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Intersecting magisteria

Bridging archaeological science and traditional knowledge

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ABSTRACT
Stephen Jay Gould famously argued that science and religion are fundamentally 'nonoverlapping magisteria' – two spheres of understanding that should peacefully coexist without intersecting. However, when Native American religious practices contain cultural and historical information that can inform archaeological interpretations, the wall separating these spheres of knowledge necessarily breaks down. This essay examines how archaeological science and traditional knowledge can be bridged, by exploring the ancient history and contemporary meanings of archaeological sites in northeastern Arizona, a landscape that is important to the Hopi and Zuni, among other tribes. Methodologically this work builds outward from a series of 'place-based interviews' to create a framework for collaborative research, while theoretically it builds upwards from the foundation of an 'ethnocritical approach' that willingly returns to the sacred. Through such collaborative projects, we may develop a shared authority for shared places, meeting upon the magisteria's common ground.

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KEYWORDS
authority ● collaboration ● community ● dialogue ● Hopi ● landscape ● respect ● Zuni

ROCKS OF AGES

In his passionate and sanguine book, *Rocks of Ages*, the eminent paleontologist Stephen J. Gould valiantly sought to unravel the recurrent conflict between religion and science – a conflict which has intermittently haunted scholars for centuries, though archaeologists for less than one. Early anthropologists such as Frank H. Cushing (1888) and J. Walter Fewkes (1900) worked closely with Pueblo tribes and embraced traditional narratives, which are often embedded in religious thought, for the historical insights they supply. As should be expected, they did not find a simple one-to-one correspondence between anthropological theories and native traditions, but the researchers found a way to productively work with both. Since the passage of the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990, however, which in part legally validates oral tradition, any apparent disparity between archaeological and Indigenous knowledge about the past increasingly has been interpreted as a clash between science and religion (Clark, 2000; Deloria, 1997; Mason, 2006; Pyburn, 1999).

Perhaps a surprising revelation to those in the midst of this heated debate, Gould (1999: 92) posits in *Rocks of Ages* that the conflict between science and religion is in fact the 'great nonproblem of our time', a 'false conflict' based on an artificial, illogical, and unnecessary attempt to marry the two realms of knowledge. Gould prescribes amicable divorce through the introduction of the principle of nonoverlapping magisteria. A magisterium 'represents a domain of authority in teaching'; it is a 'domain where one form of teaching holds the appropriate tools for meaningful discourse and resolution' (Gould, 1999: 5). In Gould's scheme, the magisterium of science is set alongside – equal but separate – with the magisterium of religion. He argues:

> the net, or magisterium, of science covers the empirical realm; what is the universe made of (fact) and why does it works this way (theory). The magisterium of religion extends over questions of ultimate meaning and moral value. The two magisteria do not overlap, nor do they encompass all inquiry (consider, for example, the magisterium of art and the meaning of beauty). To cite the old clichés, science gets the age of rocks, and religion the rock of ages; science studies how the heavens go, religion how to go to heaven. (Gould, 1999: 6)

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Gould's logic and historical narrative are compelling. Surveying the misconstrued battles of Galileo, Columbus, and Darwin, he persuasively articulates how

> [e]ach domain of inquiry frames its own rules and admissible questions, and sets its own criteria for judgment and resolution. These accepted standards, and the procedures developed for debating and resolving legitimate issues, define the magisterium – or teaching authority – of any given realm. No single magisterium can come close to encompassing all the troubling issues raised by any complex subject. (Gould, 1999: 52–3)

The two key claims are thus that each magisterium 'hold[s] equal worth and necessary status for any complete human life; and second, that they remain logically distinct and fully separate styles of inquiry' (Gould, 1999: 58–9). Religion and science are therefore intimately bound, but still they ought not to merge, as 'neither do spouses fuse in the best of marriages' (Gould, 1999: 65).

Importantly, Gould (1999: 9) recognizes that his idea 'represents a principled position on moral and intellectual grounds, not a merely diplomatic solution'. Yet he encourages a 'mutual humility' about the limits of knowledge within each domain, as well as mutual respect and understanding (Gould, 1999: 26). Thus, dialogue should be at the center of the encounter between religion and science. 'The dialogue will be sharp and incisive at times,' Gould (1999: 211) admits, 'but respect for legitimate differences, and recognition that full answers require distinctive contributions from each side, should maintain a field of interest, honor, and productive struggle.'

We begin this article with *Rocks of Ages* because Gould's argument (or variations of it) is often presented to us as an explanation for why Indigenous traditions should be respected but not actively used in archaeological research. It is our perception that even as Indigenous perspectives on history and culture have increasingly gained attention (e.g. as seen at the National Museum of the American Indian), neither the general public nor the archaeological discipline has yet to fully acknowledge the mutual benefits that can result by bridging archaeological science and traditional knowledge. Gould's theory, which provides a rationale for the separate-but-equal philosophy, however, is problematic for at least two reasons. Thus, rethinking the magisteria model is an important way to begin creating avenues towards anthropological approaches that embrace both archaeological and traditional forms of knowledge.

First, Gould's argument is problematical because he focused wholly on Western debates on the role of science and religion in society; *Rocks of Ages* is a fervent response from an evolutionary biologist to Christian fundamentalist-infused creationism in America. Many American archaeologists (as scientists and as researchers theoretically attuned to evolutionary biologists) are undoubtedly ensconced in the heated public battles

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between intelligent design and evolution. The same passion and arguments are then brought to discussions about Indigenous traditional knowledge, even though very few Indigenous peoples present the kind of militant fundamentalism that pervades the creationism-evolution debate. Much Indigenous traditional knowledge is often characterized as 'religious' belief (e.g. Clark, 2000), but for most Native peoples their religions are inseparable from their cultural practices and vernacular modes of practicing history (Parker and King, 1998: 14). Moreover, unlike many evolutionary biologists whose science is based on natural phenomena, which can be narrated entirely through the language of Darwinian evolution, archaeologists are fundamentally concerned with the social and historical data that are accessed through Indigenous traditional knowledge. In other words, the illusion of divisibility defined by the nonoverlapping magisterial paradigm is particularly troublesome for social scientists who seek precisely the information that can be embedded in religious thought and practice.

Second, while Gould (1999: 104) admits that before 'Science' as such formally existed, many religions operated on terms that we can recognize as scientific, 'observing and calculating astronomical cycles, for example', he nevertheless insists that science and religion are patently divisible. From astronomy to ecology, for generations Native American societies have essentially incorporated scientific principles into their cultural lives (Brink, 2008; Cajete, 1999; Lankford, 2007). Again, although Indigenous people's worldviews are often encapsulated in what in English we term 'religion', traditional knowledge – carried and transmitted through oral traditions and histories, folklore, dances, ceremonies, songs, poetry, pilgrimages, arts, subsistence practices, and more – is much more than mere magical thinking (e.g. Lauer and Aswani, 2009; Menzies, 2006). It is equally important to recognize that science is above all a cultural practice, subject to its own intuitive dreams, dogmatic traditions, and social hierarchies. In other words, scientists are often religious about science (Hedges, 2008). Science and religion consequently each possess elements of the other (Whiteley, 2002); they have never been (and it is hard to conceive of a world in which they are) neatly isolatable categories.

Gould was consequently overly optimistic about the neat compartmentalization of our lives, and overly pessimistic about the possibilities of cross-cultural communication relating to religious and scientific knowledge. Science and religion are not perfectly overlapping magisteria, but neither are they entirely separate, nonoverlapping domains of knowledge. Instead, they are intersecting, as in a Venn diagram in which two sets, represented as circles, partly overlap; the junction between the circles containing the elements common to both sets thus represents a third and unique set. The space for productive engagement between science and religion is the magisteria's intersection, where faith and empiricism intersect. Much work already has been done to craft common ground in this space, from the tribal

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development of CRM programs (Anyon et al., 2000) to a full-fledged Indigenous archaeology in which Native concepts, values, practices, and interpretations fuel the research process (Atalay, 2008; Nicholas, 2008; Wobst, 2005).

In this article, we present how our own work has sought to bridge archaeology and traditional knowledge in collaborative projects we have completed with, or for, the Hopi Tribe and the Pueblo of Zuni. In particular, the first section focuses on how these different forms of knowledge interlink our understandings of time and space. In the second section we discuss the role 'authority' plays in constructing collaborative communities which allow the magisteria of archaeology and traditional knowledge to be traversed. Our own work, though varied, has predominately sought the middle ground through the mode of collaboration. Compared to some researchers who start with more standard archaeological methods, we begin with ethnographic and ethnohistoric methods because our starting point is the social and political present in which the places of the past are cognized and negotiated (see also Kelley and Francis, 1994; Zedeño, 2007). For us, the space of the magisteria's intersection is situated in the landscapes of history and the stories Native peoples tell about those geographies.

TIME, SPACE, AND KNOWLEDGE

Over the last two decades, a methodology for collaboratively bridging traditional knowledge and archaeological inquiry has been unfolding in work with Native American communities in the Southwest (Anyon and Ferguson, 1995; Dongoske et al., 1993, 1997; Duff et al., 2008; Ferguson, 1984, 1990, 2004; Ferguson et al., 1993, 1996, 2000; Kuwanwisiwma and Ferguson, 2004; Mills and Ferguson, 1998). Although propelled by the emergence of new laws – most significantly NAGPRA and the 1992 amendments to the 1966 National Historic Preservation Act – this developing suite of ethnoarchaeological methods has also worked well outside of legally mandated research (e.g. Ferguson et al., 2004).

In recent years, increasing numbers of scholars have turned to the issues surrounding oral traditions and histories as they relate to archaeological practice and interpretation (e.g. Lyons, 2003; Mason, 2000; Mbunwe-Samba, 1994; Scott, 2003). However, the approach we advocate aspires to illuminate anthropological as well as material understandings of the past. Instead of narrowly seeking to pick out the parts of oral traditions that help scholars interpret past behaviors, we also want to understand how interpretations of the past inform people's lives today. This method does not dismiss the notable advances made by those seeking to more narrowly apply Native traditions to the archaeological study of the ancient past, but rather points

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to what distinguishes our approach from others. For example, Wesley Bernardini's (2005) innovative study on Hopi migrations uniquely combined oral tradition with archaeological analysis, providing valuable insights into the historical trajectories entailed in the ancient occupation of Hopi ancestral sites at Anderson Mesa and Homol'ovi. In his study of Hopi oral traditions Bernardini (2005: 25–6) concentrated on 'historical processes' over 'historical particulars'. However, if we want to understand not only the processes of history at places like Anderson Mesa and Homol'ovi, but also their meanings to contemporary Hopis, then the particulars are as relevant as the processes encapsulated in Hopi narratives.

Based on research with four Native American tribes in Arizona's San Pedro Valley, we have previously argued that the construction of cultural landscapes turns on concepts of time and space (Ferguson and Colwell-Chanthaphonh, 2006: 32–9). Concepts of time and space can be categorized in three ways: absolute, relative, and representational. Absolute space and time are the Cartesian expressions of place, the tangible, physical world, most precisely accounted for by the Universal Transverse Mercator System (UTM) and the NIST-F1 Cesium Fountain Atomic Clock. Relative space and time are relational expressions of place, such as a hand-drawn map by a hunter of his hunting grounds, or a Tohono O'odham 'calendar stick' which records a series of important tribal events. Representational space and time are the symbolic expressions of place, like the bold red circle on the Japanese flag that represents the 'land of the rising sun', or the 'Golden Age' of Camelot.

The absolutes of time and space are categorically central to archaeological inquiry. Absolute time, in particular, is a primary framework in research. From the emergence of stratified excavations to dendrochronology to carbon dating, archaeologists have labored to refine the dating of sites and artifacts as a key mechanism for understanding the past (Nash, 2000). For archaeologists, absolute time fundamentally informs absolute space. Imagine four sites dating to four distinct periods, and let's suppose in four distant parts of the Southwest (Figure 1). It is with the precision of dating that archaeologists can conclude that Site 1 is the oldest and Site 4 is the most recent. When sites are given absolute ages, they become chronological (or relative), that is A → B → C → D. But it is the absolute dates that give modern archaeologists their confidence in elucidating such historical trajectories.

In contrast, the Hopi and Zuni for millennia did not have the technology to precisely date ancestral sites, even as they recounted narratives of their respective historical trajectories. As Anyon and his colleagues (1997: 82) wrote, in oral traditions 'a strict measure of time has little relevance'. This means that the ordering of time for both Pueblo groups begins not with absolute time but with relative space. In the Zuni origin narrative the history relates the emergence of the ancestors at the Grand Canyon, a

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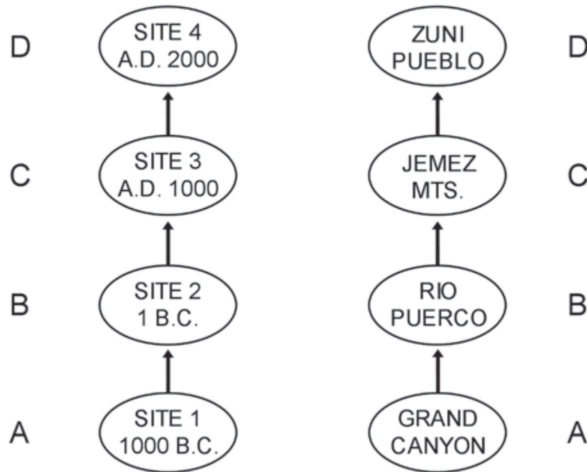

Figure 1 The relationship among sites is mainly known through absolute time for archaeologists (left), but through relative space for Zunis (right)

migration eastward, via the San Francisco Peaks, along the Little Colorado River, and from there one group traveled north of the Puerco River to the Chaco Canyon, then further east to the Jemez Mountains and Sandia Mountains, then returning westward passed Mount Taylor, the Rio San Jose, and the Nutria River before arriving at the Middle Place, Zuni Pueblo (Ferguson and Hart, 1985: 20). And so for the Zuni, traditionalists know that their ancestors lived in A before B before C before D – not because of the recording of absolute time, but because of the remembrances of relative space (Figure 1).

However, for Zunis and Hopis space is not defined in a linear fashion; that is, space is not ordered in a simple sequence of A → B → C → D. Rather, these places constitute a web of interrelations that involve starts and stops, circles and departures, that is closer to A → B → (C^1, C^2, C^3, C^4) → (D^1, D^2, D^3) → E (Figure 2). Similarly, Bernardini's (2005: 41) work on the process of Hopi migrations encapsulates how ancient movements across the land were not linear but complexly interconnected like a braided river, a process of ethnogenesis which has also been described as closer to a reticulated graph than a neat and tidy dendrogram (Ferguson and Colwell-Chanthaphonh, 2006: 245).

Consequently, Zunis recognize the Grand Canyon as the place of emergence, but after migrating to new areas the ancestors continued to return there on pilgrimages. After some groups split off along the Little Colorado River with one traveling to the north and east, the other traveling to the south, both groups circled back and rejoined the main body of Zuni at Halona:wa. Other groups are said to have departed from the main

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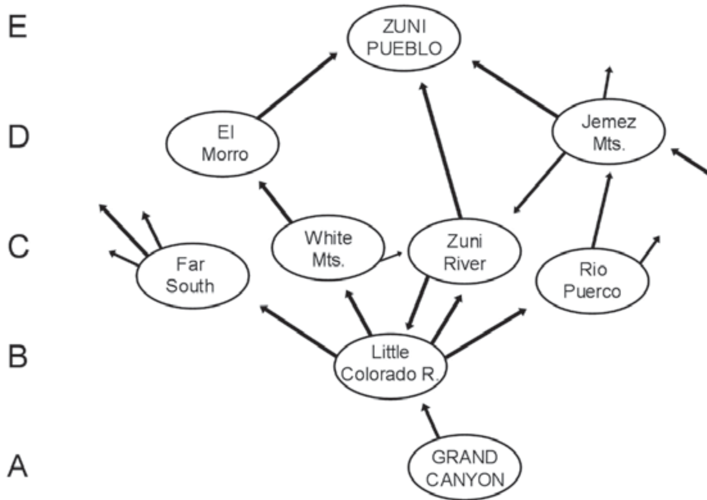

Figure 2 For Zunis (as Hopis) space is not defined in a linear fashion: space is not ordered in a simple sequential way

group and headed south, never to be reunited with their relatives. Later, when a group of ancestors migrated westward following their sojourn along the Rio Grande, Zunis traveled back and forth to that river basin for trade, hunting and gathering, and religious pilgrimages, and some may have stayed for a time before returning again to Zuni (Ferguson, 2007).

Through this complexity, one can see how it becomes nonsensical for Hopis and Zunis to associate historical values of particular places based strictly on temporal modes. The Grand Canyon is of great importance for the Hopis, for example, not only because some clans commemorate it as the Place of Emergence, but also because it is the terminus of a pilgrimage trail, a source of sacred salt, a stopping point during the migrations of some ancestral clans, and an abode of spirits and ancestors (Ferguson, 1998; Lomaomvaya et al., 2001; Schwartz, 1989). In this way, for Pueblo traditionalists, relative space and time is transformed into representational space and time, where in essence all the ancestral lands come to symbolically embody 'the past'.

From the perspective of Hopi and Zuni traditional knowledge, time is thus divided into the present and the past. This is not to suggest that Puebloans cannot distinguish between AD 2006 and AD 1006, or a century of time's passage versus a millennium, but rather that the knowledge embodied, *inter alia*, within oral traditions, ritual songs, and ceremonial paraphernalia speaks to the time and places of the era before life was lived like it is today. Such a perception of time is perhaps best encapsulated in the phrase we often hear from our Pueblo colleagues, 'time immemorial', a

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phrase used to express a great antiquity as well as the fruitlessness of trying to pinpoint an exact time; it was just and only a long, long time before today.

Such a division of time was described some years ago by Jan Vansina (1985: 23), who wrote that oral tradition is structured like an hourglass with the top including accounts that detail names, places, and personalities; a tapering of information in the middle in which few details are available, the 'floating gap'; and the bottom expanding to encompass a large body of traditions that recount events of ancient days, as one finds in myths of origin. The gap is 'floating' because with every generation the narrowing of information in oral traditions shifts. Vansina's floating gap is marked in Pueblo traditional knowledge by a division of the symbolic past and lived present.

If for Hopis and Zunis the material past is largely, though not expressly, representational (that is, if they do not perceive the material past primarily by absolute dates) how do they make connections to the tangible things that mark the past, the corporeal artifacts and ancient sites that were created in the past and which persist in the present, the 'archaeological record' that comprises the center of an archaeological gaze? These Pueblo groups use traditional knowledge – augmented by individual experience and common sense – to guide three primary methods of connecting the present to the past: cultural geography, material correspondences, and spiritual empathy. What suffuses these means of connection is the emphasis on time as lived experience instead of time as an abstract phenomenon. As Larry J. Zimmerman (2008: 537) has written, for many American Indian traditionalists, 'Time is more complex, not just sequential. What is important are events and their meanings for life. . . . Time and past are a circle or a spiral, always coming back to the point of origin. In other words, the past is always present.'

The first way of connecting the present to the past is through an understanding of cultural geography, a perception of physical topographies informed by cultural understanding. Such understandings may be derived from metaphor, such as the symbolism that associates colors and animals with the six directions (the four cardinal directions along with the zenith and nadir), while others may be linked to an understanding of where villages would be located in relation to natural resources such as springs and potential agricultural fields. For example, on one research project which documented Hopi traditional cultural properties along the US 160 highway corridor for compliance with the National Historic Preservation Act, Hopi advisors connected with the land by recalling place names, historical events, sacred and secular trails, eagle gathering areas, and food and ritual gathering areas (Ferguson et al., 2005).

For example, Masitsotsmo (Gray Hills), a place near the junction of highways US 160 and US 89, is known as a collection area for silakinowa (rasping wood), the petrified wood used to adorn ceremonial costumes

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because it provides a clinking sound during ritual performances. The area is also a place for gathering neeveni (wild food plants), including öngatoki (*Chenopodium* sp.), a wild 'salty spinach'. Other named places documented during this project included Patuko'wa (Place of Many Tops of Rocks), Tsa'aqtuyqa (Crier's Point), Maktsotsvalpi (Hunter's Gathering Place), Mariiya (Middle Mesa), Palavatupha (Red Lake), and Komayuwsim (Place of the Mudheads). Also potentially threatened by the proposed highway improvement of US 160 is the Hopi Salt Trail, several eagle gathering areas, and Kawestima, a multilayered traditional cultural property with ancient Pueblo sites, shrines, petroglyphs and pictographs, gathering areas, and associated oral narratives (Figure 3). All of these archaeological sites and natural features combine to form a complete and complex geography for the Hopi, comprising part of Hopitutskwa – Hopi land.

The second means of connection is an analysis of material correspondences between old things and the things Pueblo community members use today. The form of a metate or the architectural elements of a room are mentally compared, and when parallels exist, Pueblo advisors express that it is these convergences of material form that link past and present social practices (Figure 4). In the Hopi-Salado cultural affiliation study undertaken by the Hopi Tribe, numerous forms of ancient and modern material culture were compared to provide evidence of connection (Ferguson and Lomaomvaya, 1999). For example, a Salado White-on-Red effigy vessel excavated from the Tonto Basin was interpreted by Hopi cultural advisors as a ritual vessel, likely used in ceremonies. One advisor stated that the

Figure 3 A Hopi research team listens to Wilton Kooyahoema discuss the cultural importance of Kawestima at the mouth of Tsegi Canyon, next to US 160. Photograph by T.J. Ferguson, 1 June 2005, courtesy of Hopi Cultural Preservation Office

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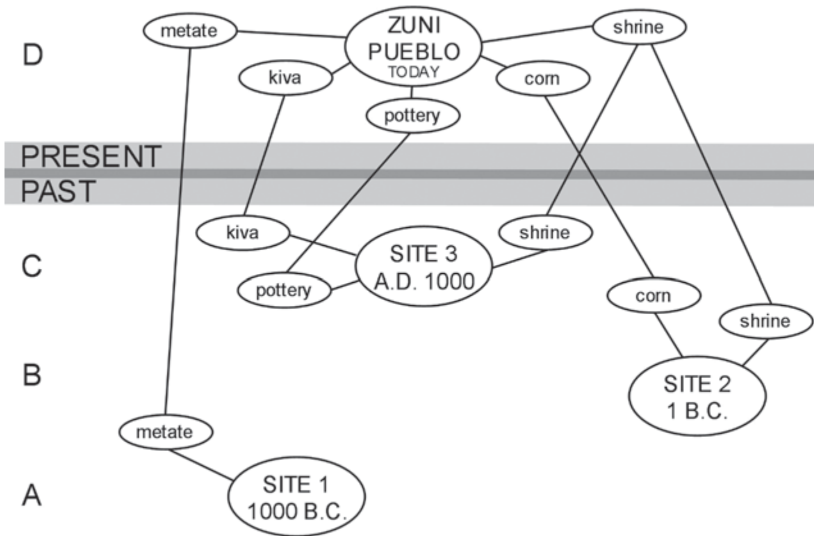

Figure 4 The form of a metate or the architectural elements of a room are mentally compared and, when parallels exist, Pueblo advisors express that it is these convergences of material form that broadly link past and present social practices

paint and design suggest Yoywu'paqa (Water Thrower), a Flute Society deity, while another posited that the designs parallel those found in the Tsöötsöft (Antelope Society). It is the similar design elements that allow contemporary Pueblo people to draw specific connections to ancient objects, a link between present and past, irrespective of the absolute time and space which an archaeologist would emphasize.

The third way people connect the present and past is spiritual empathy which, as Echo-Hawk (2000: 270) wrote, can easily 'elude critical analysis' but is nevertheless of fundamental importance to Pueblo traditionalists for whom religion, culture, and history are seamlessly fused. Does a place feel right? Are spirits present? These are the questions with unquantifiable answers advisors implicitly ask themselves when they enter a sacred space, such as when they visit ancestral archaeological sites. Although scholars may not comprehend such feelings, that does not mean they should deny those sentiments, and their importance in interpretation, for others. In these ways, the past represented by archaeological sites co-exists in the living present – symbolic does not mean unreal, past does not mean departed – the ancestors continue to be a part of contemporary life.

On another project to document Hopi traditional cultural properties, this time in anticipation of a coal-fired power plant, several incidents suggested

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the ways in which advisors connected to place through feelings of the spirit (Colwell-Chanthaphonh and Koyiyumptewa, 2007). One particular incident explained how traditional Hopis see animals as sentient beings that connect them to ancient ancestors and the spirit world. At an ancestral archaeological site, a rattlesnake was discovered in a distinctive sandstone outcrop, coiled into a nook. Advisors interpreted the snake's presence as being highly significant, not a mere glimpse of 'wildlife'. 'Long ago, one of them lived here and turned into a rattlesnake,' advisor Raleigh H. Puhuyaoma Sr. shared. 'It's now protecting the place.' Everyone in the research group made an offering of corn meal. Several weeks later, advisor Owen Numkena Jr told us that it soon rained at the Hopi Mesas after this encounter with the rattlesnake. He understood this to be a result of their spiritual exchange.

In sum, Hopis and Zunis connect themselves to ancestral sites because of the traditional knowledge that shapes their understanding and experiences of cultural geography, material correspondences, and spiritual empathy. Although beyond the scope of this paper, it is important to note that the archaeological landscape that resonates with meaning for the Hopi and Zuni also has cultural importance for other tribes, including the Apache, Navajo, and Paiute (e.g. Swidler et al., 2000; Welch and Ferguson, 2007). As shown in Figure 4, Zunis draw connections to sites in the Southwest through material correlates, which are typically generalized as representing the past – distinct from the present, though intimately connected. This illustration draws attention to the fact that Zunis, not so dissimilarly from archaeologists, are very much focused on the material landscape; however, unlike archaeologists, their understandings are not strictly informed by absolute dates and sites, for all these sites (known and unknown) represent the lives of the ancestors. And it is through these representations that the past becomes embodied: it is through these representations that the past is present, that the lives of the ancestors coexist with the lives of their Pueblo descendents.

In parallel terms, consider the World Trade Center site, which today is an abstract symbol of terrorism but also *embodies* the experiences of terrorism (Meskell, 2002). Figure 4 further shows why Hopi and Zuni advisors value all the ancient ancestral sites in northeastern Arizona and northwestern New Mexico. Even if they do not exactly know who occupied which site and when, they do know how and why particular objects were and are used, the phenomenological experiences of them: the feeling of a vibrating turkey-bone whistle beneath the lips, the echoes of ritual songs reverberating from the walls of a smoke-filled kiva, the scent of fresh roasting corn after a summer harvest.

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A SHARED COMMUNITY AND AUTHORITY

Several months ago, we received an email from a colleague who was in the midst of teaching an undergraduate anthropology class and using an article we had published (Colwell-Chanthaphonh and Ferguson, 2006). She asked if her students might write questions they had about the article, which we could then answer. Naturally, we agreed. Of the dozen or so questions posed, the one that stood out most to us boiled down to the following: 'Where do the Native Americans you're working with get their authority to interpret the archaeological record?' It is an excellent question, and one that we did not directly address in the article. But what we find so fascinating is that although we also presented interpretations from archaeological researchers, the student did not ask the more neutral question, 'Where does anyone get the authority to interpret the past?' or for that matter, the inverse of the question posed, 'Where do archaeologists get *their* authority?' Instead, the validity of archaeological authority was assumed, while it was the Native interpretations that were somehow, for some unarticulated reason, prima facie suspect.

Why many, if not most, Americans hold these implicit beliefs about history and authority is a complex question, but David Hurst Thomas (2000) has gone a long way in answering it (see also Atalay, 2006; Dumont, 2003; McGuire, 2008; Riding In, 1992). Archaeological science rose to prominence in the late 1800s, riding the crests of two waves that were surging across America: social evolution and the myth of the Vanishing Indian. Notions of social evolution bred feelings of a divine superiority among Anglo-American elites and buttressed a doctrine of racial determinism, while the Vanishing Indian myth justified transforming Indigenous peoples into scientific specimens and implicitly endorsed a canon of cultural salvage as righteousness. These ideas powerfully converged with a need to appropriate economic resources still held by Native Americans – such as land, water, and minerals – as well as a call for the construction of a national history and heritage.

Such attitudes were codified with the emergence of cultural property laws, most notably the Antiquities Act of 1906, which transferred monuments, ruins, and objects of antiquity into the hands of scientists in the name of the nation. But, of course, such laws disregarded that 'Indian people might have their own religious, spiritual, or historical connections' to ancient places (Thomas, 2000: xxxi). The result over the decades has been a peculiar inversion. Whereas Americans should have assumed a union between past and present Indian lives, there has been instead a presumption of estrangement. The attitude has long been – and remains – one where the onus is on Native peoples to justify their claims of affinity to the past

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while the claims of professional researchers are deemed to be inherently legitimate.

Thus Thomas has compellingly revealed how the emergence of archaeological authority was self-ascribed, a political alignment to elevate scientific claims while simultaneously enervating Native claims. But, the student's question concerning authority is not entirely answered by referencing the 'skull wars'. The student, after all, wanted to understand not political or legal authority per se but interpretive authority. Although these kinds of authority are not easily separable, the question at its core is not about the right to control history, but about the right to explicate it. Do archaeologists have the privilege to interpret the past by virtue of their nuclear accelerators, PhDs, and RPA memberships? Or do Native Americans have an entitlement to interpret their ancestors' lives by virtue of their spiritual training, oral traditions, pathos, or bloodlines? Who, then, has the right to decipher and illuminate the human experience?

Authority is often implicit in scientific research, deeply connected to its basic practices. Many would say that authority is a scientific fact in the sense that authority is conferred by the degree to which scientific claims overlap with objective reality. A geological model that begins with the premise of a flat earth or a physics theorem that contradicts the laws of gravity will not gain much traction these days, and thus such claims and the people making them are granted little authority. This explains why archaeologists flatly discount Erich von Däniken's claims and also why with each major paradigm shift in a discipline the previous generation of scholars is often largely abandoned (Kuhn, 1996). But, authority is based not only on scientific arguments. If it were, there would be no need for PhDs and the RPA. When authoring articles or books there would be no need to disclose affiliations – no need to mention the degree earned from Harvard University – for the ideas presented would stand alone. There would be no difference in prestige between *Kiva* and *American Antiquity*, AltaMira Press and Cambridge University Press (see Hutson, 1998, 2006). Hence, anthropologically, we may say that authority is not merely based on the ability to articulate scientific facts; it is also a fact of human social organization and history (see Walls, 1997). Authority is in part created and cultivated through social relations.

An important aspect of authority is thus the way in which it is a social performance. Pseudo-scientists often enclose their claims in pretense, claiming a PhD where none has been conferred or parroting technical language and jargon (Feder, 1999; Harrold and Eve, 1995; Williams, 1991). They do this because they understand, consciously or not, that self-ascribed authority is essentially meaningless: authority must be acknowledged to become legitimate. As authority is conferred by others, it is really about the social dynamics of community and the politics of recognition.

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Dilemmas consequently arise when an authority in one community is apprehended in a different community that recognizes authority in dissimilar terms. In the kinship of archaeology, archaeologists think those with a PhD have authority; however, when those same PhDs show up in a place like the Pueblo of Zuni, many Zunis will think the archaeologist's authority is merely self-ascribed and therefore questionable, if not illegitimate (see Forsman, 1997: 106). That is, Zunis don't recognize the authority imbued in the three letters of PhD; they evaluate authority in terms of the actual knowledge one demonstrates concerning particular and specific archaeological sites and understandings of the past.

In an opposite way, in Pueblo communities it is religious and clan positions informed by personal and spiritual training and experience that create authority about tribal traditions. Perry Tsadiasi, for example, who we have worked with for many years, is a Rain Priest, a War Chief, and a Daytime Medicine Man, three highly esteemed positions in Zuni society. For religious Zunis, Tsadiasi holds a tremendous amount of authority. Similarly, another elder we have long worked with, Wilton Kooyahoema, is a Kwaakwant (One Horn Priest) at the Third Mesa Hopi village of Hotvela, and thus a spiritual authority on matters concerning the dead, including ancient ancestors. Yet, when Tsadiasi and Kooyahoema show up at ancient sites archaeologists are excavating along a highway many miles from their respective pueblos, their authority seems to be self-ascribed because academic researchers are indoctrinated to recognize authority through advanced degrees and published books – not through religious titles and prayers.

Fortunately, the core of the problem is also the source of a solution: community. The beginning point for a holistic understanding of the past must be to create and cultivate a community in which a Zuni War Chief or Hopi Kwaakwant hold in some measure comparable authority to a scholar with a PhD. A starting point is the recognition that 'Scientific knowledge does not constitute a privileged view of the past that in and of itself makes it better than oral traditions. It is simply another way of knowing the past' (Anyon et al., 1997: 84). This does not suggest that either expert is granted unlimited entitlement to interpretation, but rather that each brings his or her own perspectives and knowledge to bear on the places and things that archaeologists and Indigenous peoples both care deeply about.

It is not dissimilar from our current professional climate in which a PhD is a mark of one's commitment and cultivated knowledge in a particular area; a PhD hardly means the person holding it is infallible. For the archaeologist, expertise may be held in Salado ceramics, while for the Hopi Water Clan member, expertise may be held in Water Clan migration routes that traversed the area where Salado Polychrome was produced. In ethical terms, this new community is thus built from a principle of

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inclusiveness, encompassing all the people who have a legitimate stake in the archaeological remnants of the past. It is also about democratic discourse, bringing in voices and viewpoints that have previously been circulating in two spheres untouched. And it is about reciprocity, ensuring a mutual and fair exchange of ideas and privileges (Kuwanwisiwma, 2008). A shared community will be the foundation for a shared authority.

STEPPING STONES

Advocating for the convergence of oral tradition and material culture studies is arguing for a return to archaeology's beginning. Key figures in the American Southwest, such as Frank Hamilton Cushing and J. Walter Fewkes, developed methodologies that bridged these different ways of knowing more than a century ago. However, given the long and tangled relationship between Native American and archaeological researchers over the last century, and our contemporary political and legal context, simply replicating earlier efforts will not suffice. New approaches are needed.

More than a decade ago, in the seminal volume *Native Americans and Archaeologists: Stepping Stones to Common Ground*, several authors provided especially useful ways of beginning to seek out the intersection of the magisterium of science and the magisterium of religion (Swidler et al., 1997). Gary White Deer (1997), for one, argued that what is needed most is a 'balance between spirit and matter', an archaeological model that acknowledges Native ceremonialism. White Deer (1997: 42) points out that Native Americans by and large have accepted the utility of Western science, but '[i]n order to create a balance between our shared responsibilities, archaeology must also accept the validity of Native American spiritual beliefs and practices'. Accepting the 'return of the sacred' does not mean that archaeology must become tied to religious claims, but rather that 'Native American spirituality ought to be included as a significant component of a common ground' (White Deer, 1997: 43).

In turn, Larry J. Zimmerman (1997) promoted a two-pronged approach he termed 'covenantal archaeology' and 'ethnocritcal archaeology'. The first prong involves cultivating covenantal relationships in which archaeologists and Native Americans work together; sharing power will entail sharing interpretations, which means that scholars surrender the false affectation that archaeology alone can determine historical truths. This leads to the second prong, which entails creating 'dialogical models where cultural differences are explored and where interpretations are negotiated rather than declared' (Zimmerman, 1997: 55). Zimmerman (1997: 55) contends the aim is to ensure that 'the science is clearly articulated and is placed fully

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into an explicit social context. This is the essence of a covenantal archaeology, where research questions and methods are negotiated and support a mutually agreed upon agenda.'

It is still perhaps too early to fully analyze the impact of such visions for archaeology because few researchers have yet to fully engage these ideas – although recent research has clearly begun to develop and expand on these and many other valuable ideas of collaborative archaeologies (e.g. Colwell-Chanthaphonh and Ferguson, 2008; Dongoske et al., 2000; Duff et al., 2008; Kerber, 2006; McDavid, 2002; Silliman, 2008). Thus our work follows the beacons offered by previous scholars: methodologically it builds outward from the effort to create a framework for collaborative research, while theoretically it builds upwards from the foundation set by White Deer and Zimmerman (among others) to create an ethnocritical approach that willingly returns to the sacred.

While Hopi and Zuni cultural advisors repeatedly communicate to us their frustrations about the projects that negatively impact their ancestral lands (projects that nevertheless propel, and often pay, for our own research with the tribes), they still express appreciation for the opportunity to provide their viewpoints, to be offered the possibility of a shared authority. They cherish their own traditions and value archaeological insights. For them, the first steps that will lead down the long path to the magisteria's common ground are to be invited to the research table, to be heard, and to be respected.

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