood when knowledge is seen as both part of cultural *property* and integral to cultural *identity*. From this perspective, the appropriation and commodification of knowledge acquire added complexity, and control of knowledge becomes vital to cultural integrity.

### Archaeological Research Products as Cultural and Intellectual Property

Every human society is the embodiment of a particular system of knowledge. The cultural knowledge possessed by contemporary Indigenous societies is part of a compendium of wisdom that extends back through time, a significant portion of which is represented in archaeological materials and information. This information not only reflects what happened and when it happened in the past but is symbolic of cultural identity and worldview still important to many of the descendants of the sites' creators. Archaeological sites thus constitute not only cultural property but intellectual creations, raising questions of how archaeologically derived knowledge contributes to cultural identity and what aspects of cultural identity qualify as intellectual property. Here we are referring not to archaeological approaches to cultural

identity (i.e., using archaeology to define ethnicity [e.g., Shennan 1989]) but rather to the appreciation of archaeological material as a component of cultural identity (Jones 1997) that makes the products of archaeology potential forms of intellectual property. Archaeological sites and materials fit the above-mentioned definitions of Indigenous cultural and intellectual property proposed by Janke (1998) and Hampton and Henderson (2000) in their contributions to cultural identity, worldview, cultural continuity, and traditional ecological knowledge.

#### CULTURAL IDENTITY

Archaeological artifacts and sites have long served as symbols of national identity worldwide. Stonehenge is not only one of the best-known archaeological sites in the world but also strongly associated with British identity (see Golding 1989). When Rhodesia gained independence in 1980 and became Zimbabwe, it took its new name from an archaeological site and chose as its national symbol a carved soapstone bird from that site. In many parts of the world, Aboriginal communities relocated by government mandate, epidemics, or other factors have retained a strong association with their former homes, whether through occasional visits or through oral histories (e.g., Kritsch and Andre 1997, Myers 1986). Artifacts and heirlooms also play a vital role in the identity of Indigenous peoples, serving as a link both to past generations and to the systems of knowledge that sustained them. This may help to explain the widespread use of, for example, arrowheads—objects that have likely not been in use for a century or more—in the contemporary logos of many Aboriginal groups in North America.

Aboriginal peoples may choose to represent themselves or seek confirmation of their cultural identity by continuing to use (or, in some cases, adopting) precontact objects or traditions (e.g., Merrill, Ladd, and Ferguson 1992). These may include architecture, traditional foods and cooking practices, and rock art imagery. In the Interior Plateau of British Columbia, the image of the semisubterranean pit house (fig. 1) is widely used by the Secwepemc (or Shuswap) people on letterhead, signage (fig. 2), sweatshirts, and promotional items. Full-scale reconstructions of pit houses are found in Aboriginal heritage parks and communities; some individuals have even built and seasonally use their own pit houses. Underground pit-cooking (a practice well-documented in the archaeological record) continues, although only infrequently, and pit-cooked food is prized (Peacock 1998). Pictographs are also widely viewed by Secwepemc and other Plateau peoples as an important part of their heritage (e.g., York, Daly, and Arnett 1993), although no new ones have been painted for many generations. Among other things, pictographs provide an expression of worldview and clear indications of a distinctive Aboriginal presence in the landscape.



FIG. 1. *Reconstructed pit house, Secwepemc Museum and Heritage Park, Kamloops, B.C. (photo G. Nicholas).*

#### WORLDVIEW

Certain types of archaeological sites and artifacts, such as pictographs, petroglyphs, medicine wheels, vision quest sites, and burial sites, have long been associated with the worldviews of Indigenous peoples. While few of these are still in use today, those that are reflect continued use since precontact times; offerings are left at sacred places today much as they have been for possibly millennia (e.g., Andrews and Zoe 1997). In Australia, the National Aboriginal Sites Authorities Committee distinguishes two types of Aboriginal sites: (1) archaeological sites, whose significance is defined “on the basis of scientific enquiry and general cultural and historical values,” and (2) “sites which are the tangible embodiment of the sacred and secular traditions of the Aboriginal peoples of Australia.” It is noted that the latter sites may include the former and that the “relative significance of these sites may only be determined by the Aboriginal custodians” (NASAC 1991, cited in Ritchie 1994:233).

The role of these types of sites is not necessarily static but reinterpreted or even augmented to meet current needs. Dreamtime sites are places in the landscape where ancestral beings went about creating the land and all it contained, including themselves (see Stanner 1998). To Aboriginal Australians, the Dreaming is a timeless phenomenon relayed through oral traditions linked to specific places and objects. While most of these tell how things came into being, they also reflect contemporary issues. As noted by Chatwin (1987:12), almost anything “can have a Dreaming. A virus can be a Dreaming. You can have a chickenpox Dreaming, a rain Dreaming, a desert-orange Dreaming, a lice Dreaming. In the Kimberleys they’ve now got a money Dreaming.” Contemporary influences on traditions are also found in North America. Offerings left at sacred places often include tobacco, pebbles, and food, as well as coins and other “modern” items.

Such versatility is also seen in rock art, which may include both an objective record of life in the past (e.g., animals seen) and a subjective one (e.g., personal visions, dreams, magic). These images may be interpreted differently today from when they were created.<sup>18</sup> In some places, the tradition continues of repainting or even painting over old images (e.g., Chaloupka 1986).

Mortuary practices and the treatment of human remains are also expressions of worldview, and the reburial issue goes to the core of worldview and cultural identity in indigenous societies everywhere (e.g., Bray 2001, Carmichael et al. 1994, Davidson, Lovell-Jones, and Bancroft 1995, Zimmerman 1997). Cemeteries have long been important places in the cultural landscape and served as territorial markers. Some cemeteries have been in use for thousands of years (O’Neill 1994). Such locations are of importance to the associated contemporary Indigenous communities and may also play a significant role in land claims and political movements.

#### CULTURAL CONTINUITY

Cultural continuity may be reflected in the occupation of the same lands for millennia, in the retention of the technologies used in the past to produce the same household goods (e.g., ceramics in the American Southwest), and in other ways (e.g., Jones 1997). Archaeological sites serve as important personal and societal touchstones (i.e., as links between past and present) that reaffirm basic values and provide a sense of place. This is indicated by Chase’s (1989:17) observations on the significance of

18. This is likely the case with the Nlaka’pamux elder Annie York’s interpretation of pictographs in her band territory in the Interior Plateau of British Columbia (York, Daly, and Arnett 1993). The degree to which her interpretations of imagery match those of its creators hundreds or thousands of years ago is debatable (Nicholas 2001).



FIG. 2. *Example of stylized pit house used as the logo of the Secwepemc Museum, Kamloops, B.C. (photo G. Nicholas).*



precontact archaeological sites for North Queensland Aboriginal people in Australia. In cases where the colonial experience and a century or more of acculturation have dramatically changed the lives of Aboriginal peoples, there often remain core cultural values that indicate the persistence of traditional beliefs and worldview. These may take the form, for example, of a strong emphasis on family values and respect for community elders.

The strong connection between cultural continuity and Indigenous claims to land and cultural or archaeological materials has significant implications for the recognition of ownership in matters of repatriation and reburial. However, the continuity may sometimes be more apparent than real, as a result of population movements in the distant past or historic federal tribal relocation and the often capricious nature of tribal boundary recognition, one group may occupy a territory that contains the archaeological record of another. Even in central Australia, where until recently the effects of colonialism were limited, the degree of relatedness between the Aboriginal Australian groups mapped by Tindale (1974) and their late Pleistocene predecessors in the area merits examination.

Where cultural discontinuities are recognized in the archaeological record, residents of the area may deal with this information in different ways. For example, the group may lack any concrete knowledge of earlier residents and accept the entirety of the local archaeological record as its own; some Secwepemc people insist that their ancestors *always* lived in pit houses and harvested salmon when the archaeological record suggests that these are later Holocene developments (Nicholas 2003). Alternatively, the newcomers may recognize the legacy of an earlier occupation and integrate knowledge of ancient unrelated beings into their histories and worldviews as Hamann (2002) has documented for Mesoamerica. Finally, the group may consciously co-opt the archaeological record for cultural or political reasons, as is the case with current Navajo claims to Anasazi archaeological sites.

#### TRADITIONAL ECOLOGICAL KNOWLEDGE

"Traditional ecological knowledge" has been described as an Indigenous system of knowledge that is based on observation, testing, and replicated results and therefore directly comparable with "science." Berkes (1993:3) defines the term as "a cumulative body of knowledge and beliefs, handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment. [It] is an attribute of societies with historical continuity in resource use practices; by and large, these are non-industrial or less technologically advanced societies, many of them Indigenous or tribal." Traditional systems of knowledge have become an important subject of intellectual property rights (e.g., Simpson 1999) and are increasingly recognized by both Indigenous and non-Indigenous people as a manifestation of the acquired

knowledge of particular Indigenous societies. This body of knowledge includes not only the intellectual tradition itself (i.e., the information preserved and transmitted) but also the traditional use sites that are the geographic expression of that knowledge.

Archaeological sites by any definition are traditional use sites, and therefore the knowledge represented at these sites is worth considering in the context of cultural and intellectual property. Various types of sites (e.g., fish weirs) represent the operation or practice of past land-use and resource-harvesting practices that, in turn, are the embodiment of traditional ecological knowledge, while those of a particular region collectively reflect compositional and distributional changes that occurred over millennia as past occupants responded to shifts in the natural and social environment. Traditional ecological knowledge is also frequently used by archaeologists to locate archaeological sites (e.g., Greer 1997). Site information is typically obtained through interviews with elders and community members or from published ethnographies.

Should intellectual components of the archaeological record such as these be protected as proprietary? If so, by whom? No explicit protection exists under any provincial or state heritage protection mechanisms in Canada or the United States. Most archaeologists, in fact, may not recognize an intellectual component at all. However, the situation is likely very different for those with a vested interest in their own heritage sites. In Australia, for example, Aboriginal peoples have expressed concern that "the focus of cultural heritage laws is on tangible cultural heritage, such as specific areas, objects, and sites. The intangible aspects of a significant site, such as its associated stories, songs, and dreaming tracks, are not protected" (Janke 1998:xxiv; also Roberts 2003). Even if an intellectual component is recognized, an argument may be made that the great age of most archaeological sites puts this information in the realm of shared heritage, thus making its exploitation legally acceptable. In the following section we return to the two-sided issue of control of knowledge in archaeology and evaluate threats to Indigenous cultural and intellectual property rights through appropriation and commodification—taking and affixing a price to what many would consider inalienable and priceless.

#### Appropriation and Commodification of the Past

Appropriation and commodification of cultural knowledge and property affect the cultural identity and integrity of contemporary Indigenous societies. Should cultural knowledge and property be protected from such exploitation? If so, should protection be from outside interests only or from all users, including Indigenous peoples themselves? Mutability (distortions) and transferability (easy dissemination) may be reasons to explore the usefulness of intellectual property mechanisms for

protecting some aspects of cultural knowledge and property from exploitation. But what if Indigenous groups want to exploit their own past for commercial gain?<sup>19</sup> Should intellectual property laws be used discriminately to protect the past—to support Indigenous rights? We do not address these important and complicated questions here. Rather, our aim is to raise issues and outline potential consequences of appropriation and commodification of artifacts and information with the intention of informing and stimulating discussion in this growing area of concern.

#### ARTIFACTS

The collection of antiquities extends back in time for thousands of years (Trigger 1989:27–72). Today, however, the acquisition of antiquities, often by illegal or unethical means, is occurring at unprecedented rates to satisfy the growing interest of collectors and museums in historic or prehistoric items that are prized for their age, rarity, exoticness, or “Aboriginalness.” Sometimes Indigenous peoples themselves contribute to the appropriation and commodification of artifacts; the often impoverished Indigenous Central and South Americans known as *huaqueros* loot tombs and sell the artifacts to support their families: “Many of Latin America’s indigenous peoples see themselves as the legitimate heirs to both seeds and artifacts, which are conceived of as ancestor’s gifts, given to humanity by real or mythological patrons to be harvested, or excavated, as it were, by later generations” (Matsuda 1998:88). “Subsistence digging” also occurs in North America (Hollowell 2003, Staley 1993), and its profits may provide the means of acquiring the knowledge or skills that allow Aboriginal people to improve their circumstances. Zimmer (2003:306–7), for example, reports: “Once a young [Native] woman brought a newly-found artifact to show me, an ivory animal worth many thousands of dollars on the market. ‘I know I shouldn’t sell this, Julie,’ she said, ‘but it will help pay for my college education.’” Subsistence digging is not limited to Aboriginal peoples, as is evidenced by the *tombaroli* of Italy and pothunters in the United States, and in some cases Indigenous subsistence diggers do not consider the archaeological remains part of their culture.

The appropriation and commodification of artifacts may also take less obvious forms. For example, reproductions of artifacts in various media and the public dissemination of information, objects, and images derived from the archaeological record are often found among the technologically assisted and mass-produced products introduced into modern society. These include images of artifacts and sites, sometimes including those cherished by or sacred to past or present Indigenous peoples,

that appear on postcards, T-shirts, and billboards and in magazine advertisements, books, and films. For example, Sherwin-Williams uses images of the Upper Paleolithic Lascaux Cave paintings to sell house paint, and AT&T digitally inserts its logo into Egyptian tomb carvings. Through these advertisements, the past is appropriated and commodified in the sense that it is marketed in ways parallel to other, original or more contemporary ideas and resources.

Appropriation and commodification are accompanied by the objectification of the past—a focus on artifacts rather than on the people behind them. In a book on the pictographs of British Columbia, Corner (1968:1) states that “the freedom to wander unrestricted through the rugged and beautiful Kootenay country made me appreciate the feelings of the Indians, and created an intense interest in their life and culture.” He goes on to report that “a diligent search of the recorded data on pictographs in North America failed to reveal a simple key that would unlock the mystery of what these fascinating paintings really mean,”<sup>20</sup> overlooking the possibility that contemporary Aboriginal peoples could have assisted him in this effort.

Although anthropologists and archaeologists ought to be more sensitive than others to issues of cultural appropriation and commodification, they, too, sometimes assume that ancient objects become divorced from contemporary cultural impacts when they enter the public domain. When a seated-figurine bowl was illustrated on the program cover of the 1992 Northwest Anthropology Conference, several First Nations individuals in attendance considered this use inappropriate because such bowls still have spiritual value. A similar bowl was illustrated by Winter and Henry (1997) but only with the permission of the Saanich Native Heritage Society. Perhaps the most common example of such appropriation is the use of artifacts and rock art imagery as part of the cover designs of books and journals.<sup>21</sup> If permission to reproduce such artifacts is sought, it is generally from the museum that today curates or owns them.

In marketing the past, the accomplishments of earlier societies are not only removed from their original physical and cultural context but sometimes otherwise altered. The transformation of the unique into the commonplace radically changes the value of things. For centuries, the great Renaissance frescoes of Europe could be viewed only from inside the buildings in which they were painted. Addressing this point, John Berger (1977: 19) writes: “Originally paintings were an integral part of the building for which they were designed. . . . The uniqueness of every painting was once part of the uniqueness of the place where it resided. . . . When the

19. This is but one facet of a larger and more difficult question: If a group “owns” or controls its cultural heritage, should it not have the freedom to do what it wishes with it? Many who agree in principle with this reasoning are dismayed when it is put into practice (for example, when repatriated human remains are reburied).

20. While many Aboriginal people had commented on the appropriateness of Corner’s book, the recent publication of another book on British Columbia rock art (Nankivell and Wyse 2003), this one including GPS locations, has raised the ire of some First Nations.

21. Including *American Antiquity*, *Australian Archaeology*, the *Canadian Journal of Archaeology*, *Latin American Antiquity*, the *Mid-Continental Journal of Archaeology*, and *Northeast Anthropology*.

camera reproduces a painting, it destroys the uniqueness of its image. Or, more exactly, its meaning multiplies and fragments into many meanings." Berger is writing here of Western art, but his comments pertain also to Indigenous representations, both historic and prehistoric. The same is true of the Upper Paleolithic cave paintings of Lascaux and of Native American rock art, all of which were previously part of fixed landscapes.

Regardless of the original intention of their creators, the appreciation of these representations is very different when they are widely disseminated—and perhaps even altered—through a variety of media. The following anecdote (from Nicholas) illustrates how easy it is to alter an idea expressed in tangible form, how little control we have over dissemination of the original idea, and how difficult it is to make proprietorial claims of an intellectual nature in various high-tech media:

About ten years ago I was preparing a lecture on hunter-gatherer economy. I was thinking about "access to the means of production" and other ideas influenced by the work of Karl Marx while making overhead transparencies of !Kung hunters. The next thing I knew, the old boy's head had been pasted onto a hunter's body and then onto an Upper Paleolithic "Venus" figurine. Soon after, I sent copies of this inspired artwork to several colleagues, including Martin Wobst of the University of Massachusetts-Amherst, where I had completed my Ph.D. Last year I learned from Wobst that my Venus/Marx figure had appeared on a T-shirt prepared for the 25th anniversary of the department. I was amused and honored that this late-night whimsy had its 15 minutes of fame. However, in thinking about IPR issues, I began to wonder where the design on this shirt might ultimately end up. Perhaps an enterprising entrepreneur, seeing someone wearing it, will decide to create a series of T-shirts featuring famous people on Venus-figurine bodies.

The unauthorized appropriation of Aboriginally produced images, whether ancient or modern, has been a topic of discussion in Australia for some time (see Johnson 1996). Much attention has been given to the theft of Aboriginal design, particularly those created by contemporary Aboriginal artists. Still another dimension of this relates to the theft of intellectual property through the appropriation of Aboriginal art. Brown (1998:219) notes that in a recent legal case in Darwin the plaintiffs were "asking the federal court to recognize the clan's economic and moral rights in the artist's graphic designs, rights tied to the clan's territory and ritual knowledge." At least some pictographs and petroglyphs in North America represent graphic designs tied to traditional territories and the ritual knowledge of past people whose descendants may still occupy that territory. These designs may subsequently appear in books and other me-

dia,<sup>22</sup> seldom with attribution to the traditional peoples concerned.

Even when there is approval by Aboriginal persons for the publication of such images or interpretations thereof, is the approval at the level of family, community, tribe, or nation? In some cases it may be Aboriginal peoples themselves that commodify the past. For example, the native people of St. Lawrence Island, Alaska, have been digging and selling artifacts from their ancestral sites for many years (see Hollowell 2003, Hollowell-Zimmer 2001, Staley 1993, Zimmer 2003). However, as Zimmer (2003:307) notes, "Perhaps a Euro-American notion in which objects of material culture are venerated as 'heritage' is somewhat foreign to a people whose heritage is performed and experienced in daily practices like speaking their own language, whaling, eating Native foods, and drum-dancing *sans* tourists."

Appropriation of the North American archaeological record has been facilitated by Indigenous and non-Indigenous parties alike. One example involves the Zia Pueblo sun symbol. Zia Pueblo has demanded \$73 million from the state of New Mexico for the use of its *zia* sun symbol on the state flag. The symbol, adopted by the state in 1925, had been developed by Harry Mera, a physician and anthropologist at the Santa Fe Museum of Anthropology, on the basis of a pot on display in the museum that had been made by an anonymous Zia potter in the late 1800s (Healy 2003). (The symbol had likely appeared much earlier.) Another example concerns the cancellation of a mural of images from Pottery Mound ruin commissioned for the new archaeology building at the University of New Mexico in deference to objections raised by Acoma Pueblo. Pottery Mound is an 800-year-old site near Albuquerque that was excavated in the 1950s and 1960s. The Acoma admit that their ancestors had nothing to do with the artwork at the site. A statement by the muralist, Tom Baker, raises an important point beyond the issue of political correctness: "Public Mound images were excavated by a taxpayer-supported institution on public land, and thus are public property" (Duin 2003).

#### INFORMATION

What has occurred with material property is also occurring with the know-how of Indigenous peoples. Knowledge that was once restricted to specific cultural systems has now been made widely available, seldom because of decisions of the communities themselves. Immense public interest in things Aboriginal has for centuries prompted collection, study, and even imitation of Native curios and lifeways. This interest is increasingly specialized through fields like anthropology, which aims to understand the totality of humankind through detailed

22. The cover of *Australian Archaeology* shows two stylized human figures that are based on but not direct copies of rock art images. Amy Roberts (personal communication, 2001) notes that Aboriginal people have complained but thinks that this "has to do with the figures' being naked." In 2000, the Australian Archaeological Association membership voted to keep the design.

studies of selected societies, often in collaboration with representatives of those societies. In some cases information recorded by anthropologists has been of immense value to community members decades later; that collected and published by Franz Boas (1897, 1969 [1930]) has aided the Kwakiutl of British Columbia in restoring aspects of their ceremonies that had been outlawed in 1885 (Holm 1990). Until the Indian Act was revised in 1951, it was illegal to hold certain ceremonies; individuals or communities who persisted were often jailed and their masks, regalia, and other items confiscated.<sup>23</sup> For the almost 70 years in which they were banned, potlaches and Winter Dances continued secretly, but many of their components were changed or lost in the process. The detailed information collected by Boas and his assistant George Hunt has thus become a vital source for those interested in restoring the ceremonies to their original form. Intellectual aspects of cultural property and cultural identity have been appropriated and sometimes commodified in various ways, including traditional use studies, use of human remains, cultural reconstructions of life (i.e., cultural tourism/living museums), and applications of archaeological research results to modern problems.

*Traditional use studies.* In British Columbia between 1995 and 2000, provincially funded “traditional use studies” provided Aboriginal communities with the “opportunity” to identify and map the cultural resources in their territories systematically.<sup>24</sup> Through these studies, site-specific biological and cultural information on traditional activities was compiled by the participating community and/or hired consultants. As part of the associated “sharing agreement,” the resulting data were submitted to the Provincial Heritage Registered Database for use in the government’s natural-resource management decisions. Information-sharing agreements were established through a memorandum of understanding between the province and the Aboriginal community as part of the final phase of the study (i.e., after the data had been compiled), but an interim sharing agreement (signed by all parties prior to the initial phase of the project) was required for final project funding. Sharing agreements addressed the storage and distribution of inventory data, confidentiality and security, and continued reporting and management of information (Aboriginal Affairs Branch, Ministry of Forests, TUS Program 1996, cited in Markey 2001:71). Issues of data ownership and intellectual property rights were not specifically ad-

ressed—a serious omission that was recognized by many First Nations and made them unwilling to participate because of uncertainty about the future use of the data. In her critical analysis of the traditional use study as a model for data gathering and interpretation of traditional ecological knowledge in British Columbia, Markey (2001:14) concludes that such studies “continue to produce inventory-based data, reflecting minimal concern for Aboriginal perspectives and knowledge by taking cultural information out of context.”

*Appropriation of human remains.* The Kennewick Man controversy (Chatters 2000, Preston 1997) has become a landmark case on the disposition of prehistoric human remains. Aboriginal groups in the Northwest have argued in the courts since 1996 that the remains of this 9,000-year-old individual should be repatriated and reburied under the provisions of the NAGPRA, which states that Aboriginal human remains must be turned over to the representative Aboriginal group where affinity can be determined. A group of archaeologists has countered that because of their great age these remains cannot be related to the Aboriginal groups laying claim to them and has sued the U.S. government for the right to study them (*Bonnichsen v United States*, 969 F Supp 628 [1997])<sup>25</sup>—essentially asserting themselves as the rightful owners or stewards of the information contained in the skeletal remains. In September 2000 a federal judge ruled that the remains were to be turned over to the tribal claimants. The case was subsequently appealed. In August 2002 U.S. Magistrate John Jelderks ruled that the skeletal remains could be studied by the archaeologists. The ultimate fate of the remains and the information they embody is uncertain; an appeal of the decision is planned by the tribal claimants.<sup>26</sup> This case has obvious implications for the appropriation of material property and, pending the results of legal decisions on ancestry and custodianship, may raise issues of intellectual property in relation to the appropriation of Indigenous worldview.

*Reconstruction of Indigenous lifeways.* Cultural tourism has become a significant industry worldwide, and living museums and theme parks are widespread. Many of these include reenactments of life in the past utilizing speech and people in period clothing to represent both the colonizers and the colonized. The “best” of these include or are led by bearers of the culture involved,<sup>27</sup>

23. Many of these materials became part of the collections of the National Museum of Man and the Royal Ontario Museum, among others (Lohnse and Sundt 1990:92).

24. These land-use and occupancy studies (cancelled in 2002) were a product of British Columbia government policy responses to legal obligations in land-use management as defined by the Court of Appeal in *Delgamuukw v The Queen* (1993) (Culhane 1998). The goal of the program was “to inventory TUS data to provide the province and industry with the tools to facilitate meaningful consultation with participating First Nations in land use planning” as well as to “[assist] First Nations participating in the treaty process, [and develop] cultural education and capacity” ([http://www.for.gov.bc.ca/aab/int\\_msrs/pim\\_tus.htm](http://www.for.gov.bc.ca/aab/int_msrs/pim_tus.htm)).

25. D. Ore (1997), cited in the final court brief (<http://www.kennwick-man.com/documents/doi.html>).

26. Non-Aboriginal organizations have also made claims, including the Asatru Folk Assembly, which insists that the remains are those of an ancient European: “the Asatru Folk Assembly . . . practices an ancient religion known as Asatru, with roots in northern Europe. . . . Asatru emphasizes the spiritual importance of ancestral bonds. Since Kennewick Man may well be related to modern-day people of European descent, the AFA filed suit in 1996 in federal court to prevent the U.S. government from giving the skeleton to local Indian tribes, and to ensure the remains were studied and results released to the public” (<http://www.runestone.org/kmfact.html>).

27. For example, those of African-American slaves at Colonial Williamsburg (Virginia) offered through an interpretive program called “The Other Half Tour.”

but some of them blatantly exploit and stereotype Indigenous peoples. Living museums allow visitors to take home the experience of an “authentic” (and safe) encounter with the Other. There is also today a proliferation of Aboriginal heritage parks, tours, workshops, and “experiences” that are Aboriginally conceived, developed, and run.<sup>28</sup> The way in which Aboriginal communities choose to present themselves is critical to whether the experience is appreciated by visitors as one of cultural education and sharing or criticized as cultural “prostitution.”

Other examples are worth noting. The German Indian clubs (Calloway, Gmunden, and Zantop 2002, Robbins and Becher 1997–98) consist of individuals who “play Indian” at several removes from the Native Americans they emulate (fig. 3). Going a step farther, the Smokis of the American Southwest have actually appropriated and violated Hopi ceremonies. Founded in 1921 by white businessmen, the Smokis put on public performances

28. For example, Xà:ytem (Hatzic Rock) and Tla-o-qui-aht cultural tours by Tla-ook Adventures in British Columbia and the co-managed Kakadu National Park in Australia.

that are essentially parodies of the Hopi Snake Dance (Whitley 1997:178). Added to threats to the sanctity of, loss of access to, or destruction of sacred places (e.g., Mt. Graham, Arizona) and the commodification of religious objects, symbolism, and artifacts (Whiteley 1997; Pearlstone 2000, 2001), these activities leave little of the cultural knowledge and property of Southwestern Indigenous peoples unscathed.

*Applications of archaeological research.* Two types of archaeologically derived information have particular relevance in the modern world.<sup>29</sup> The first is information derived from studies of long-term shifts in subsistence practices or settlement patterns, which can be used to evaluate the potential impact of climate change on modern populations. The second is information on prehistoric technology. Both types may be appropriated and commodified.

One example of the development of new ideas through archaeologically obtained knowledge of prehistoric tech-

29. Archaeological information is also relevant to other realms, such as education.



FIG. 3. Campfire, from the series Karl May Festival, by Andrea Robbins and Max Becher 1997–98 (reproduced by permission of the photographers and courtesy of Sonnabend Gallery, New York).

nology is the use of obsidian blades as surgical scalpels. Obsidian was widely utilized for stone blade production in many parts of the world. Aware that such blades had an edge up to 1,000 times sharper than surgical steel, Payson Sheets (1989) developed obsidian scalpels for use in eye surgery, where the sharper edge promotes faster healing and reduces scarring. Even though stone blade production was practiced by virtually all past human societies, this technology was potentially patentable because it represented a new use.<sup>30</sup> Other modern flintknappers had observed how quickly obsidian cuts healed, but Sheets was the first to capitalize on it. Another example is the reintroduction of raised-field farming techniques by Clark Erickson and his colleagues as a means of assisting native communities to improve their agricultural yields. There is extensive archaeological evidence of raised fields throughout Central and South America (Parsons and Denevan 1967), but this technology appears to have fallen out of use until it was promoted by Erickson and his colleagues (Erickson 1998). This is not the case with the *chinampas*, a type of raised-field farming constructed in swamps (Coe 1964), that were the economic basis of the Aztec economy in Mexico and of other societies in Central and South America and have continued to be used to the present and introduced into new areas. Does the reintroduction of forgotten raised-field farming represent intellectual property? If so, for whom—the archaeologists or the descendants of the people who developed the technology in the first place? Erickson's (2000) more recent work on precontact artificial fisheries in the Bolivian Amazon suggests yet another area of potentially commercially valuable Indigenous knowledge.

So far we have explored the notion that some products of archaeological research represent cultural and intellectual property according to Janke's (1998) definition and outlined some of the ways in which archaeologically derived knowledge has been appropriated or commodified. We next focus on the means by which Indigenous peoples are seeking (or may seek in future) to regain control over this knowledge through existing legal rights, including intellectual property ownership mechanisms.

## Who Owns the Future?

"Everyone now speaks of their culture," says Sahlins (1999:x), "precisely in the context of national or international threats to its existence. This does not mean a simple and nostalgic desire for teepees and tomahawks or some such fetishized repositories of a pristine identity. A 'naïve attempt to hold peoples hostage to their own histories,' such a supposition, Terence Turner remarks, would thereby deprive them of history. What the self-

consciousness of 'culture' does signify is the demand of the peoples for their own space within the world cultural order." A strong association between cultural knowledge and cultural identity is reflected not only in a society's material culture (e.g., the pit house in Interior British Columbia) but in the intellectual aspects of cultural traditions. Language, for example, is a very important contributor to Indigenous cultural identity (see Maffi 2000). Given the strength of this association, it is clear why control of knowledge is at the heart of the issue—not simply for economic reasons but because control is integral to the definition or restoration of cultural identity for present and future Indigenous societies.

It can be argued that whoever owns (or controls records of) the past also owns or otherwise shapes the future of that past. Archaeologists have, to date, controlled the dissemination of information derived from the archaeological record through publication practices, restriction of access to site locations, and other means. While this management of knowledge has done much to help preserve archaeological resources, it has had several drawbacks. For one, much information has been kept from Indigenous communities, often inadvertently. Since archaeologists are in the position to choose what they will or will not publish, information potentially useful to Indigenous peoples may simply not be available because it fell outside of the interests of the investigator and was not pursued. Access to knowledge is obviously the first of several key steps in establishing control of it. Yet publication itself is a double-edged sword in terms of sharing research findings versus protecting knowledge from third-party exploitation (see Bannister 2000; Bannister and Barrett 2001, n.d.; Laird et al. 2002). Beyond simply relying on heritage protection legislation, is it possible to increase Indigenous control of cultural knowledge and property through existing intellectual property laws and complementary nonlegal tools? If so, what are the implications for future archaeological research? In this final section, we explore several current examples that may begin to elucidate answers to these complex questions.

### CONTROL THROUGH CONTRACTS AND LOCAL PROTOCOLS FOR RESEARCH

Examples of Indigenous groups' seeking to control access to and/or use of their past are definitely on the rise. Brown (1998:194) cites a 1994 letter to several museums from the chair of the Hopi Tribe that "states the tribe's interest in all published or unpublished field data relating to the Hopi, including notes, drawings, and photographs, particularly those dealing with religious matters." He notes also that

the Hopi initiative was soon followed by a declaration issued by a consortium of Apache tribes demanding exclusive decision-making power and control over Apache "cultural property," here defined as "all images, text, ceremonies, music, songs, stories, symbols, beliefs, customs, ideas and other physical and spiritual objects and concepts" relating to the

30. On the basis of a search of the U.S. Patent Office database (<http://www.uspto.gov/patft/>) and personal communication with a representative of Fine Science Tools Inc., a Vancouver-based company that currently sells "Stone Age scalpels" made from obsidian (<http://finescience.com/fst/ScalpelsKnives/10110-01.html>), we conclude that obsidian scalpels were not patented.

Apache, including any representations of Apache culture offered by Apache or non-Apache people (Inter-Apache Summit on Repatriation 1995:3).

An important question to consider is to what degree archaeological research products might be included here.

Local Indigenous protocols are increasingly being used as the basis for research contracts or agreements between the communities and outside researchers. Protocols have been developed by many Aboriginal groups in British Columbia, and some require a permit in lieu of one issued by the B.C. Heritage Branch under the Heritage Conservation Act. The Sto:lo Nation, for example, states: "We hereby declare that all artifacts recovered from our traditional campsites, ceremonial sites, villages, burial grounds and archaeological sites are the rightful property of the Sto:lo people" (quoted in Mohs 1987:169). The protocol of the Cultural Resources Management Department (CRMD) of the Kamloops Band, Secwepemc Nation, contains even more inclusive terms and provisions for an archaeological permitting system, stating that "all data, maps, journals, and photographs, and other material generated through or as a result of the study are the exclusive property of the Band," that "there shall be joint copyright between the Permittee and the Band over any such publications, unless otherwise agreed between the parties," and that "all material found or generated by the proponent as a result of heritage investigations shall be deemed the property of the Kamloops Indian Band." How effective is this agreement, and what rights are ceded upon signing? The provisions of the archaeological permit refer to physical property/results but do not specifically mention intellectual property ownership aside from "joint copyright." The provisions do, however, specifically include "data," and the fact that the term is not defined enables the Kamloops Band to interpret it broadly, perhaps allowing some forms of intellectual property to be included.

Should such permits explicitly include reference to intellectual property rights? If so, is it possible or likely that at some point a contemporary Aboriginal group will lay claim to a major archaeological site and exercise exclusive control over the site name, images of the artifacts, or related items? What if there are competing interests due to overlapping land claims (e.g., Franklin and Bunte 1994)? These are complex control issues that have yet to arise. It is important to note, however, that regaining control, such as repatriation of human remains, is often just the beginning of a series of related challenges; control of knowledge or resources without the capacity to manage them can have significant consequences. As Winter and Henry (1997:222) note,

An associated issue is the intrinsic power of excavated materials. While the [Saanich] Society has a responsibility for the preservation of artifacts of cultural, artistic, and historical value to the Saanich people, in some cases it is difficult to accept such objects. Some artifacts carry with them a constellation of responsibilities. To accept care of certain ar-

tifacts brings onerous cultural and spiritual obligations. Some need extensive ritual care. Some artifacts may only be returned to individuals who are culturally appropriate by reason of family, lineage, gender, or initiation. Such people may not be available, or may not be willing to personally undertake the effort and personal expense.

#### CONTROL THROUGH INTELLECTUAL PROPERTY OWNERSHIP MECHANISMS

Beyond contractual approaches to controlling Indigenous cultural and intellectual property, existing intellectual property ownership tools are beginning to be employed. Academic researchers are increasingly required to negotiate issues related to publication, including standard copyright issues (authorship and moral rights), editorial control (restrictions on publication), and benefit sharing. For example, "joint copyright between the Permittee and the Band" for all resulting publications is required by the heritage investigation permit of the Kamloops Indian Band referred to above. With most archaeological publications, copyright is held by the publishers. With greater collaboration between archaeologists and Aboriginal communities, publishers will need to accommodate the need for more flexible copyright arrangements. This is already under way with some ethnobotany publications (e.g., Turner 1997, 1998). Furthermore, some archaeologists have turned over copyright to the Indigenous peoples with whom they work (e.g., Roberts 2002). Sharing or transferring copyright may require (and benefit from) review by the community collaborator(s) prior to publication—an extension of existing concepts of peer review to include community experts. Such collaborative approaches to publication, however, often require additional time. Another issue is copyright ownership and access to photographs of Aboriginal designs, which raises the question which of these is the true creation or artistic work, the design or the photograph. Here one could suggest a parallel with the patenting of isolated and purified plant chemicals by drug companies that use cultural knowledge as a guide, which creativity is most deserving of protection, the laboratory manipulation or the original knowledge?

Trademark is also gaining recognition as a potentially useful legal tool for protecting Indigenous images and designs. For example, several members of Pauktuutit, a Canadian Inuit women's organization, are currently examining how a variation on trademark that they term a "cultural property mark" might be employed to protect the *amauti*, an innovative traditional form of clothing with both practical and holistic attributes. The concept of a cultural property mark is similar to a trademark but would apply to the collective knowledge of Indigenous peoples rather than the knowledge of individuals or corporations (Blackduck 2001a, b). Aboriginal groups in British Columbia such as the Cowichan Band Council have registered certain words as "certification marks" (another form of trademark) for commercial use. For ex-

ample, “Cowichan,” “Genuine Cowichan,” and “Genuine Cowichan Approved” are registered for use in the marketing of handmade clothing created by Coast Salish knitters using traditional materials, methods, and patterns.<sup>31</sup> These marks have potential application in the protection or promotion of other aspects of cultural heritage. While trademark use typically involves protection of exclusive rights to an image intended for commercial purposes, defensive uses of trademark law have been documented. In February 2000 the Snuneymuxw Nation successfully registered some ancient petroglyphs in their traditional territory as “official marks” to prevent their being copied and reproduced by anyone for any purpose, arguing that they are sacred and copying them for any reason would be sacrilegious (Associated Press 2000, Tanner 2000). The Comox Indian Band has protected the place-name of a sacred site, Queneesh,<sup>32</sup> as an official mark.

Patents may seem unrelated to archaeological research. At the molecular level, however, archaeological research may involve the recovery of ancient DNA, a potentially patentable material.<sup>33</sup> DNA has, for example, been extracted from 8,000-year-old brain tissue (Doran et al. 1986). Access to and study of DNA from contemporary populations is a very contentious issue, in part because it brings up serious issues of privacy and prior informed consent but also because the genetic information derived through analysis may be seen as a valuable commodity. Given that human genetic material is patentable in Canada, the United States, and many European countries, one can speculate that if, for example, ancient DNA from prehistoric human remains were to play a critical role in informing future medical treatments for contemporary diseases there might be important issues to be resolved regarding both cultural heritage and intellectual property rights. At best, intellectual property and other laws offer a piecemeal approach to protecting certain aspects of cultural heritage. This contrasts with the blanket approach that Brown (2003:209) calls “total heritage protection” and describes as “a benign form of quarantine that safeguards all elements of cultural life. Entire cultures would thus be defined as off-limits to scrutiny and exploitation. Within this sheltering umbrella, communities would remain free to devise appropriate ways to defend their philosophical or

scientific or artistic achievements.” He points out the contradictions inherent in this approach (pp. 217–18):

To defend indigenous peoples, it promotes official boundaries that separate one kind of native person from another, and native persons from non-native ones, thereby threatening the fluidity of ethnic and family identities typically found in aboriginal communities. In the name of defending indigenous traditions, it forces the elusive qualities of entire civilizations—everything from attitudes and bodily postures to agricultural techniques—into ready-made legal categories, among which “heritage” and “culture” are only the most far-reaching. In the interest of promoting diversity, Total Heritage Protection imposes procedural norms that have the paradoxical effect of flattening cultural difference.

While much of the recent intellectual property rights discussion has centered on the use or expansion of existing legal mechanisms, Brown (1998:199) contends that this strategy serves primarily to “convert information into property” but that “property discourse *replaces* [emphasis ours] what should be extensive discussion on the moral implications of exposing Native people to unwanted scrutiny, on the one hand, and sequestering public-domain information, on the other.” We strongly support Brown’s call (p. 202) for “public discussion about mutual respect and the fragility of native cultures in mass societies.” Given that the establishment of an adequate process for such a dialogue has been slow, however, we suggest that the existing legal and nonlegal protection mechanisms discussed herein merit consideration.

#### CULTURAL PROSPECTING? LESSONS FROM OTHER DISCIPLINES

Non-Indigenous archaeologists have long held a monopoly on the recovery of prehistoric materials and scientific knowledge of past peoples. In general, they have also profited the most from archaeological research in the sense of creating personal careers and building their professional field. Indeed, archaeological exploration of the past could be viewed as cultural prospecting, parallel to biodiversity prospecting. This being the case, are there lessons to be gleaned from the current intellectual property rights debate in ethnobotany? Archaeology is based on physical evidence that is often seen as lacking in contemporary value. In contrast, the intellectual contributions (e.g., language, traditional plant knowledge) of living Indigenous societies are integral to ethonobotany and are in many cases highly regarded in contemporary human and environmental health applications. Some archaeological research products are protected by federal, state, or provincial laws. While such legislation appears to be inadequate to protect cultural and intellectual property, it is often supplemented by well-developed local protocols, contracts, and/or permit systems. By comparison, no provincial or federal policy in Canada specifically limits access to or use of ethnobotanical knowledge

31. Canadian Intellectual Property Office web site (<http://strategis.ic.gc.ca/SSG/0792/trdp079217400e.html>).

32. Canadian Intellectual Property Office web site (<http://strategis.ic.gc.ca/SSG/0908/trdp090857300e.html>).

33. For example, deCODE Genetics of Delaware has been creating databases of Icelanders’ genes and their medical and genealogical records. The company cross-references these data and markets them and other bioinformatics software products to drug developers (Industry Standard web site [<http://www.thestandard.com/companies/dossier/0,1922,276205,00.html>]). DeCODE “will license the genes that it discovers (all of which it intends to patent) to drug-makers only if they agree to provide medicines developed as a result to all Icelanders without charge” (Gibbs 1998). The Mannvernd Association for Ethics in Science and Medicine in Iceland is opposing the databases through a lawsuit on the grounds that they violate human rights (<http://mannvernd.is>).



or plant biodiversity on public lands. The ethnobotanical research policies and guidelines that have been developed are mainly institutionally derived (i.e., university, industry, professional society). Relevant international statements and declarations are emerging (e.g., *Kari-Oca Declaration* 1992, *Mataatua Declaration* 1993), but protocols developed by Indigenous groups themselves are largely recent developments.<sup>34</sup>

Through publication of their data, archaeologists increase access to the historical record, as archaeological information is often not readily available to communities. Not surprisingly, copyright relating to the publication of results has been largely perceived as the main intellectual property issue, although there is the potential for patent issues and trademark applications are emerging. Indeed, if marketers can seek and often gain legal protection of “proprietary” phrases, symbols, names, and even odors (see Brown 2003:76), then the notion of Indigenous peoples’ seeking protection for medicine wheels, rock art, or other aspects of their cultural heritage cannot be viewed as outlandish or unprecedented. In ethnobotany, by comparison, publication raises important issues (see Bannister and Barrett n.d., 2001; Laird et al. 2002), but copyright is viewed as inadequate protection in that it serves only to limit the *physical reproduction* of published works rather than protecting their intellectual components. Copyright is also very difficult to monitor or enforce. Patents are the mechanisms of choice for researchers interested in protecting intellectual property rights to “inventions” with commercial potential based on traditional plant knowledge. Ethnobotanists are increasingly having to consider patent issues and trade secrecy (fiduciary duty) in connection with traditional medicines or foods.

Significant differences between archaeology and ethnobotany are obvious in the types of information sought and the ways in which that information is utilized. Archaeology and ethnobotany approach intellectual property issues from opposite ends of the spectrum—archaeology from the *material* record of *past* culture with supposed *limited* present use and ethnobotany from the *intellectual* aspects (and related biological resources) of *living* (or recently living) peoples with perceived *high* contemporary value. Perhaps the two disciplines can inform one another. Archaeologists have the potential to become leaders in dealing with issues of intellectual property rights in their own field by becoming aware of debates in related disciplines and considering their implications.

34. Examples of protocols or guidelines developed by indigenous groups include *Guidelines for Respecting Cultural Knowledge (Alaska Native Knowledge Network)* (<http://www.ankn.uaf.edu/standards/knowledge.html>), *Mi'kmaq Research Principles and Protocols* (<http://mrc.uccb.ns.ca/mci/default.htm>), *Code of Ethics for Researchers Conducting Research Concerning the Ktunaxa Nation* (<http://www.law.ualberta.ca/research/aboriginalculturalheritage/casestudies.htm>), and *'Namgis First Nation Guidelines for Visiting Researchers/Access to Information* (<http://www.law.ualberta.ca/research/aboriginalculturalheritage/casestudies.htm>).

## COSTEWARDSHIP OF THE FUTURE

Unless archaeologists consider the implications of existing intellectual property laws and the subject matter that might lead to intellectual property disputes (e.g., publication of academic research, fiduciary duties with regard to secret knowledge, reproduction of images of cultural artifacts or symbols, use of traditional knowledge derived from archaeological digs) they may be caught unawares by restrictions on data access or use imposed on them by tribes that have gained legal rights or developed the capacity to conduct research on their own. The situation is analogous in some respects to the events leading up to drafting of the NAGPRA. For decades professional archaeologists and their antiquarian predecessors were complacent about the recovery and treatment of human skeletal remains, assuming that they had the unlimited right to claim these precontact materials for their own use and that Native Americans had little or no interest in those materials (see Thomas 2000 for overview). Those who held this view were “shocked and outraged” by the ease of passage of this powerful piece of legislation (e.g., Meighan 1992).

We advocate a more active role for archaeologists working with Indigenous peoples (or on Indigenous territories) in considering the implications of their research. We believe that solutions to disputes between archaeologists (or archaeology) and tribes will be found in the recognition of what archaeological knowledge means and what *control* of that knowledge means beyond simply economics or professional rewards and advancement. There must be recognition of ethical obligations at both the individual and the collective level. Adopting participatory research approaches, supporting meaningful collaboration with Indigenous colleagues, sharing decision-making responsibilities and benefits in research processes and outcomes, and working cooperatively with all those who have an interest in Indigenous cultural heritage will be key to identifying, understanding, and addressing the conflicts that may arise in claiming ownership of the past.

## Comments

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Nicholas and Bannister have done anthropology a great service by offering these reflections on archaeology's place in the contemporary debate about indigenous intellectual property and its protection. On the principle that praise, however justified, makes for dull reading, I will comment briefly on two elements of their argument that merit clarification.

A persistent flaw of contemporary writing about in-

indigenous intellectual property rights is that it rarely situates the issues within the broader context of information ecology, on the one hand, and the political dilemmas of pluralist democracy, on the other. For instance, there is much talk about the implementation of special protections for indigenous intellectual property rights but little concern for how these arrangements might spill over into information policies elsewhere in society—in science, industry, public life, and so on. Likewise, advocates of expansive indigenous intellectual property rights assume that the nature of indigenous sovereignty facilitates the compartmentalization of special protections so that only indigenous groups are affected. As I have argued elsewhere (Brown 2003:222–27), however, sovereignty is a problematic doctrine when applied to culture in general and knowledge in particular. The casual and, in my view, erroneous assumption that the “repatriation” of knowledge is identical to the repatriation of objects is part of the problem. Knowledge answers to different rules. It is also more readily manipulated, to the potential detriment of intellectual exchange and political freedom. I hope I am not alone in dreading the day when history comes to be regarded as the exclusive intellectual property of specific interest groups, indigenous or otherwise.

My doubts intersect Nicholas and Bannister’s arguments in a few places. For instance, they note that archaeologists’ accounts threaten the “sanctity of Indigenous beliefs” by offering views of history that contradict indigenous ones. The same can be said about the impact of archaeology on the beliefs of those Christians who reject the study of human evolution in favor of biblical versions of prehistory. Must archaeologists therefore mute their professional opinions lest creationists have their feelings hurt and their theology undermined? What about the highly spiritualized notions of history embraced by devout Muslims, Mormons, Orthodox Jews, and other religious groups? Unless Nicholas and Bannister are saying that archaeologists have an ethical obligation to scrub all potentially hurtful facts and assertions from scientific accounts, they need to explain why “sensitivity” in one case is an ethical imperative and in the other a matter of no concern at all. The rejoinder that the belief systems of indigenous peoples are more vulnerable than those held by followers of major world religions is accurate but more or less irrelevant, given the tendency of liberal democracies to insist that the same rules apply to everyone.

I am also uneasy about the upbeat belief that collaboration between archaeologists and indigenous communities will resolve all questions about the ownership and control of archaeological information. Collaboration is a good thing, of course, and I find Nicholas and Bannister’s own success in collaborative research entirely praiseworthy. But if we take the hypothetical statement “I signed a collaborative research agreement with First Nation X that assigns copyright to the community and gives it power over what I say in my publications” and then replace “First Nation X” with “Microsoft” or “the National Rifle Association” or the name of any other

group or institution in society, one immediately recognizes that the ethics of prior editorial review are far murkier than they seem at first glance. I would welcome guidance from Nicholas and Bannister about where one draws the line between legitimate collaboration and the willful surrender of professional truth standards in order to secure a research permit.

Happily, such stark contrasts between indigenous and scientific perspectives are more the stuff of academic debate than of the real world, where native people and anthropologists have shown themselves capable of learning to shuttle between apparently irreconcilable ways of knowing (see, e.g., Ferguson 1996, Loring 2001, Watkins 2000). Nicholas and Bannister offer a vision of how archaeologists can rethink disciplinary practices to build the level of trust that makes movement between cultural worlds the norm rather than the exception. We may never get to a place where the divide between indigenous and nonindigenous views of history and prehistory disappears completely, but this essay suggests paths worth following, questions worth asking, in anthropology’s quest for more ethical ways to pursue research on the human condition.

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In 1992 a Coca-Cola advertisement published first in an Italian newspaper caused a furore in Greece because it included a manipulated photograph of the Parthenon with its columns refashioned as Coca-Cola bottles. Much of the press and several public commentators and politicians condemned the “sacrilege” committed on the national symbol, the ownership rights of which are seen as belonging firmly to Greece (cf. Hamilakis and Yalouri 1996). More or less at the same time, a diplomatic and political dispute arose between the same country and one of its northern neighbours, the former Yugoslav Republic of Macedonia. The clash, which threatened the geopolitical stability of the region, was apparently over the symbols chosen for the newly established national flag of the latter country: a widely found decorative motif from ancient Macedonia but one which has been associated with the Vergina excavations in Greek Macedonia. Greece claimed that the choice constituted a theft of a national symbol, an act indicating expansionist aspirations (cf. Brown 1994).

These two cases help to illustrate the point that the phenomenon discussed by Nicholas and Bannister is already at the heart of a number of conflicts and at the intersection of cultural, political, and diplomatic wars. These cases also show that the phenomenon is highly diverse rather than simply something to do with what we call indigenous communities. Nicholas and Bannister’s discussion touches upon a number of important issues and makes significant points, but it deploys a variety of loaded concepts that need unpacking: “property,” “copying

and replication" (and, by implication, "authenticity"), "rights," and "stewardship of the past and its material traces." It also makes certain assumptions about the nature of archaeological practice which are far from being settled and universally accepted. "Stewardship," for example, while it is conventionally accepted (and enshrined in various archaeological codes of ethics and practice) as the archaeologist's primary ethical and professional responsibility, is increasingly recognized as ontologically and epistemologically problematic and ethically self-serving. The "record" has not been entrusted to archaeologists, who then become its stewards; rather, archaeologists are instrumental in *producing* that record out of the fragmented material traces of past social practices. Their self-appointed role as stewards of that record, therefore, is ethically spurious and may imply the desire to exclude others from engaging with the material traces of the past (cf. Hamilakis 1999, 2003). If the concept of stewardship is therefore an inadequate basis upon which to discuss issues of ethics and responsibility, the notion of shared stewardship (involving various indigenous groups and publics as well as archaeologists) that Nicholas and Bannister propose can be equally problematic. It simply extends the authority of archaeologists' own problematic concepts to incorporate indigenous groups and publics rather than imagining new concepts and forging new modes of engagement.

While I would contend that the underlying issues have to do with the epistemology and the ethics (and, by implication, the politics) of archaeological practice and are therefore inadequately explored within a legalistic framework, the discourse on intellectual and cultural property can act as a "forceful sound bite" (Strathern 1998:217); in other words, it can open up space for inequities to be debated and power dynamics exposed. The debates on the restitution of cultural property, for example, are often entangled with legal, objectifying and depoliticizing arguments and ignore the essentialist and static conceptions of identity that often underpin these claims. At the same time, however, they have made possible a debate on colonialist and imperialist archaeological and anthropological practices and exposed structures of exploitation that would have otherwise gone unexplored. The various ethical and political clashes are context-specific, and as such they demand a context-specific response that takes into account the power inequalities and dynamics in each case. For example, in the present climate of the commodification of the past, the domination of neoliberal economics, and the tyranny of the market, a defense of the concept of the public sphere and of common property is an urgent need. That discourse of the public domain, however, may be deployed in such a way as to deprive marginalized and disenfranchised people of the only "resources" left to them: cultural artifacts, knowledge, and ideas. To return to the two case studies that I started with, legal frameworks would have been completely inadequate here, as the issues involved have to do with conceptions of national identity, ancestry, and ideas of cultural superiority, as well as issues of authenticity and its authority. An exploration of these issues would have led us to the very

heart of the matter at hand: the genesis of the discipline of archaeology as a device of Western modernity which was called upon to create "facts on the ground," the material signifiers of national and European identities—a discourse that in the following centuries would be appropriated, modified, and deployed in various ways as a potent weapon in various political negotiations and clashes.

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"Make everything count not once, but three times" was the formative maternal advice given to that grasping agent of empire, Lord Baden-Powell, to guide his subjugation of the indigenous in India. This "audit culture" (Strathern 2000) has not diminished, and anthropology and archaeology both support and question knowledge corporatization (Ouzman 2003). Knowledge systems and their control have a direct impact on the futures of these intertwined disciplines. In solidarity with the rich ideas of this article I examine two key issues—the valence and violence of words and archaeology's object-centricity—before considering indigenous and archaeological knowledge-system entanglements.

This article should more have strictly defined words like "native," "indigenous," and "aboriginal," especially with the authors lamenting a "lack of consistent terminology." Evaluating intellectual property rights requires clear terms of reference that are also capable of nuance. There are, for example, different scales of indigeneity, not all synonymous with "First Nation" status. Also, homogenizing the "West" elides the diversity of Western intellectual property rights. It would have been interesting had the approach of historical archaeologists, often Westerners studying their own history, been juxtaposed with indigenous archaeological practice. Adding "citizen(ship)" and "authentic" and dwelling longer on "sovereignty" would have better shown people's ability both to participate in a larger nationhood and to maintain a distinct identity that is not a "subnationhood" but supranational and capable of making nation-states decidedly uneasy.

Intellectual property rights conflict often involves material culture, which combines with a notion of "heritage" as a largely open-access realm to form a deadly combination predisposed to conflictual rights-speak. Michael Brown's warning that this legalistic trajectory deflects attention from indigenous people's rights not to have their past or present studied highlights a central tension over access to ideas and cultural material other than one's own (Brown 2003). But I do not agree that the price of access is only disseminating morally positive findings, replacing divisive colonial stereotypes with inclusive postcolonial ones. Censorship and intellectual-freedom concerns need nonetheless to acknowledge that access is not a right but a set of negotiated practices. This is the case even if an originator or custodial indig-

enous community is not easily identifiable—and here longer discussion dealing with such absence in the otherwise excellent access-process-product section would have been welcome. Perhaps less simplistic notions of time are needed. “Westerners” do use elliptical time (Kondratieff cycles), and indigenes situationally use linear time (they meet deadlines). May we not productively understand “tradition” as a fund of knowledge, objects, places, and people that permits innovation (Ranger 1993), allowing temporalities to soften and interdigitate? Associating indigenous people with the past can imply an inability to deal with the present. This article’s discussion of strategic indigenous usage of “Western” legal mechanisms helps counter this perception.

Acknowledgment of the past’s ever-presence and creativity is sorely needed by a “First” World mired in managing material culture. The recent dispute over a ca. 9,400-year-old person’s remains exposes “Western” legal inertia (Hurst-Thomas 2000). If indigenous sovereignty is honored in letter and spirit, disputes between nations have many mediatory possibilities, but a single jurisprudence routinely and authoritatively adjudicating disputes is not one of them. In Australian “keeping places,” for example, objects enjoy graded access (see, e.g., <http://www.dcdsca.nt.gov.au/dcdsca/intranet.nsf/pages/strehlowresearchcentre>). Some objects are accessible only by their originator communities, while other objects and associated knowledge require negotiated access with indigenous gatekeepers. This is one way in which intellectual property rights issues are “stretching the existing legal categories” by offering blurring as a space for conflict resolution in which the “intangible” can be accommodated in discussions of “reasonable doubt.” Similarly, how would St. Lawrence islanders’ subsistence looting allow less judgmental understandings of “looting” in Iraq (Hamilakis 2003)? Engaging with indigenous intellectual property rights is good science because it allows evaluation through multiple enabling and constraining criteria (Wylie 2000). In return, perhaps archaeology can act as therapy. At the risk of lapsing into California confessionalism, as a part-Afrikaner whose ancestors authored apartheid I find the repetitive techniques of archaeological surveillance useful in confronting my ancestry. Archaeological study of the past-as-present engenders broad-based debate on intellectual property rights. For example, incorporating a San rock painting and motto into South Africa’s coat of arms (without indigenous consultation; Smith et al. 2000) came at the cost of state copyright over images of declared heritage for the benefit of the “nation,” thereby undermining First Nation sovereignty. Similarly, well-intentioned New Age homages to indigenous sacred sites assume unproblematic access in the name of a politically lame “humanity” (e.g., Finn 1997). These debates may help broaden the binary archaeologist-indigenous interaction, allowing more consensual construction of best practice. We can ask whether ethnography is not just a vehicle for neoliberal values and whether indigenous gerontocracies would benefit from alternative governance. Willful ignorance of intellectual property rights leads to an avoidance of people and responsibilities—even moving into “site-less fields” where

the human barely factors (Helmreich 2003). Cooperative and politically engaged research is not to everyone’s liking, but we all need to be able to decide whether intellectual property rights should become an intrinsic part of archaeology.

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This is an important paper, and I hope that all my colleagues will read it, think about it, and, probably most important, talk about it, especially with colleagues in other disciplines. (Photography, for example, has long and complex experience with intellectual property rights issues, and folklore and ethnomusicology could also be added to those mentioned by Nicholas and Bannister.) As I read this paper I could feel (and confess to sharing, initially) a rising sense of panic among colleagues who are already making Herculean efforts to be fully ethical archaeologists as yet another thing is added to the long string of issues we must consider. Those who are still chafing over NAGPRA and proclaiming the death of science may respond with anger. But intellectual property issues are out there, and we will have to deal with them, whether we choose to prepare now or wait for another Kennewick. Certainly those of us who have focused on the practice of archaeological ethics have found that calm, earnest discussion among all affected parties meeting as equals before a crisis erupts is the best hope for reaching mutually acceptable outcomes. Although I have no direct experience of such negotiations with indigenous groups, my work with a local community in Greece has taught me that relinquishing some control actually brings many rewards, some far greater than any I have found in the academic community. We might also remember that we already accept many limitations on what we publish—site locations come to mind, along with various restrictions imposed by editors, reviewers, and publishers.

We should also think carefully about our own intellectual property rights. What do archaeologists bring, uniquely, to the work they produce? Can we separate our contributions from the data? What are the implications for the group and for archaeology of turning over all excavation and survey records to an indigenous group?

## Reply

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The commentators support many of our primary points. The issues are of course broader than our stated focus

on Indigenous contexts, as Hamilakis suggests; in his examples it is not simply a question of academic discourse but one of real geopolitical consequence. Exploration of intellectual property rights in archaeology will make all stakeholders more aware of the issues that he raises with respect to "archaeology as a device of Western modernity"; the discipline cannot shake off its colonialist legacy until we examine who benefits from the production of knowledge. Aboriginal complaints about threats to their cultural heritage have tended to be recognized only when framed as a political strategy, which ignores the very real threats to and loss of integrity of their cultural heritage, past and present. Widespread appropriation by advertisers of the *inukshuk* (the standing stone figures of the Canadian Arctic) (Logan 2003) may be no less damaging to the Inuit than the incorporation of contested symbols in Hamilakis's Macedonian flag example, but his example is more likely to be viewed as an intellectual property issue because of its greater visibility on the world political stage. The point is to recognize the many contexts in which intellectual property rights may apply and learn how to negotiate for more equitable terms.

We agree with Brown that the wider implications of Indigenous intellectual property rights cannot be ignored, but his point can be turned on its head to examine the lack of attention to Indigenous intellectual-property-rights-related issues in the information policies to which he points. Could the "talk . . . of special protections for indigenous intellectual property rights" be largely a reaction to this? In other words, are Indigenous groups often being "cornered" into considering intellectual property rights protections to prevent others from appropriating and commodifying aspects of their culture? Violet Ford, vice president of the Inuit Circumpolar Conference, which represents some 145,000 Inuit people, notes that "more than 100 individuals and companies in Canada alone have applied for a copyright on the Inukshuk" (quoted in Logan 2003).

Hamilakis points to the inadequacy of legal frameworks for a discussion of Indigenous intellectual property rights, while Brown points out that knowledge is "more readily manipulated" than objects. Indeed, just as the line between cultural property and intellectual property is blurred in an Indigenous context, so too are the divisions between ethics, ideology, and law. It is important to understand the parallels and differences and to explore the potential legal and moral mechanisms for redress that may yet evolve. Claims will be constructed in the interests of those who put forward the argument, and the rationales for these claims require exposure (see Hollowell 2003).

Brown equates the potential impact of archaeology on Indigenous cultures with the "hurt feelings" of Christians, but we are talking about insensitive promotion of views (presented as "scientific" and thus unquestionable) that are contrary to the "stories and beliefs" held by descendant communities. The vulnerability of Indigenous belief systems is highly relevant to our argument (Nicholas 2004). The fiduciary responsibility to Aborig-

inal peoples acknowledged by the Canadian government is evidence that equally applying the "rules" of *Western* society to non-Western societies is in some cases inequitable.

Ouzman notes that we should have more strictly defined "Native," "Indigenous," and other terms, and Hamilakis refers to "loaded concepts." Terminology is very important, but our terms have been defined elsewhere (e.g., Brown 1998, Janke 1998) and we sought to move the discussion beyond terminology. Further discussion will lead to a more nuanced treatment of these terms that is much needed. We are encouraged to see anthropologists such as Michael Brown and Julie Hollowell and archaeologists such as Anne Pyburn, Lynn Meskell, and Larry Zimmerman addressing these issues.

Hamilakis raises the issue of stewardship, but we are not promoting the type of stewardship he and others (e.g., Wylie 2002, 2004) have critiqued. What is needed is a more critical and pluralistic perspective on stewardship as a negotiated practice—a recognition that for some groups stewardship means just the opposite of what it does in, say, a museum context. Furthermore, while we agree with Hamilakis regarding the need for less archaeocentric stewardship, we consider it presumptuous to offer alternatives on behalf of descendant communities.

Brown's uneasiness about "collaboration" may stem from his somewhat superficial treatment of the concept. We are not suggesting Indigenous "power over" what is said (e.g., veto), even though the power inequities of conventional academic research favor the researcher over the researched; rather, we call for *sharing* of power for both moral and practical reasons. Indeed, a participatory approach to research implies that academics ought to be able to (as Brown notes) "replace First Nation X" with any other group in society to share the benefits, risks, responsibilities, and decision making of research. Power sharing is, however, an unpopular concept in academe; ultimately it is the awareness, preparedness, and integrity of the individual that will influence whether the line is placed closer to "legitimate collaboration" or to the "surrender of professional truth standards."

We have learned firsthand the realities of collaboration with Indigenous colleagues and communities. It was not our intention to suggest "working together" as the solution. We firmly believe that informed and honest dialogue is the way to go, but there are often hurdles to overcome (Nicholas and Andrews 1997). Mutual respect is key (see Clifford 2004:5). The issues that we address here are not simply legal but ethical matters. The legal definition of intellectual property is narrow but dynamic. Most archaeologists, however, will confront intellectual property rights issues in terms of soft law and customary law, in the form of negotiated agreements, protocols, international standards, and what is agreed upon as ethical practice. In addition to the general guidelines currently available (e.g., Wax 1991, Wood and Powell 1993, Zimmerman, Vitelli, and Hollowell-Zimmer 2003), we hope to see some specific to intellectual property issues archaeology in the near future.

Brown hopes that he is not alone in dreading the day

"when history comes to be regarded as the exclusive intellectual property of specific interest groups, indigenous or otherwise." We are not promoting or defending copyright or other restrictions on the exchange of knowledge (legal or not) as the answer. All restrictions on knowledge flow have a cost. Unrestricted access to information is, however, rare in human societies. Restrictions on access to or use of information emerge when it acquires or is seen as having the potential to acquire value. Ouzman rightly notes that access is not a right but a set of negotiated practices. Archaeologists already negotiate access to information at many different levels, ranging from seeking permission to reproduce illustrations to obtaining permits or access to restricted site-inventory files or submitting applications to university ethics committees. Is it unreasonable to be expected to seek permission to do certain things with archaeological data from the descendants of those who created the artifacts and sites in the first place?

Vitelli's point concerning how we deal with the unique intellectual contributions that researchers bring to the data goes to the heart of the matter (also see Chippendale 2003). In signing protocols with the various First Nations with whom we work, we are no less concerned about giving up rights to our own research contributions. The key is meaningful dialogue on ways of doing things. "Negotiation" is often taken to mean a surrender of some type, but it is a form of dialogue, and an important element of successful dialogue is establishing an understanding of different points of view (see Wood and Powell 1993).

Perhaps the next step is to begin to understand the foundations of these concerns and their cultural-historical-political contexts. As Hamalakis notes, "rights" are often constructed to meet the needs of a specific situation. Archaeologists are not used to thinking in terms of how contemporary peoples make use of the past. We hope that our paper will serve both as an invitation to "unpack" some of these questions of terminology, access, and control and as a challenge to do so.

## References Cited

- ANDREWS, T. D., AND J. B. ZOE. 1997. "The *Idaà* trail: Archaeology and the Dogrib cultural landscape, Northwest Territories, Canada," in *At a crossroads: Archaeologists and First Peoples in Canada*. Edited by G. P. Nicholas and T. D. Andrews, pp. 160–77. Burnaby, B.C.: Archaeology Press.
- ASCH, M. 1997. "Cultural property and the question of underlying title," in *At a crossroads: Archaeologists and first peoples in Canada*. Edited by G. P. Nicholas and T. D. Andrews, pp. 266–71. Burnaby, B.C.: Archaeology Press.
- ASSOCIATED PRESS. 2000. Indian band applies for trademark on ancient petroglyphs. February 16.
- BALTER, M. 2000. Archaeologists and rabbis clash over human remains. *Science* 287:34–35.
- BANNISTER, K. 2000. Chemistry rooted in cultural knowledge: Unearthing the links between antimicrobial properties and traditional knowledge in food and medicinal plant resources of the Secwepemc (Shuswap) Aboriginal Nation. Ph.D. diss., University of British Columbia, Vancouver, B.C., Canada.
- . 2003. Use of traditional knowledge of Aboriginal peoples for university research: An analysis of academic ethics and research policies in British Columbia, Canada. Commissioned report prepared for the Biodiversity Convention Office for submission to the Convention on Biological Diversity Article 8j. Hull. Quebec.
- BANNISTER, K., AND K. BARRETT. 2001. Challenging the status quo in ethnobotany: A new paradigm for publication may protect cultural knowledge and traditional resources. *Cultural Survival Quarterly* 24(4):10–13.
- . n.d. "Weighing the proverbial 'ounce of prevention' versus the 'pound of cure' in a biocultural context: A role for the precautionary principle in ethnobiological research," in *Ethnobotany and conservation of biocultural diversity*. Edited by T. J. Carlson and L. Maffi. *Advances in Economic Botany* 15.
- BATTISTE, M., AND J. (S.) Y. HENDERSON. 2000. *Protecting indigenous knowledge and heritage: A global challenge*. Saskatoon: Purich Publishing.
- BELL, C. E., AND R. K. PATTERSON. 1999. Aboriginal rights to cultural property. *International Journal of Cultural Property* 8:167–211.
- BERGER, J. 1977. *Ways of seeing*. New York: Viking Penguin.
- BERKES, F. 1993. "Traditional ecological knowledge in perspective," in *Traditional ecological knowledge: Concepts and cases*. Edited by J. T. Inglis, pp. 1–10. Ottawa: Canadian Museum of Nature.
- BLACKDUCK, A. 2001a. Protecting Inuit clothing designs: Pauktuutit looks to Panama for legal model. *Nunatsiaq News [Iqaluit]*, May 25, Iqaluit. [http://www.nunatsiaq.com/nunavut/nvt10525\\_091](http://www.nunatsiaq.com/nunavut/nvt10525_091).
- . 2001b. Pauktuutit to continue work on Amauti protection: Rankin workshop impresses federal officials. *Nunatsiaq News [Iqaluit]*, June 1.
- BOAS, F. 1897. The social organization and the secret societies of the Kwakiutl Indians. *Report of the U.S. National Museum for 1895*, pp. 311–738. Washington, D.C.
- . 1969 (1930). *The religion of the Kwakiutl Indians*. New York: AMS Press.
- BRAY, T. L. Editor. 2001. *The future of the past: Archaeologists, Native Americans, and repatriation*. New York: Garland.
- BROWN, K. S. 1994. Seeing stars: Character and identity in the landscapes of modern Macedonia. *Antiquity* 68:784–96. [YH]
- BROWN, M. F. 1998. Can culture be copyrighted? *CURRENT ANTHROPOLOGY* 39:193–222.
- . 2003. *Who owns native culture?* Cambridge: Harvard University Press.
- BRUSH, S., AND D. STABINSKY. 1996. *Valuing local knowledge: Indigenous people and intellectual property rights*. Washington, D.C.: Island Press.
- CALLOWAY, C. G., G. GMUNDEN, AND S. ZANTOP. 2002. *Germans and Indians: Fantasies, encounters, projections*. Lincoln: University of Nebraska Press.
- CARLSON, C. C. 1995. "The (in)significance of Atlantic salmon in New England," in *New England's creatures: 1400–1900*. Edited by P. Benes, pp. 1–10. Cambridge: Boston University Press.
- CARMICHAEL, D. L., J. HUBERT, B. REEVES, AND A. SCHANCHE. Editors. 1994. *Sacred sites, sacred places*. New York: Routledge.
- CASSIDY, M., AND J. LANGFORD. 1999. *Intellectual property and Aboriginal people: A working paper*. Ottawa: Indian and Northern Affairs Canada.
- CBAC (CANADIAN BIOTECHNOLOGY ADVISORY COMMITTEE). 2001. Biotechnological intellectual property and the patenting of higher life forms. Consultation Document, Ottawa. [http://www.cbac-cccb.ca/IPConsult\\_eng.htm](http://www.cbac-cccb.ca/IPConsult_eng.htm).
- . 2003. Higher life forms and the Patent Act. Advisory Memorandum, February 24. <http://cbac-cccb.ca/epic/internet/inclbac-cccb.nsf/vwGeneratedInterE/ah00217e.html>.
- CHALOUFKA, G. 1986. *Burrunguy, Nourlangie Rock*. Darwin: Northart.

- CHASE, A. K. 1989. "Perceptions of the past among North Queensland Aboriginal people: The intrusion of Europeans and consequent social change," in *Who needs the past? Indigenous values and archaeology*. Edited by R. Layton, pp. 169–79. London: Unwin Hyman.
- CHATTERS, J. C. 2000. The recovery and first analysis of an Early Holocene human skeleton from Kennewick, Washington. *American Antiquity* 65:291–316.
- CHATWIN, B. 1987. *The songlines*. New York: Penguin Books.
- CHIPPENDALE, C. 2003. "The ethics of research knowledge," in *Ethical issues in archaeology*. Edited by L. J. Zimmerman, K. D. Vitelli, and J. Hollowell-Zimmer, pp. 239–49. Walnut Creek: AltaMira Press.
- CIEL (CENTRE FOR INTERNATIONAL ENVIRONMENTAL LAW). 1999. US Patent Office admits error, rejects patent claim on sacred "ayahuasca" plant. Centre for International Environmental Law press release, November 4. <http://www.ciel.org/Biodiversity/AyahuascaRejectionPR.html>.
- CLIFFORD, JAMES. 2004. Looking several ways: Anthropology and Native heritage in Alaska. *CURRENT ANTHROPOLOGY* 45: 5–30.
- COE, M. 1964. The chinampas of Mexico. *Scientific American* 211(1):90–98.
- CORNER, J. 1968. *Pictographs (Indian rock paintings) in the interior of British Columbia*. Vernon, B.C.: Wayside Press.
- CULHANE, D. 1998. *The pleasure of the crown: Anthropology, law, and First Nations*. Burnaby, B.C.: Talon.
- DAVIDSON, I., C. LOVELL-JONES, AND R. BANCROFT. Editors. 1995. *Archaeologists and aborigines working together*. Armidale: University of New England Press.
- DENHEZ, M. 2000. *Unearthing the law: Archaeological legislation on lands in Canada*. Ottawa: Archaeological Services Branch, Parks Canada.
- DORAN, G. H., D. N. DICKEL, W. E. BALLINGER JR., O. F. AGEY, P. J. LAIPIS, AND W. W. HAUSWIRTH. 1986. Anatomical, cellular, and molecular analysis of 8,000-yr-old human brain tissue from the Windover archaeological site. *Nature* 323:803–6.
- DRATLER, J. 1994. *Licensing of intellectual property*. New York: Law Journal Seminars-Press.
- DUIN, J. 2003. Tribes veto Southwest mural. *Washington Times*, February 18. <http://www.thomasbakerpaintings.com/Washington%20Times%20article>.
- ERICKSON, C. L. 1998. "Applied archaeology and rural development: Archaeology's potential contribution to the future," in *Crossing currents: Continuity and change in Latin America*. Edited by M. Whiteford and S. Whiteford, pp. 34–45. Upper Saddle River, N.J.: Prentice-Hall.
- . 2000. An artificial landscape-scale fishery in the Bolivian Amazon. *Nature* 408:190–93.
- FAGAN, B. M. 1997. 9th edition. *In the beginning: An introduction to archaeology*. New York: Longman.
- FERGUSON, T. J. 1996. Native Americans and the practice of archaeology. *Annual Reviews in Anthropology* 25:63–79.
- FINN, CHRISTINE. 1997. "Leaving more than footprints": Modern votive offerings at Chaco Canyon prehistoric site. *Antiquity* 71(271):177–78. [so]
- FRANKLIN, R., AND P. BUNTE. 1994. "When sacred land is sacred to three Tribes: San Juan Paiute sacred sites and the Hopi-Navajo-Paiute suit to partition the Arizona Navajo reservation," in *Sacred sites, sacred places*. Edited by D. L. Carmichael, J. Hubert, B. Reeves, and F. Schanche, pp. 245–58. London: Routledge.
- GIBBS, W. W. 1998. Natural born guinea pigs: A start-up discovers genes for tremor and psoriasis in the DNA of inbred Icelanders. *Scientific American* [online]. <http://www.sciam.com/1998/0298issue/0298techbus3.html>.
- GOLDING, F. N. 1989. "Stonehenge—past and future," in *Archaeological heritage management in the modern world*. Edited by H. F. Cleere, pp. 256–64. London: Unwin Hyman.
- GOULD, S. J. 1987. *Time's arrow, time's cycle: Myth and metaphor in the discovery of geological time*. Cambridge: Harvard University Press.
- GREAVES, T. 1994. *Intellectual property rights for indigenous peoples: A sourcebook*. Oklahoma City: Society for Applied Anthropology.
- GREER, S. 1997. "Traditional knowledge in site recognition," in *At a crossroads: Archaeologists and First Peoples in Canada*. Edited by G. P. Nicholas and T. D. Andrews, pp. 145–59. Burnaby, B.C.: Archaeology Press/Simon Fraser University Press.
- HAMANN, B. 2002. The social life of pre-sunrise things: Indigenous Mesoamerican archaeology. *CURRENT ANTHROPOLOGY* 43: 351–82.
- HAMILAKIS, Y. 1999. *La trahison des archéologues? Archaeological practice as intellectual activity in postmodernity*. *Journal of Mediterranean Archaeology* 12(1):60–79. [YH]
- . 2003. Iraq, stewardship, and the "record": An ethical crisis for archaeology. *Public Archaeology* 3(2):104–11. [YH, SO]
- HAMILAKIS, Y., AND E. YALOURI. 1996. Archaeology as symbolic capital in modern Greek society. *Antiquity* 70: 117–29. [YH]
- HAMPTON, E., AND S. HENDERSON. 2000. "Discussion paper on indigenous knowledge and intellectual property: Scoping the definitions and issues (executive summary)," in *Protecting knowledge: Traditional resource rights in the new millennium*, pp. i–vi. Vancouver, B.C., Canada.
- HEALY, D. 2003. The flag of Zia Pueblo. <http://users.aol.com/Donh523/navapage/zia.htm>.
- HELMREICH, STEPHAN. 2003. "Life @sea: Networking marine biodiversity into biotech futures," in *Remaking life and death: Towards an anthropology of the biosciences*. Edited by Sarah Franklin and Margaret Lock, pp. 227–59. Santa Fe: School of American Research. [so]
- HOLLOWELL, J. J. 2003. Digging for "old things": Perspectives on a legal market for archaeological materials from Alaska's Bering Strait. Ph.D. diss., Indiana University, Bloomington, Ind.
- HOLLOWELL-ZIMMER, J. J. 2001. Intellectual property protection for Alaska native arts. *Cultural Survival Quarterly* 24(4).
- HOLM, B. 1990. "Kwakiutl: Winter ceremonies," in *Handbook of North American Indians*, vol. 7, *Northwest Coast*. Edited by W. Suttles, pp. 378–86. Washington, D.C.: Smithsonian Institution Press.
- HURST-THOMAS, DAVID. 2000. *Skull wars: Kennewick Man, archeology, and the battle for Native American identity*. New York: Basic Books. [so]
- INDUSTRY CANADA. 1995. *Canadian patent law*. Canadian Intellectual Property Office, Hull, Que., Canada.
- INTER-APACHE SUMMIT ON REPATRIATION. 1995. Inter-Apache policy on repatriation and the protection of Apache culture. MS.
- JANKE, T. 1998. *Our culture. Our future. Report on Australian indigenous cultural and intellectual property rights*. Surrey Hills, N.S.W.: Australian Institute of Aboriginal and Torres Strait Islander Commission/Michael Frankel.
- JEMISON, G. P. 1997. "Who owns the past?" in *Native Americans and archaeologists: Stepping stones to common ground*. Edited by N. Swidler, K. E. Dongoske, R. Anyon, and A. S. Downer, pp. 57–63. Walnut Creek: AltaMira Press.
- JOHNSON, V. 1996. *Copyrites: Aboriginal art in the age of reproductive technologies (Touring exhibition 1996 catalogue)*. Sydney: National Indigenous Arts Advocacy Association and Macquarie University Press.
- JONES, S. 1997. *The archaeology of ethnicity: Constructing identities in the past and present*. New York: Routledge.
- Kari-Oca Declaration and Indigenous Peoples Earth Charter*. 1992. Kari-Oca: World Conference of Indigenous Peoples on Territory, Environment, Development.
- KRITSCH, I. D., AND A. M. ANDRE. 1997. "Gwich'in traditional knowledge and heritage studies in the Gwich'in settlement area," in *At a crossroads: Archaeologists and first peoples in Canada*. Edited by G. P. Nicholas and T. D. Andrews, pp. 125–44. Burnaby, B.C.: Archaeology Press/Simon Fraser University Press.
- LAIRD, S. A., M. N. ALEXIADES, K. P. BANNISTER, AND D. A. POSEY. 2002. "Publication of biodiversity re-

- search results and the flow of knowledge," in *Biodiversity and traditional knowledge: Equitable partnerships in practice*. Edited by S. A. Laird, pp. 77–101. London: Earthscan.
- LOGAN, M. 2003. Global systems selling out Indigenous knowledge. Inter Press Service News Agency. <http://ips-news.net/interna.asp?idnews=21517>.
- LOHNSE, E. S., AND F. SUNDT. 1990. "History of research: Museum collection," in *Handbook of North American Indians*, vol. 7, *Northwest Coast*. Edited by W. Suttles, pp. 88–97. Washington, D.C.: Smithsonian Institution Press.
- LORING, STEPHEN. 2001. "Repatriation and community anthropology: The Smithsonian Institution's Arctic Studies Center," in *The future of the past: Archaeologists, Native Americans, and repatriation*. Edited by Tamara L. Bray, pp. 185–200. New York: Garland. [MFB]
- MC DAVID, C. 2002. Archaeologies that hurt, descendants that matter: A pragmatic approach to collaboration in the public interpretation of African-American archaeology. *World Archaeology* 34:303–13.
- MAFFI, L. 2000. Language preservation vs. language maintenance and revitalization: Assessing concepts, approaches, and implications for the language sciences. *International Journal of the Sociology of Language* 142:175–90.
- MANN, H. 1997. Intellectual property rights, biodiversity, and indigenous knowledge: A critical analysis in the Canadian context. Report submitted to the Canadian Working Group on Article 8(j) of the Convention on Biological Diversity.
- MARKEY, N. 2001. Data "gathering dust": An analysis of traditional use studies conducted within Aboriginal communities in British Columbia. M.A. thesis, Department of Sociology and Anthropology, Simon Fraser University, Burnaby, B.C., Canada.
- Mataatua Declaration on Cultural and Intellectual Property Rights of Indigenous Peoples*. 1993. Whakatane: Aotearoa/New Zealand. <http://users.ox.ac.uk/~wgtr/mataatua.htm>.
- MATSUDA, D. 1998. The ethics of archaeology, subsistence digging, and artifact looting in Latin America: Point, muted counterpoint. *International Journal of Cultural Property* 7:89–97.
- MEIGHAN, C. W. 1992. Some scholar's views on reburial. *American Antiquity* 57:704–10.
- MERRILL, W. L., E. J. LADD, AND T. J. FERGUSON. 1992. The return of the *ahayu:da*: Lessons for repatriation from Zuni Pueblo and the Smithsonian Institution. *CURRENT ANTHROPOLOGY* 34:523–67.
- MIHESUAH, D. A. 2000. *Repatriation reader: Who owns American Indian remains?* Lincoln: University of Nebraska Press.
- MOHS, G. 1987. Spiritual sites, ethnic significance, and native spirituality: The heritage and heritage sites of the Sto:lo Indians of British Columbia. M.A. thesis, Department of Archaeology, Simon Fraser University, Burnaby, B.C., Canada.
- MORRIS, R. 1984. *Time's arrows*. New York: Simon and Schuster.
- MYERS, F. R. 1986. *Pintupi country, Pintupi self: Sentiment, place, and politics among Western Desert Aborigines*. Washington, D.C.: Smithsonian Institution Press.
- NAGPRA (*Native American Graves Protection and Repatriation Act*). 1990. <http://www.usbr.gov/nagpra/naglaw.htm>.
- NANKIVELL, S., AND D. WYFE. 2003. *Exploring B.C.'s pictographs: A guide to native rock art in the British Columbia interior*. Burnaby, B.C.: Mussio Ventures.
- NICHOLAS, G. P. 2001. The past and future of Indigenous archaeology: Global challenges, North American perspectives, Australian prospects. *Australian Archaeology* 52:29–40.
- . 2003. "Understanding the present, honoring the past," in *Indigenous peoples and archaeology*. Edited by T. Peck, E. Siegfried, and G. Oetelaar. Calgary: University of Calgary Archaeological Association.
- . 2004. "The persistence of memory, the politics of desire: Archaeological impacts on Aboriginal Peoples and their response," in *Indigenous archaeologies: Decolonizing theory and practice*. Edited by C. Smith and H. M. Wobst. London: Routledge. In press.
- NICHOLAS, G. P., AND T. D. ANDREWS. 1997. "On the edge," in *At a crossroads: Archaeology and First Peoples in Canada*. Edited by G. P. Nicholas and T. D. Andrews, pp. 276–79. Burnaby, B.C.: Archaeology Press/Simon Fraser University.
- O'NEILL, G. 1994. Cemetery reveals complex aboriginal society. *Science* 264:1403.
- OUZMAN, SVEN. Is audit our object? Archaeology, conservation, sovereignty. *Antiquity* 77(297). <http://antiquity.ac.uk/wac5/ouzman.html>. [so]
- PARSONS, J., AND W. DENEVAN. 1967. Pre-Columbian ridged fields. *Scientific American* 217(1):92–101.
- PATTERSON, T. C. 1999. *A social history of anthropology in the United States*. New York: Berg.
- PEACOCK, S. 1998. Putting down roots: The emergence of wild food production on the Canadian Plateau. Ph.D. diss., University of Victoria, Victoria, B.C., Canada.
- PEARLSTONE, Z. 2000. Mail-order "katsinam" and the issue of authenticity. *Journal of the Southwest* 42:801–32.
- . 2001. *Katsina: Commodified and appropriated images of Hopi supernaturals*. Los Angeles: UCLA Fowler Museum of Cultural History.
- PINSKY, V., AND A. WYLIE. 1995. *Critical traditions in contemporary archaeology: Essays in the philosophy, history, and socio-politics of archaeology*. Albuquerque: University of New Mexico Press.
- POSEY, D. A., AND G. DUTFIELD. 1996. *Beyond intellectual property rights: Toward traditional resource rights*. Ottawa: IDRC.
- PRESTON, D. 1997. The lost man. *New Yorker*, June 16, pp. 70–81.
- RANGER, TERENCE. 1993. "The invention of tradition revisited: The case of colonial Africa," in *Legitimacy and the state in twentieth-century Africa*. Edited by Terence Ranger and Olufemi Vaughan, pp. 62–111. London: Macmillan. [so]
- RATHJE, W. L. 1991. Once and future landfills. *National Geographic*, May, pp. 116–34.
- RATHJE, W. L., AND C. MURPHY. 1992. *Rubbish! The archaeology of garbage*. New York: HarperCollins.
- RITCHIE, D. 1993. "Principles and practice of site protection laws in Australia," in *Sacred sites, sacred places*. Edited by D. L. Carmichael, J. Hubert, B. Reeves, and A. Schanche, pp. 227–44. London: Routledge.
- ROBBINS, A., AND M. BECHER. 1997–98. "Karl May Festival," in *German Indians*. Photographic display at Leslie Tonkonow Artworks and Projects, New York. <http://rob-becher.www4.50megs.com/TonkanowGlimagesframe.html>.
- ROBERTS, A. 2002. *Indigenous South Australian perspectives of archaeology project report*. Adelaide: Department of Archaeology, Flinders University.
- . 2003. Knowledge, power, and voice: An investigation of indigenous South Australian perspectives of archaeology. Ph.D. diss., Flinders University, Adelaide, Australia.
- ROSE, J. C., T. J. GREEN, AND V. D. GREEN. 1996. NAGPRA is forever: Osteology and the repatriation of skeletons. *Annual Review of Anthropology* 25:81–103.
- SAHLINS, M. 1976. *Culture and practical reason*. Chicago: University of Chicago Press.
- . 1999. What is anthropological enlightenment? Some lessons of the twentieth century. *Annual Reviews in Anthropology* 29:i–xxiii.
- SHEETS, P. D. 1989. "Dawn of a new Stone Age in eye surgery," in *Applying anthropology: An introductory reader*. Edited by A. Poloefsky and P. J. Brown, pp. 113–15. Mountain View, Calif.: Mayfield.
- SHENNAN, S. Editor. 1989. *Archaeological approaches to cultural identity*. London: Unwin Hyman.
- SIMPSON, L. R. 1999. The construction of traditional ecological knowledge: Issues, implications, and insights. Ph.D. diss., University of Manitoba, Winnipeg, Manitoba, Canada.
- SINGLETON, T. A. 1995. The archaeology of slavery in North America. *Annual Review of Anthropology* 24:119–40.
- SMITH, BENJAMIN W., J. DAVID LEWIS-WILLIAMS, GEOFFREY BLUNDELL, AND CHRISTOPHER CHIPPIN-



- DALE. 2000. Archaeology and symbolism in the new South African coat of arms. *Antiquity* 74(284):467-68. [so]
- SMITH, C. E. 1994. Situating style: An ethnoarchaeological study of social and material context in an Australian Aboriginal artistic system. Ph.D. diss., University of New England, Armidale, Australia.
- STALEY, D. P. 1993. St. Lawrence Island's subsistence diggers: A new perspective on human effects on archaeological sites. *Journal of Field Archaeology* 20:347-55.
- STANNER, W. H. H. 1998. "The dreaming," in *Traditional Aboriginal society*, 2d edition. Edited by W. H. Edwards, pp. 227-38. South Yarra: Macmillan Australia.
- STEPHENSON, D. J., JR. 1999. "A practical primer on intellectual property rights in a contemporary ethnoecological context," in *Ethnoecology: Situated knowledge/located lives*. Edited by V. Nazarea, pp. 230-48. Tucson: University of Arizona Press.
- STRATHERN, M. 1998. Comment on: Can culture be copy-righted? by Michael Brown. *CURRENT ANTHROPOLOGY* 39: 216-17. [YH]
- . Editor. 2000. *Audit cultures: Anthropological studies in accountability, ethics, and the academy*. London: Routledge. [so]
- TANNER, A. 2000. Image problem. *The Province* [Gabriola Island, B.C.], February 13.
- THOMAS, D. H. 1998. 3d edition. *Archaeology*. Fort Worth: Harcourt Brace.
- . 2000. *Skull wars: Kennewick man, archaeology, and the battle for Native American identity*. New York: Basic Books.
- TINDALE, N. B. 1974. *Aboriginal tribes of Australia: Their terrain, environmental controls, distribution, limits, and proper names*. Canberra: Australian National University Press.
- TRIGGER, B. G. 1989. *A history of archaeological thought*. New York: Cambridge University Press.
- TURNER, N. J. 1997 (1978). Revised edition. *Food plants of interior First Peoples*. Vancouver: University of British Columbia Press/Victoria: Royal British Columbia Museum.
- . 1998 (1979). Revised edition. *Plant technology of British Columbia first peoples*. Vancouver: University of British Columbia Press/Victoria: Royal British Columbia Museum.
- WATKINS, J. 2000. *Indigenous archaeology: American Indian values and scientific practice*. Walnut Creek: AltaMira Press.
- WAX, M. L. 1991. The ethics of research in American Indian communities. *American Indian Quarterly* 15:431-56.
- WHITELEY, P. 1997. "The end of anthropology (at Hopi)?" in *Indians and anthropologists: Vine Deloria Jr. and the critique of anthropology*. Edited by T. Biolsi and L. J. Zimmerman, pp. 177-208. Tucson: University of Arizona Press.
- WILLIAMS, N. M., AND D. MUNUNGGURR. 1989. "Understanding Yolngu signs of the past," in *Who needs the past? Indigenous values and archaeology*. Edited by R. Layton, pp. 70-83. London: Unwin Hyman.
- WINTER, B., AND D. HENRY. 1997. "The Sddlnewhala bowl: Cooperation or compromise?" in *At a crossroads: Archaeology and First Peoples in Canada*. Edited by G. P. Nicholas and T. D. Andrews, pp. 214-23. Burnaby, B.C.: Archaeology Press/Simon Fraser University Press.
- WOOD, J. J., AND S. POWELL. 1993. An ethos for archaeological practice. *Human Organization* 52:405-13.
- WYLIE, ALISON. 2000. Rethinking unity as a working hypothesis for philosophy of science: How archaeologists exploit the disunity of science. *Perspectives on Science* 7:293-317. [so]
- . 2002. "Ethical dilemmas in archaeological practice: The (trans)formation of disciplinary identity," in *Thinking from things: Essays in the philosophy of archaeology*. Compiled by A. Wylie, pp. 229-46. Berkeley: University of California Press.
- . 2004. "The promise and perils of an ethic of stewardship," in *Beyond ethics: Anthropological moralities on the boundaries of the public and the professional*. Edited by Lynn Meskell and Peter Pells. St. Louis: Berg Press. In press.
- YORK, A., R. DALY, AND C. ARNETT. 1993. *They write their dreams on the rock forever: Rock writings in the Stein River valley of British Columbia*. Vancouver: Talonbooks.
- ZIMMER, J. J. 2003. "When archaeological artifacts are commodities: Dilemmas faced by native villages of Alaska's Bering Strait," in *Indigenous peoples and archaeology: Proceedings of the 32nd Chacmool conference*. Edited by T. Peck, E. Siegfried, and G. Oetelaar, pp. 298-312. Calgary: Archaeological Association of the University of Calgary.
- ZIMMERMAN, L. 1987. The impact of concepts of time and past on the concept of archaeology: Some lessons from the reburial issue. *Archaeological Review of Cambridge* 6(1):42-50.
- . 1997. "Remythologizing the relationship between Indians and archaeologists," in *Native Americans and archaeologists: Stepping stones to common ground*. Edited by N. Swidler, K. Dongoske, R. Anyon, and A. Dower, pp. 44-56. Walnut Creek: AltaMira Press.
- ZIMMERMAN, L. J., K. D. VITELLI, AND J. HOLLOWELL-ZIMMER. Editors. 2003. *Ethical issues in archaeology*. Walnut Creek: AltaMira Press.