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COMMENTARY

Recent Geographical Research on Indians and Inuit in the United States and Canada

ROBERT RUNDSTROM, DOUGLAS DEUR, KATE BERRY, AND DICK WINCHELL

The indigenous cultures and communities of North America are studied in many academic disciplines, geography among them. The number of geographers who work in this area is small compared to the figures that emerge from such departments as anthropology, history, or literature, mainly because geography itself is a small discipline.¹ A surprisingly wide range of topics, methods,

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epistemological stances, and regional emphases are represented in recent geographical literature nonetheless. Our purpose here is to summarize the published books and journal articles written about North American Indian and Inuit geographies during the past ten years, following a brief look at earlier work.² We do so to raise awareness of this diverse and somewhat diffuse literature, and to make it more accessible to readers of this journal.

A brief precis on the nature of geography may assist those unfamiliar with the subject. Geography may be described as the study of the earth as the home of humans, a perspective on the world that includes anything occurring on the surface of the earth that has a spatial or locational aspect. With such a broad purview, geographers may contemplate their subject as an earth or life science, a social science, or as one of the humanities, depending on the particular questions they ask. The citations included in this article point to sources representing each of these perspectives, although the social science and humanities orientations common to the study of human geography, as opposed to physical geography, are most prominent. This breadth also means that geographers often are familiar with the ideas, methods, and information coming from other academic and non-academic sources, and frequently recast them in terms of space, place, or human-environment relationships.

We recognize that many people, not just academically trained geographers, work within the geography realm. In fact, some of the best work comes from people beyond our discipline, including anthropologists, folklorists, historians, planners, and others who care about the environmental, cultural, social, political, or economic geographies of life on earth. Notably, this also includes Native writers whose ideas sometimes find their way into the geographers' writings. Although most of the references listed here emerge from within our own discipline, this review also recognizes the valuable geographical studies and ideas drawn from these other literate sources.

SOME EARLY STUDIES OF INDIAN-ENVIRONMENT RELATIONS, CIRCA 1900–1970

We begin with a brief review of geography's role in the earlier days of American Indian studies. This preamble is offered in support of two claims: (1) that the subject has a lengthy disciplinary history; and (2) that some contemporary research is directly linked both topically and methodologically to this early work.³

In the first two decades of the twentieth century, American geographers were engaged in a debate about the extent to which environmental factors determined cultural development and behavior. This basic question followed from a simple observation: geographical aspects of human lives—especially settlement patterns, house types, forms of agriculture, and other types of land use—vary across the surface of the earth. For some, a single set of causal factors was considered adequate to explain this regional variation. Like some anthropologists and historians, these geographers firmly believed that environmental factors such as climate, vegetation, soils, and landforms largely determined human outcomes.⁴

Other geographers not inclined toward determinism tended to see historical and cultural processes as more important, and demonstrated their argument in part by pointing to ecological zones, such as the high desert plateaus of the US Southwest, where human response and adaptation had taken quite different paths, such as has occurred between the Navajo and Hopi. By no means did they rule out the possibility of environmental influence, but they were highly skeptical of single monolithic causes, preferring to see environmental conditions as offering a broad range of possibilities within which humans could respond in different ways. The most influential geographer to emerge in this historicist-possibilist critique of environmental determinism was Carl Sauer.

More than anyone else, Sauer was responsible for the development of American cultural geography and the idea of a cultural landscape, or the natural landscape as transformed through human agency, where ways of living and thinking are visibly expressed on the land. Both developments are associated with the department of geography at the University of California, Berkeley, where Sauer worked from 1923 to 1975. It is in the work of Sauer and his students, or what came to be called "Berkeley cultural geography," that studies of American Indian geographies began to emerge.⁵

At Berkeley, Sauer and his students were in frequent contact with noted anthropologists Alfred Kroeber and Robert Lowie, both of whom were students of Franz Boas. Like Sauer, Boas was originally trained in German geography and was critical of deterministic, environmentalist models of cultural development. As an antidote to overly general environmental theories of Indian cultural genesis, Boas and his students sought to illuminate the full complexity of Indian life through numerous empirical studies. Many addressed geographical topics, including Indian place names, environmental knowledge, and land use. These works frequently were termed *ethnogeographies*, empirical studies of the geographical aspects of the lives of people labeled "ethnic."⁶ So, at Berkeley there emerged an approach to American Indian studies that grew out of both geography and anthropology more or less simultaneously, although Sauer and Kroeber had come by many of their ideas before they knew each other.

In brief, work under Sauer typically involved intensive fieldwork in rural areas, historicization of the topic in libraries and archives, and a strong empiricist and anti-theoretical orientation. Most of the cultural geographies of Indian communities were written about people in Mexico, but United States examples include studies of settlement patterns, indigenous plant use, and the relations among oral traditions, traditional land use, and material culture.⁷ The long-standing interests of Sauer and some of his students, especially Fred Kniffen, continued well into the late twentieth century.⁸

To be sure, much has changed in the way geographers engage American Indian studies. The last decade alone has witnessed the emergence of literary, postcolonial, and other theoretical perspectives in studies of space and place. Other geographers now study maps and contemporary geographic information systems (GIS) and how both have been used by Natives and non-Natives to represent Indian and Inuit places. Still others engage directly in advocacy on

behalf of Indian economic development and land claims. In what follows, however, readers also will find direct links to Sauerian-Boasian geographies of American Indians via cultural ecology, diffusion studies, and regional-historical geography.⁹

NEW WORK ON MATERIAL LANDSCAPES

Recently geographers have contributed significantly to revisionist movements within North American cultural ecology, illuminating the sophistication of American Indian environmental management and the degree to which people intentionally modified environments for their own purposes prior to European contact. For example, two geographers identified pre-contact plant cultivation practices and agricultural landforms that had been overlooked by many archaeologists and anthropologists, namely the identification of ridged agricultural fields and other evidence of intensive environmental management in the upper Midwest.¹⁰ Others have expanded our understanding of human modification of environments in the American southwestern deserts, Alaska, Wisconsin, and central California.¹¹ Also, Douglas Deur has demonstrated the presence of low-intensity plant cultivation in garden plots on the west coast of Canada, a region usually depicted as non-agricultural. Janet Gritzner and Sandra Peacock, working just east of Deur in the semi-arid interior plateaus of both the United States and Canada, have shown that the peoples of this region managed plants intensively through prescribed burning, selective harvesting, and the transporting and transplanting of plant materials.¹² Karl Butzer and William Denevan have produced syntheses summarizing Indian impacts on the land throughout North America, and have demonstrated the value of this environmental modification to later European occupation of the continent.¹³ These studies often integrate biogeography, or the study of plant and animal distributions and movement, analysis of settlement patterns and archaeological features, and conventional ethnographic methods, thereby shedding light on related topics such as pre-contact Native settlement distribution, population size, and cultural complexity.¹⁴

For the post-contact period, interpretations of the fur trade and other similar networks have been overhauled by a new focus on Indians as active trade agents, modifiers of landscapes, and manipulators of markets and geopolitics.¹⁵ Returning to the continental scale once again, historical geographer Donald Meinig has reinterpreted the shaping of the United States by synthesizing trade research and other information on Indian networks with research on US religious, corporate, and military interests aiming to secure a continent-wide economic and cultural empire. The result is a skillful revision of American history as a plainly imperialist enterprise.¹⁶

Another persisting theme associated with Berkeley geography entails explaining the origins and diffusion pattern of specific elements of the material cultural landscape. For example, the following have appeared in recent years: a regional analysis of material landscapes in the Four Corners area; a typology of Canadian Métis houses and farmsteads; a comparative study of gravesites and outdoor funerary practices among the Navajo, Mormons, and

Zuni; examinations of Mescalero Apache settlement and housing; analyses of architecture and its geographical context; a study of conflicting cultural landscapes at Santa Clara Pueblo by a member of that pueblo; and a diffusion study supporting the thesis that there was early Asian contact with Indians in the pre-Columbian Americas, an idea still not widely accepted in geography.¹⁷ In another materialist study, Terry Jordan and Matti Kaups argued that early New Sweden produced a successful mix of Finnish and Delaware Indian forest cultures in the Delaware Bay area that then expanded into the Upland South, becoming the most successful frontier society in early America. However, one critic was chagrined that the authors had handled questions of backwoods relationships, intermarriage, and other social customs only from the European perspective.¹⁸

(RE)SOURCES

The material elements of the biosphere normally termed *resources* might also be worth considering simply as *sources*. So many issues associated with the biosphere, like water quality and quantity, are deeply intertwined with sovereignty, land dispossession and restoration, planning and development, sacredness, and even gambling and tourism. All these topics are sources of physical, economic, political, and spiritual livelihoods. While this manipulation of language may seem thoroughly postmodern, it is not our intention to be playful. We employ ambiguity as a linguistic element expressing the intellectual richness of this subject by acknowledging the inter-penetration of its subtopics. In this section then, we seek to dissolve the traditional human-nature dichotomy by grouping these ideas together and employing *resource* and *source* as one word.

The Biosphere

Since 1980 the capacity of tribal governments as sovereign managers of (re)sources and environmental quality has increased modestly in some cases, dramatically in others. Individual tribal members working as attorneys for or leaders of tribal governments or pan-Indian organizations such as the Native American Rights Fund and the Council of Energy Resource Tribes frequently raise their voices to characterize human-environment relations from an Indian perspective. Geographers studying tribal (re)source management are responding to the same contemporary Native issues raised in these settings.¹⁹

Water has been of special interest to those working in the arid and semiarid western United States. In this area, water not only is physically and economically crucial, but also is an agent of social cohesion and cultural reaffirmation. Kate Berry demonstrated this in two recent publications comparing the role of water for two Paiute communities and one non-Indian community in northwestern Nevada, and the role of water in the historical geography of California.²⁰ Berry and Joanne Endter also examined the significance of different cultural values in the actions, policies, and court decisions affecting water allocation for tribes. Judith Jacobsen and Mary McNally considered how water project development and marketing of water rights on tribal land has

been influenced by congressional actions and negotiated water rights settlements, and John Newton looked at local responses to flood hazard in northern Canada.²¹

Noteworthy contributions also have been made in the analysis of tribal control over plant and wildlife (re)sources. The Clayoquot Sound Scientific Panel in British Columbia, a group including both Indian and non-Indian researchers, articulated how traditional understandings and uses of forests worked in the pre-European occupation period and demonstrated how such perception and knowledge might be accommodated in current land management practices.²² Steven Silvern studied tribal control of off-reservation fish and wildlife (re)sources guaranteed by treaty by examining the structure of conflict between hunters and fishers and six Chippewa tribes in Wisconsin.²³

The infamous government-ordered Navajo sheep-reduction program of the 1930s may stand alone as the worst example of the government's willingness to pauperize a population by eliminating its animals. Will Graf and others confirmed that where Indian-white relations are concerned, "a little scientific knowledge [is] a dangerous commodity." Graf, a physical geographer, states that the Navajo were right in asserting that climate variation was the cause of Colorado River sedimentation, not the number of sheep they grazed.²⁴ The Bureau of Reclamation and Soil Conservation Service were comfortable nonetheless in recommending the reduction program when they had only incomplete data. In jarring contrast, co-management agreements for wildlife and other biota are so common across Canada now that an argument has been made for including them as part of the constitutional rights of First Nations.²⁵

Sovereignty, Dispossession, Land Claims, and Land Restoration

A key element in sovereignty disputes is the relationship of land claims and land rights to contemporary tribal powers and land use decision-making. Sovereignty is also central to the expansion of tribal powers and autonomy within states, provinces, and federal governments. In particular, the recognition of tribal governments as legitimate controlling agents of tribal (re)sources has put the sovereignty issue on center stage among geographers and planners. For example, Dick Winchell described the concept of inherent sovereignty as the basis of tribal powers while also offering ways of incorporating inherent sovereignty into contemporary comprehensive planning models. In addition, David Wishart recognized that sometimes contemporary reservations are good bulwarks against further attacks on sovereignty.²⁶

Sovereignty issues are implicated in "dispossession research," which is conducted at all geographic scales. Perhaps no one has summarized in a single map the continent-wide geography of Indian removals during the colonial period better than Elaine Bjorklund.²⁷ For specific regions, there are Kenneth Brealey's study of the genesis of British Columbia's reserve system, Malcolm Comeaux's description of how water and development economics were used to dispossess the Pima and Maricopa, Florence Shipek's volume on southern California, where Indians were literally pushed into the rocks, and Wishart's book detailing the elimination of people from nineteenth-century

Nebraska.²⁸ The latter two are the culmination of decades of archival research and, in Shipek's case, ethnographic fieldwork. Dispossession also continues in its classic form today, as Ward Churchill summarized for a number of places, and as Holly Youngbear-Tibbetts described in detail for the White Earth Anishinaabeg.²⁹

Dispossession is more than a physical act, for it occurs in rhetorical strategies that anticipate the action. Randy Bertolas examined such a strategy in the redefinition of Cree places as "wilderness." He argued that imagining a place as empty of humans, although only a dream, allows the colonizer-dreamer to then separate people from their own socially constructed landscapes, causing seemingly less psychic pain for the colonizer. Robert Bone described essentially the same process for the Canadian North.³⁰ There are newer or less commonly used methods too, including gerrymandering a reservation to reduce electoral representation, and contesting tribal rights to select an electricity provider by going to court to call into question the "Indianness" of a reservation.³¹

Imre Sutton, a political geographer, summarized the historical evolution of Indian Country as a site of legal jurisdiction in substantial detail. Dorothy Hallock gave a more abbreviated summary, but recast contemporary Indian Country as the location of numerous aspects of colonizer-colonized relations, not just as the seat of Indian legal claims. She also suggested that Indian Country was a general geographical model for all majority-minority relations. Finally she reported a case study out of her own experience as a planner on the Fort Mojave Reservation, part of which was redesigned as an internment camp for Japanese-Americans during World War II.³²

Canadian geographers seem to have given more thought to the basis for land claims and their potential resolution, a matter probably arising out of the contemporary political circumstances in which Canadians find themselves. Taking an economic approach, Frank Duerden looked at land claims in the Yukon as a land location-allocation problem, Evelyn Peters drew lessons from the Cree situation in Quebec, and Peter Usher et al. provided a valuable and detailed diachronic summary of tenure systems, Indian and Inuit concepts of rights, and ongoing claims in British Columbia and the Arctic.³³

Geographers are by no means uniformly aligned in their political sentiments regarding Indian land claims. Political agendas and associated ideologies vary widely and are often evident in what they write and whom they consult. Some in the United States still willfully disregard Indian land rights when staking out their own positions in support of a competing land claim, despite extensive writing on the subject by Linda Parker, Sutton, and others cited above.³⁴ For example, the January 1999 issue of *Political Geography* included a debate over the future of the Hanford Plant just across the Rattlesnake Hills from the Yakima Reservation in south central Washington. A respected political geographer wrote that Yakima rights were only those of a "local interest group" that had not exercised these "local customs" in the more than fifty years since Hanford was built. Several critics attempted to set the writer straight, but no acknowledgement of their criticisms was registered in his rejoinder.³⁵

Out of the claims process can come land restorations, although it is highly uncommon in the United States. Barbara Morehouse recounts the success of the

Havasupai in regaining trust over 185,000 acres of Grand Canyon National Park. Five other tribes gained very little, but Morehouse's analysis suggests that the Havasupai were more successful not because of longevity, occupancy, or other similar evidence, but because they broadened their rhetorical arguments beyond the narrow concerns of the moment to include most of the other Grand Canyon interests, both Indian and non-Indian, involved in that negotiation. Morehouse leaves unanswered the question of whether such rhetoric has an historical basis in Havasupai culture or if it represents a form of "talking back" by using one of the colonizer's own argument strategies.³⁶

Sacred Land

Another aspect of the colonial legacy is the need to document sacred land. The very concept is embedded in the colonial relationship itself, implying as it does that there is some land that is not sacred. Moreover, the federal government did not allow "sacred land" as a legal land-claim defense until the 1970s, and its documentation must meet standards defined by the federal government, a bizarre requirement since the federal courts seldom demonstrate much wisdom in cosmological or religious matters. Today places of special religious significance become the spatial nexus of intercultural conflict. Thus Indian spiritual connections to the environment are frequently examined and negotiated in light of contemporary residential development, land management activities, and outdoor recreation as well as legislative activities and the outcomes of litigation.³⁷

Spiritual connections are seldom straightforward however. Stephen Jett suggested that there may be varying degrees of sanctity for Navajo, although he is unclear about whether such a continuum emanates from his own analysis of the situation or from Navajo interpretations. In addition, James Griffith explained in detail the multivalent possibilities of places where ideas of sacredness held by the Tohono O'Odham, Yaqui, Mexican, and Anglo-American peoples intersect. Also, Linea Sundstrom attempted to set the record straight for the Black Hills using archival documents in an ethnohistorical reconstruction identifying what is held sacred in the area, since when, and by whom, including at least seven tribes.³⁸

The secular popularity of the subject of sacred lands has not come without repercussions. People are dehumanized and cultural complexity trivialized when non-Indian environmentalists fixate on indigenous ecological spirituality and activity while ignoring other significant aspects of community and culture. Bruce Willems-Braun makes this point about marginalization of the Nuu-chah-nulth of British Columbia, who often have been denied an active role in debates over wilderness preservation because a perspective on the environment has frequently been imposed on them rather than asserted by them.³⁹

Economic Development and Planning

Three decades ago Brian Goodey called on geographers to work as researcher-advocates in support of Indian tribes and their economic development.⁴⁰ Since

that time, land use, economic development, and tourism, especially related to gambling, have undergone rapid change in Indian Country. When coordinated with tribal interests, research into these areas generally has been viewed positively by tribal governments. There are a number of geographers and their colleagues who are working for tribes directly or as consultants, or are pursuing research on these topics independently.⁴¹ Data problems are a major concern among these researchers, especially difficulties encountered in using census and Bureau of Indian Affairs (BIA) or Department of Indian Affairs and Northern Development (DIAND), the Canadian equivalent of the BIA, data for analysis of population and economic and community development.⁴²

A critical issue in tribal planning is the need to establish a framework for government-to-government relations between tribal and city, county, and state governments when work must be accomplished in a regional context. A major applied research effort on this topic was carried out and summarized by Shirley Solomon, a geographer working with the Northwest Renewable Resource Center in Seattle. This collaboration produced extensive coordination of tribal groups and local governments. Models for government-to-government relations and the roots of tribal government and sovereignty also are represented in a 1992 guide for positive tribal-county relations produced by that center.⁴³

Another important planning topic is health care. One study found that access to health services was severely restricted on the Round Valley Reservation in northern California not only because of its extreme distance from comprehensive medical facilities, but also because trained medical and dental professionals could not be consistently retained. Another found that Montana Indian women were twice as likely as non-Indians to have to travel outside the county to a birthing facility and even more likely to have poor obstetric care anywhere near where they live. None of this will come as a surprise to readers familiar with rural life, especially life in Indian Country. But geographers are novices to health care planning and are only just beginning to realize their expertise may be of use in examining aspects of health care such as location, access, travel distance, and sense of place. The new multicultural conceptions of health and well-being now beginning to replace standard medical-geography models undoubtedly will encourage more interest in Indian health issues.⁴⁴

Gambling and Tourism

Federal legislation in the 1980s and 1990s made gambling a potentially significant component of reservation economic development, the impact of which was examined in two edited books and several articles by geographers.⁴⁵ The case studies indicate rapid growth in gambling accompanied by some economic benefit accruing to most participating tribes. Long-term stability, increasing competition from other gambling facilities, subsequent social polarization, and the politics of wealth redistribution both inside and outside reservation boundaries are recognized as problems. Regional studies for Connecticut, the Dakotas, New Mexico, and Oklahoma also are included in these publications.

The sale of American Indian arts and crafts and the associated appeal of

cultural tourism have long played a role in Indian economic life, although the benefits have been distributed unevenly from region to region. In the past, such activities were generally directed and controlled by non-Indians, and the bulk of revenues and proceeds went to non-Indians. While there are some exceptions, this pattern often continues today. Several geographers have studied the consequences of tourism for Native populations and the increased effort to gain local control of tourism facilities and activities.⁴⁶

LANDSCAPES, IDENTITIES, AND REPRESENTATIONS

Postcolonialism and Landscapes of the Mind

Geographers also have begun applying postcolonial or other social theory to American Indian studies. Generally anglophonic postcolonial studies have emerged from and focus on the British colonial experience; accordingly, postcolonial American Indian research is well represented within Canadian universities, most notably the University of British Columbia. These researchers seek to deconstruct and assess the imprint of a European worldview on the lands, minds, and bodies of Indians. They draw inspiration from postcolonial literature and French intellectuals Henri Lefebvre, Jacques Lacan, Jacques Derrida, and Michel Foucault. These diverse theoretical currents are brought together in studies of colonial surveillance and control of Indian spaces, the appropriation of such spaces through ethnocentric cartographic or other textual representation, and the various Indian responses to such practices.⁴⁷ Nicholas Blomley has employed similar themes, investigating Indian blockades in British Columbia as a mechanism for tribal reappropriation of space, and Robert Galois has attempted a revised empirical overview of historical Kwakiutl settlement free from earlier colonial biases.⁴⁸

Explaining the mechanisms of group representation and identity is fundamental in several studies: Berry's comparative work on waterscapes and representation for Paiute and non-Paiute communities in northern Nevada; Dennis Crow's inquiry about reservations as "low places"; Deur on the Makah whale hunt revival; Galois on the period of colonial consolidation in British Columbia; Peters' examination of the apparent conflict between "city person" and "Indian" identities in Canadian cities; and Silvern's study of treaty-rights conflicts in Wisconsin.⁴⁹ Also, the spatial aspects of gender are influential in the way places and people function. Karen Morin examined British women's constructions of Indians as Others in historic "contact zones" like the railroad depots of the American West, Peters explained the role of Indian females in subverting urban spaces in Canada, and Wishart considered the role and status of women in Pawnee society, and the general place of Indian women as subjects of geographical research.⁵⁰ In an unusual link to demographic study, Robert Jackson sifted the evidence of population decline in the US Southwest and developed the thesis that deaths were related not only to disease, but also to place/space destruction and reductions in cohesion, identity, and sense of place.⁵¹ In a similar vein, R. Douglas K. Herman provided insight into changes

in Hawai'ian identity in response to colonization and corresponding shifts in environmental knowledge and language.⁵²

The question of whether there exists a pan-Indian sensibility about place and space also has been of some interest. In a 1976 interview, N. Scott Momaday proposed and described what he termed a pan-Indian ecological sensibility bound into Indian identity, an ethos distinguished from those of non-Indian North Americans by the presence of what he termed a sense of "reciprocal appropriation."⁵³ Then geographers David Stea and Ben Wisner wrote of a pan-Indian ecological worldview projected outward in solidarity with other indigenous or Fourth World peoples.⁵⁴ Since then a few geographers have examined pan-Indianness as an evolving identity crucial to understanding the link between place and action,⁵⁵ and one has written about the men's movement's appropriation and wild distortion of elements of this identity.⁵⁶

Others have shown how Indian identities are materialized in places as disparate as battlefield and massacre sites, cultivated gardens, migration corridors, and interior landscapes of the mind.⁵⁷ The Inuit have been of particular interest, as shown in studies attempting to explain their mental landscape representations or "mental maps," their navigational skills, and their secondary position to environmentalists' identification with stranded whales and stripped seals.⁵⁸

Place names or toponyms are also of longstanding interest to geographers, and another intersection where the work of anthropologists has been influential. Most recently the intimate links among social structure, individual and group identity, and place were illustrated by geographers studying Chinook Jargon, Inupiat, Hawai'ian, Navajo, and Inuktitut place names.⁵⁹

Maps and Geographic Information Systems

The study of Indian and Inuit maps accelerated during the past ten years and helped revitalize cartography as a discipline with an historically and culturally situated subject matter, and not merely a narrow technical one. A group of writers have examined the interpretations made of Indian or Inuit maps by nineteenth- and twentieth-century explorers and government agents, and the discourses into which these documents entered, including those of contemporary scholarship.⁶⁰ Map exchanges between Indians or Inuit and Europeans or Euro-North Americans occurred everywhere in North America, but extant examples and thus much of the research effort is concentrated in the continent's interior plains from Texas to Saskatchewan, and in the Arctic. These maps are seen as emanating from different assumptions and discourses about the world as a home for humans and non-human others when compared to what Europeans and Euro-North Americans were producing. Indian maps actively disrupted European discourse on geography, history, and identity, and represent one side of what was and still is to some extent an unbridgeable gap in worldviews.

The other side, the European and Euro-North American mapping of Indian Country, has also come under scrutiny.⁶¹ This cartography spans the last five hundred years, but geographers have tended to study comparatively recent

examples. They have questioned these maps, often finding them ideological weapons serving non-Indian interests rather than the simple and innocent mimetic representations that the general public and their makers imagined them to be.

Three major volumes, all recently published, summarize in varying detail and with different emphasis the current understanding of indigenous cartography in North America. G. Malcolm Lewis' long-awaited edited collection of scholarly essays, *Cartographic Encounters: Perspectives on Native American Map-making and Map Use*, leads the way here. Lewis also composed a lengthy cartobibliographic summary for the second volume of David Woodward's *The History of Cartography* project. Finally, Mark Warhus recently published his own summary of Indian mapping, *Another America: Native American Maps and the History of Our Land*. This last book is more accessible to general readers and has numerous excellent map reproductions.⁶²

A number of atlases also appeared that were totally or significantly devoted to portraying Indian geographies.⁶³ Several others deserve attention because they emanate from Indians or Inuit themselves and represent a new trend of "mapping back" or "counter-mapping" the colonizers. A *Zuni Atlas* was published because Zuni elders, in their effort to press a land claim, decided it was time to make certain protected geographical information available to the public for the first time.⁶⁴ In part this atlas is notable because it reveals some Zuni sacred sites in order to demonstrate land occupancy beyond present reservation boundaries. But it does so using maps drawn at a scale too small for the reader to navigate. Thus the sites were revealed for litigation purposes, but still kept safe from unwanted visitors.

The Inuit have been especially active in counter-mapping. First, they created a map series containing their own place names inscribed on Canada's official topographic maps, then they assembled the *Nunavut Atlas*, an extensive compilation of wildlife patterns and other environmental data gathered from Inuit elders.⁶⁵ These may be viewed both as attempts to overcome disruption of the traditional oral transfer of geographic information from one generation to the next and also as nationalistic outpourings in anticipation of the creation of the new Territory of Nunavut in 1999. Robert Rundstrom has taken note of these developments and their implications in an article and map review.⁶⁶

GIS are a completely new technological development within the past two decades but are understood as a natural extension into the digital era of gathering and mapping geographical data. To put it most broadly, GIS are computer systems for the gathering, storage, and manipulation of geographical coordinates and associated statistical data about anything on the earth's surface, expressions of which can be made in either paper or digital form. They are more than computerized mapping systems because they can transform information in ways uncommon or unknown in traditional mapmaking and they easily link with orbiting satellites and the remotely sensed digital images that satellites transmit. In the past five years, a national American Indian GIS association has developed and is closely linked to the leading corporate manufacturer of GIS software; tribes, therefore, have been very active participants

in GIS applications and research.⁶⁷ Continued efforts to link the US Census Bureau's Topologically Integrated Geographic Encoding and Referencing (TIGER) file maps with tribal information has also helped some tribes initiate detailed spatial data analysis of the lands and people administered by tribal government. The BIA also established a GIS branch that encourages tribes and offers advice on tribal GIS development—although recent funding cut-backs have hampered this effort—and has stockpiled a considerable amount of tribal GIS data in their own library.⁶⁸

Partly in response to these developments and partly because many Indian communities are deeply suspicious of the BIA-backed tribal governments where GIS managers are housed, a consortium of tribes in the northern Plains and another in the Rio Grande corridor have limited BIA and other federal agencies' access to some of their databases, declaring some of their GIS proprietary in an attempt to protect sensitive and sacred geographical information. These and other longstanding problems associated with the allocation of political authority in Indian Country caused one geographer to raise questions about the path of GIS development, especially its transformative powers, surveillant capabilities, and political uses.⁶⁹ Through experience working with GIS, many have come to see it as a contradictory technology that can both empower and marginalize people and communities. Arguments about the social impacts of GIS have grown in recent years, and a debate has surfaced in geography under the heading "GIS and Society." One of the more interesting proposals emerging from that debate, and worth considering in Indian Country, is for development of "community-integrated" GIS that focus on local empowerment through community, not government, control of and access to digital geographic information.⁷⁰

RESEARCH, WRITING, AND TEACHING

Increased self-reflection in research, writing, and teaching is another recent trend as geographers continue to study American Indian lands and communities. Seeking appropriate contexts for interaction and research in conjunction with Indian governments and peoples, many geographers have read what Indian writers have to say to academics about intellectual property rights, citation protocols, and other matters associated with colonialism and the written word.⁷¹ Rundstrom and Deur and Jane Tompkins have suggested ways to translate these and other ideas into ethical practice.⁷²

Geographers engaged in non-Indian research sometimes find it useful to employ Indian geographies as a metaphor or analogy they think is applicable to their project. The results of this kind of writing can be mixed, but in the best of circumstances it provides insight. For example, Neil Smith decided that media descriptions of recent social changes in a part of Manhattan, which were also picked up and used in local parlance, were drawing on images from a mythical Wild West. White yuppie gentrifiers were being called "pioneers" and "settlers" in a harsh environment full of "savages."⁷³ It was, he rightly argued, the old mythic narrative of cowboys and Indians being played out yet again in another era of conquest and resettlement, this time in the "wastelands" of the inner city.

Inevitably academics must take their ideas into the classroom, and geographers who teach about Indians and Indian Country have begun to explore the meaning of this activity. Three writers, each adopting a different pedagogical perspective, offered explanations for the materials and rationales they currently use in their classrooms. Among many different issues raised, one overriding question emerged in all three: How do non-Indians achieve fairness and equity of representation when they teach the subject? Several solutions were offered, but all three writers agreed on the importance of exposing white students directly to Indian speakers and communities.⁷⁴

CONCLUSIONS AND SOME SUGGESTIONS FOR THE FUTURE

We think this review signals the arrival of geography as a small but important participant in American Indian studies. Geographers are helping to illuminate the complexity and refinement of environmental modifications made by early Indians and perpetually revise our knowledge of these matters in virtually every region of the continent. They also are busy telling mainstream society that water is a vital cultural (re)source—not just a scarce but necessary physical commodity—with the intent of altering the allocation and cost-benefit models used in managing it. Geographers continue to document land fraud through dispossession research in both historical and contemporary periods, sitting in courtrooms as expert witnesses to do so, and by trying to educate other geographers still steeped in traditions of seeing Indian land claims as an insignificant “interest” competing against “higher” uses. Geographers also continue to assert the centrality of land and place in Indian identity and to explore how attachments to place are manipulated by both individuals and the institutions that would control them. They continue to deconstruct the imprint of European and Euro-North American colonization and to unpack the sounds and silences in historical and contemporary maps and GIS, in part to promote more culturally sensitive applications of technology. Geographers are working with planners and tribal leaders to develop models for cooperative planning for future economic development. Increasingly, they are reflecting on their own positions as privileged researchers, teachers, and consultants. Finally, they are teaching all this to their students.

By no means are we implying that everything is just fine in geography. For example, there is a sense among many AISG members that we can and should become more active and involved in issues of importance to Native people throughout North America, to the point of adopting advocacy stances more frequently. Some of the work cited here leads in that direction, especially the accomplishments of those working on (re)sources and development. However, much of the other work often seems to hold Indians at arm’s length. This may be because many geographers still look askance at colleagues who take on advocacy roles, believing that the mask of apolitical objectivity so often donned in the past is still worth wearing. Perhaps some are justified in their aloofness, preferring the detachment afforded by theoretical questions, or the solitude available in archives and libraries. On the other hand, theoretical and empirical work on material and ideal landscapes, identities, and represen-

tations, and the research on historical and contemporary cartographies are among the fastest growing and most intellectually active areas of the field.

It is also certain that there is much more that is needed in the field: historical studies exploring continuities in land use and governance for land claims; land use and place-name mapping and GIS for preservation of cultural (re)resources; examinations of the spatial basis for self-governance and self-determination to support sovereignty; critical approaches to the role of space and place in the social construction of "Indians" via public perceptions, legislative agendas, corporate intentions, and classroom teaching; continued work in deconstructing colonial legacies and postcolonial discourse in the effort to achieve genuine polyvocality; and analyses of the health care distribution system of the majority and its relationship to alternative medical systems available through local cultural practices.

It is encouraging to see a diversity of topics and approaches being engaged with enthusiasm. And in all of it geographers increasingly realize that it is no longer possible to remain completely indifferent about the politics of their own research when studying North America's Native communities, places where research, self-determination, and sovereignty now typically go hand in hand.

NOTES

1. There are 380 baccalaureate, 170 masters, and only 75 Ph.D. degree programs in geography at institutions of higher learning in the United States and Canada, less than half that of history, for example. In addition, geography is still seldom taught beyond the elementary-school level in the United States.

The number of US geographers who claim American Indian or Native Alaskan ancestry is extremely small. Membership in the Association of American Geographers (AAG), calculated as a three-year average for 1996 through 1998, shows only thirty (seventeen males, thirteen females), or 0.42 percent, such people out of a total of 7,069 total members. As a whole, the discipline continues to be overwhelmingly white (91 percent) and male (71 percent). Thus, virtually all the research in geography on American Indian topics is done by non-Indians. Most of these people are members of the American Indian Specialty Group (AISG) of the AAG, a group of about one hundred people (Source: AAG *Newsletter* 34:5 [May 1999]: 20).

There is an AISG discussion list via electronic mail. Membership in the AISG is not required to post an inquiry or other type of message. If *American Indian Culture and Research Journal* readers wish to participate, they should send an email message, "subscribe am-ind-geog [your name]" (without the quotation marks) to listserv@unc.edu. A subscription is required before messages can be posted. Once subscribed, messages can be sent to aisc@listserv.oit.unc.edu. An AISG website is located at <http://www.unc.edu/depts/geog/aig>.

2. We included books, journal articles, chapters in edited volumes, and selected dissertations and tried to be complete in the first two categories. We sincerely apologize if we have plainly missed something. The great majority of these works were written by geographers, although we inserted additional citations if we thought they had been influential in the discipline or otherwise noteworthy. We made no effort to insert

the “grey literature,” the vast and amorphous body of tribal, federal, state, regional, and local government reports produced by bureaucrats and professional consultants, although many of these certainly are relevant and worth reading.

3. At least two classic texts were recently reissued in new editions to signal the ongoing relevance of earlier work: William Denevan, *The Native Population of the Americas in 1492* (Madison: University of Wisconsin Press, 1992); and Thomas Waterman, *Yurok Geography* (Trinidad, CA: Trinidad Museum Society, 1993).

4. See W. Hans, “The American Indian and Geographic Studies,” *Annals of the Association of American Geographers* 15 (1925): 86–91; Ellsworth Huntington, *The Red Man’s Continent: A Chronicle of Aboriginal America*. (New Haven: Yale University Press, 1919); Ellen Semple, *American History and Its Geographic Conditions* (Boston: Houghton Mifflin Company, 1903).

5. It is also important to note that Carl Sauer was interested in land modification by American Indians prior to his arrival at Berkeley. See Carl Sauer, “The Geography of the Ozark Highland of Missouri” (Ph.D. diss., University of Chicago, 1915), also published as Bulletin No. 7, The Geographic Society of Chicago (Chicago: University of Chicago Press, 1920). We find it puzzling that anthropologists and other academics writing explicitly and in depth about cultural landscapes in Indian Country often ignore Sauer and the subsequent massive literature on the subject in geography. For example, see Richard Stoffle, David Halmo, and Diane Austin, “Cultural Landscapes and Traditional Cultural Properties: A Southern Paiute View of the Grand Canyon and Colorado River,” *American Indian Quarterly* 21 (1997): 229–249.

6. Samuel Barrett, *Ethno-geography of the Pomo and Neighboring Indians* (Berkeley: University of California Press, 1908); Franz Boas, *Geographical Names of the Kwakiutl Indians*, Columbia University Contributions to Anthropology, vol. 20 (New York: Columbia University Press, 1934); J. Harrington, *Ethnogeography of the Tewa Indians*, Bureau of American Ethnology Report No. 29 (Washington, DC: Smithsonian Institution, 1916); Alfred Kroeber, *Cultural and Natural Areas of Native North America* (Berkeley: University of California Press, 1939); Robert Lowie, *Primitive Society* (New York: Harper and Brothers, 1920); Clark Wissler, *The Relationship of Nature to Man in Aboriginal America* (London: Oxford University Press, 1926).

7. George Carter, *Plant Geography and Culture History in the American Southwest*, Viking Fund Publications in Anthropology, No. 5 (New York: Wenner-Gren, 1945); Fred Kniffen, “Pomo Geography,” *University of California Publications in American Archaeology and Ethnology* 36 (1939): 353–400; Carl Sauer and Donald Brand, *Pueblo Sites in Southeastern Arizona* (Berkeley: University of California Press, 1930).

8. Carl Sauer, *Sixteenth Century North America: The Land and the People as Seen By the Europeans* (Berkeley: University of California Press, 1971); Fred Kniffen, Hiram Gregory, and George Stokes, *The Historic Indian Tribes of Louisiana: From 1542 to the Present* (Baton Rouge: Louisiana State University Press, 1987). Other literature reviews have described much of the work published before 1989: Donald Ballas, “Geography and the American Indian,” *Journal of Geography* 65 (1966): 156–168; Alvar Carlson, “A Bibliography of the Geographical Literature on the American Indian, 1920–1971,” *The Professional Geographer* 24 (1972): 258–263; Stephen Jett, *A Bibliography of North American Geographers’ Works on Native Americans North of Mexico, 1971–1991* (Lawrence: Haskell Indian Nations University in conjunction with the American Indian Specialty Group of the Association of American Geographers, 1994); Dick Winchell, James Goodman, Stephen Jett, and

Martha Henderson, "Geographic Research on Native Americans," in *Geography in America*, eds. G. Gaile and C. Willmott (Columbus, OH: Merrill, 1994), 239–255.

9. The anthropology connection still runs deep for geographers, but perhaps the connection is not so strong for anthropologists. Geographers studying Indian landscapes are well aware of the work of Keith Basso and Hugh Brody, among others. However, Basso dismisses the relevance of cultural geography, citing the work of a very small group of radical postmodernists as representative. See Keith Basso, *Wisdom Sits in Places: Landscape and Language Among the Western Apache* (Albuquerque: University of New Mexico Press, 1996); Hugh Brody, *Maps and Dreams* (Vancouver: Douglas and McIntyre, 1988); id., *The People's Land: Inuit, Whites, and the Eastern Arctic* (Vancouver: Douglas and McIntyre, 1991).

More recently, geographers have found the work of environmental historians useful. In turn, environmental historians' work on American Indian land modification owes a great deal to Sauer and his students. For example, William Cronon, Alfred Crosby, and Richard White discuss American Indian land use as a foundation for studies of biotic change during the contact and historical periods. See William Cronon, *Changes in the Land: Indians, Colonists, and the Ecology of New England* (New York: Hill and Wang, 1983); Alfred Crosby, *Germ, Seeds and Animals: Studies in Ecological History* (Armonk, NY: M. E. Sharpe, 1994); Richard White, *Land Use, Environment, and Social Change: The Shaping of Island County, Washington* (Seattle: University of Washington Press, 1992).

10. James Brown, *Aboriginal Cultural Adaptations in the Midwestern Prairies* (New York: Garland, 1991); William Gartner, "Four Worlds Without an Eden: Pre-Columbian Peoples and the Wisconsin Landscape," in *Wisconsin Land and Life*, eds. R. Ostergren and T. Vale (Madison: University of Wisconsin Press, 1997), 331–349.

11. William Doolittle, "Agriculture in North America on the Eve of Contact: A Reassessment," *Annals of the Association of American Geographers* 82 (1992): 386–401; Emily Highleyman, "Subsistence and Culture: The Gwich'in Indians in Alaska" (Ph.D. diss., University of Wisconsin, Madison, 1994); T. Pearson, "The Wild Rice Harvest at Bad River: Natural Resources and Human Geography in Northern Wisconsin," in *Wisconsin Land and Life*, eds. R. Ostergren and T. Vale (Madison: University of Wisconsin Press, 1997), 505–520; William Preston, "The Tulare Lake Basin: An Aboriginal Cornucopia," *California Geographer* 30 (1990): 1–24.

12. Douglas Deur, "A Domesticated Landscape: Territorial Claims, Ethnographic Representation, and Indigenous Plant Cultivation on the Northwest Coast" (Ph.D. diss., Louisiana State University, 1999); id., "Salmon, Sedentism, and Cultivation: Toward an Environmental Prehistory of the Northwest Coast," in *Northwest Lands and Peoples: An Environmental History Anthology*, eds. P. Hirt and D. Goble (Seattle: University of Washington Press, 1999); id., "Plant Cultivation on the Northwest Coast: A Reassessment," *Journal of Cultural Geography* 19 (1999): forthcoming; id. and N. Turner, eds., *Keeping It Living: Traditional Plant Tending and Cultivation on the Northwest Coast* (Seattle: University of Washington Press, 1999); Janet Gritzner, "Native-American Camas Production and Trade in the Pacific Northwest and Northern Rocky Mountains," *Journal of Cultural Geography* 14 (1994): 33–50; Sandra Peacock, "Putting Down Roots: The Emergence of Wild Plant Food Production on the Canadian Plateau" (Ph.D. diss., University of Victoria, 1998).

13. Karl Butzer, "The Indian Legacy in the American Landscape," in *The Making of the American Landscape*, ed. M. Conzen (Boston: Unwin Hyman, 1990), 27–50; William

Denevan, "The Pristine Myth: The Landscape of the Americas in 1492," *Annals of the Association of American Geographers* 82 (1992): 369–385.

14. For example, see Denevan, *Native Population*; id., "Carl Sauer and Native American Population Size," *Geographical Review* 86 (1996): 385–397.

15. Cole Harris, "Towards a Geography of White Power in the Cordilleran Fur Trade," *The Canadian Geographer* 39 (1995): 131–140; Susan Marsden and Robert Galois, "The Tsimshian, the Hudson's Bay Company, and the Geopolitics of the Northwest Coast Fur Trade, 1787–1840," *The Canadian Geographer* 39 (1995): 169–183; Frank Tough, "Indian Economic Behavior, Exchange and Profits in Northern Manitoba During the Decline of Monopoly, 1870–1930," *Journal of Historical Geography* 16 (1990): 385–401; Lee Weissling, "Inuit Life in the Eastern Canadian Arctic, 1922–1942: Change as Recorded by the RCMP," *The Canadian Geographer* 35 (1991): 59–69; Martha Works, "Creating Trading Places on the New Mexican Frontier," *Geographical Review* 82 (1992): 268–281.

16. Donald Meinig, *The Shaping of America: A Geographical Perspective on 500 Years of History*, vol. 2: Continental America, 1800–1867 (New Haven: Yale University Press, 1993).

17. Kenneth Brown, *Four Corners: History, Land, and People of the Desert Southwest* (New York: HarperCollins, 1995); David Burley and Gayel Horsfall, "Vernacular Houses and Farmsteads of the Canadian Metis," *Journal of Cultural Geography* 10:1 (1989): 19–33; Keith Cunningham, "Navajo, Mormon, Zuni Graves: Navajo, Mormon, Zuni Ways," in *Cemeteries and Gravemarkers: Voices of American Culture*, ed. R. Meyer (Ann Arbor: University of Michigan Research Press, 1989), 197–215; Martha Henderson, "Settlement Patterns on the Mescalero Apache Reservation Since 1883," *Geographical Review* 80 (1990): 226–238; id., "Maintaining Vernacular Architecture on the Mescalero Apache Reservation," *Journal of Cultural Geography* 13:1 (1992): 15–28; Stephen Jett, "The Navajo in the American Southwest," in *To Build in a New Land: Ethnic Landscapes in North America*, ed. A. Noble (Baltimore: Johns Hopkins University Press, 1992), 331–344; Peter Nabokov and Robert Easton, *Native American Architecture* (New York: Oxford University Press, 1989); Frank Porter III, "American Indians in the Eastern United States," in *To Build in a New Land: Ethnic Landscapes in North America*, ed. A. Noble (Baltimore: Johns Hopkins University Press, 1992), 119–135; Rina Swentzell, "Conflicting Landscape Values: The Santa Clara Pueblo and Day School," in *Understanding Ordinary Landscapes*, eds. P. Groth and T. Bressi (New Haven: Yale University Press, 1997), 56–66. For the pre-Columbian Asian contact thesis, see Stephen Jett, "Further Information on the Geography of the Blowgun and its Implications for Early Transoceanic Contacts," *Annals of the Association of American Geographers* 81 (1991): 89–102.

18. Terry Jordan and Matti Kaups, *The American Backwoods Frontier: An Ethnic and Ecological Interpretation* (Baltimore: Johns Hopkins University Press, 1989); Jeanne Kay, "Landscapes of Women and Men: Rethinking the Regional Historical Geography of the United States and Canada," *Journal of Historical Geography* 17 (1991): 435–452.

19. Erin Fouberg, "Tribal Territory and Tribal Sovereignty: A Study of the Cheyenne River and Lake Traverse Indian Reservations" (Ph.D. diss., University of Nebraska-Lincoln, 1997); Jeremy Shute and David Knight, "Obtaining an Understanding of Environmental Knowledge: Wendaban Stewardship Authority," *The Canadian Geographer* 39 (1995): 101–111; David Stea, "Energy Resource Development, Energy Use, and Indigenous Peoples: A Case Study of Native North Americans,"

Geography Research Forum 7 (1984): 28–42; David Wishart, “Compensation for Dispossession: Payments to Indians for their Lands on the Central and Northern Great Plains in the Nineteenth Century,” *National Geographic Research* 6 (1990): 94–109.

20. Kate Berry, “Of Blood and Water,” *Journal of the Southwest* 39 (1997): 79–111; id., “Values, Ideologies and Equity in Water Distribution: Historical Perspectives from Coastal California, United States,” in *Searching for Equity: Conceptions of Justice and Equity in Peasant Irrigation*, eds. R. Boelens et al. (Assen, The Netherlands: Van Gorcum, 1998), 189–197.

21. Kate Berry, “The McCarran Water Rights Amendment of 1952: Policy Development, Interpretation, and Impact on Cross-Cultural Water Conflicts” (Ph.D. diss., University of Colorado, Boulder, 1993); id., “Race for Water? Native Americans, Eurocentrism, and Western Water Policy,” in *Environmental Injustices, Political Struggles: Race, Class, and the Environment*, ed. D. Camacho (Durham, NC: Duke University Press, 1998), 101–124; Joanne Endter, “Cultural Ideologies and the Political Economy of Water in the United States West: Northern Ute Indians and Rural Mormons in the Uintah Basin, Utah” (Ph.D. diss., University of California, Irvine, 1987); Judith Jacobsen, “The Navajo Indian Irrigation Project and Quantification of Navajo Winters Rights,” *Natural Resources Journal* 32 (1992): 823–853; Mary McNally, “The 1985 Fort Peck-Montana Compact: A Case Study,” in *Indian Water in the New West*, eds. T. McGuire et al. (Tucson: University of Arizona, 1993), 103–113; id., “Water Marketing: The Case of Indian Reserved Rights,” *Water Resources Bulletin* 30A (1994): 963–970; John Newton, “An Assessment of Coping with Environmental Hazards in Northern Aboriginal Communities,” *The Canadian Geographer* 39 (1995): 112–120.

22. Clayoquot Sound Scientific Panel, *The Scientific Panel for Sustainable Forest Practices in Clayoquot Sound, Final Report* (Victoria: Province of British Columbia Publications, 1995).

23. Steven Silvern, “Nature, Territory and Identity in the Wisconsin Treaty Rights Controversy,” *Ecumene* 2 (1995): 267–292; id., “Scales of Justice: Law, American Indian Treaty Rights and the Political Construction of Scale,” *Political Geography* 18 (1999): 639–669.

24. William Graf, “Science, Public Policy, and Western American Rivers,” *Transactions, Institute of British Geographers* 17 (1992): 5–19, 10–11 (quote). Graf also is aware of arguments that the government had ulterior reasons for pursuing the sheep-reduction program.

25. Claudia Notzke, “A New Perspective in Aboriginal Natural Resource Management: Co-Management,” *Geoforum* 26 (1995): 187–209.

26. Dick Winchell, “Tribal Sovereignty as the Basis for Tribal Planning,” *The Western Planner* 13 (1992): 9–11; id., “The Consolidation of Tribal Planning in American Indian Tribal Government and Culture,” in *Human Geography in North America: New Perspectives and Trends in Research*, ed. K. Frantz (Innsbruck, Austria: Department of Geography, University of Innsbruck, 1996), 209–224; David Wishart, “Indian Dispossession and Land Claims: The Issue of Fairness,” in *Human Geography in North America: New Perspectives and Trends in Research*, ed. K. Frantz (Innsbruck, Austria: Department of Geography, University of Innsbruck, 1996), 181–194.

27. Elaine Bjorklund, “The Namerind Continent’s Euro-American Transformation, 1600–1950,” in *Geographical Snapshots of North America*, ed. D. Janelle (New York: Guilford Press, 1992), 5–10.

28. Kenneth Brealey, “Travels from Point Ellice: Peter O’Reilly and the Indian

Reserve System in British Columbia," *BC Studies* 115/116 (1997): 180–236; Malcolm Comeaux, "Creating Indian Lands: The Boundary of the Salt River Community," *Journal of Historical Geography* 17 (1991): 241–256; Florence Shipek, *Pushed Into the Rocks: Southern California Indian Land Tenure, 1769–1986* (Lincoln: University of Nebraska Press, 1988); David Wishart, *An Unspeakable Sadness: The Dispossession of the Nebraska Indians* (Lincoln: University of Nebraska Press, 1994). For his effort, Wishart won the J. B. Jackson Prize for producing an outstanding contribution to geography and for clarity of writing.

29. Ward Churchill, *Struggle for the Land: Indigenous Resistance to Genocide, Ecocide, and Expropriation in Contemporary North America* (Monroe, ME: Common Courage Press 1993); Holly Youngbear-Tibbetts, "Without Due Process: The Alienation of Individual Trust Allotments of the White Earth Anishinaabeg," *American Indian Culture and Research Journal* 15:2 (1991): 93–138.

30. Randy Bertolas, "Cross-Cultural Environmental Perception of Wilderness," *The Professional Geographer* 50 (1998): 98–111; Robert Bone, *The Geography of the Canadian North: Issues and Challenges* (Toronto: Oxford University Press, 1992).

31. Glenn Phelps, "Mr. Gerry Goes to Arizona: Electoral Geography and Voting Rights in Navajo Country," *American Indian Culture and Research Journal* 15:2 (1991): 63–92; David Wishart and Oliver Froehling, "Land Ownership, Population, and Jurisdiction: The Case of the Devils Lake Sioux Tribe v. North Dakota Public Service Commission," *American Indian Culture and Research Journal* 20:2 (1996): 33–58. Wishart and Froehling assisted the Devils Lake Sioux by tracking the history of land ownership and population dynamics at Fort Totten.

32. Imre Sutton, "Preface to Indian Country: Geography and Law," *American Indian Culture and Research Journal* 15:2 (1991): 3–35; Dorothy Hallock, "Second Contact: Redefining Indian Country," in *Human Geography in North America: New Perspectives and Trends in Research*, ed. K. Frantz (Innsbruck, Austria: Department of Geography, University of Innsbruck, 1996), 195–208.

33. Frank Duerden, "Land Allocation in Comprehensive Land Claim Agreements," *Applied Geography* 16 (1996): 279–288; Evelyn Peters, "Protecting the Land Under Modern Land Claims Agreements: The Effectiveness of the Environmental Regime Negotiated by the James Bay Cree in the James Bay and Northern Quebec Agreement," *Applied Geography* 12 (1992): 133–145; Peter Usher, Frank Tough, and Robert Galois, "Reclaiming the Land: Aboriginal Title, Treaty Rights and Land Claims in Canada," *Applied Geography* 12 (1992): 109–132.

34. Linda Parker, *Native American Estate: The Struggle over Indian and Hawaiian Lands* (Honolulu: University of Hawaii Press, 1989); Imre Sutton, *Irredeemable America: The Indians' Estate and Land Claims* (Albuquerque: University of New Mexico Press, 1985).

35. One critic replied that the Yakima should be understood legally as a government, not an interest group, and that they had been originally removed from the area and prevented from returning. See Richard Morrill, "Inequalities of Power, Costs and Benefits Across Geographic Scales: The Future Uses of the Hanford Reservation," *Political Geography* 18 (1999): 1–23; Deborah Martin, "Transcending the Fixity of Jurisdictional Scale," *Political Geography* 18 (1999): 33–38. In addition, a 1992 issue of the same journal, then named *Political Geography Quarterly*, consisted of a debate on the meaning of the year 1492. That "debate" was completely Eurocentric, even as many contributors agreed that Eurocentrism was something to be avoided.

36. Barbara Morehouse, *A Place Called Grand Canyon: Contested Geographies* (Tucson: University of Arizona Press, 1996). In a brief note, Sutton calls for the restoration of small parcels of national forest land around Los Angeles to Indians in southern California as a means of ending a history of maltreatment and confrontation over ownership. See Imre Sutton, "Indian Land, White Man's Law: Southern California Revisited," *American Indian Culture and Research Journal* 18:3 (1994): 265–270.

37. For a study of Bear Butte in such an intercultural context see Kari Forbes-Boyte, "Litigation, Mitigation, and the American Indian Religious Freedom Act: The Bear Butte Example," *Great Plains Quarterly* 19 (1999): 23–34.

38. Stephen Jett, "An Introduction to Navajo Sacred Places," *Journal of Cultural Geography* 13:1 (1992): 29–39; id., "Navajo Sacred Places: Management and Interpretation of Mythic History," *Public History* 17 (1995): 29–47; James Griffith, *Beliefs and Holy Places: A Spiritual Geography of the Pimeria Alta* (Tucson: University of Arizona Press, 1992); Linea Sundstrom, "The Sacred Black Hills: An Ethnohistorical Review," *Great Plains Quarterly* 17 (1997): 185–212.

39. Bruce Willems-Braun, "Buried Epistemologies: The Politics of Nature in (Post)colonial British Columbia," *Annals of the Association of American Geographers* 87 (1997): 3–31. For a fine example of an Indian group playing a very active role in these debates, see Clayoquot Sound Scientific Panel, *The Scientific Panel*.

40. Brian Goodey, "The Role of the Indian in North Dakota's Geography: Some Propositions," *Antipode* 2 (1970): 11–24.

41. For summaries of (re)sources and economic development across Canada and the United States, respectively, see Robert Anderson and Robert Bone, "First Nations Economic Development: A Contingency Perspective," *The Canadian Geographer* 39 (1995): 120–130; Klaus Frantz, *Indian Reservations in the United States: Territory, Sovereignty and Socioeconomic Change* (Chicago: University of Chicago Press, 1999). Anderson and Bone theorize a "contingency perspective" for understanding Canada's First Nations. A group of geographical studies also examine specific tribal lands and economic development in Arizona, focusing especially on traditional concepts of land. See G. Dobbs, "Interpreting Navajo Sacred Geography as a Landscape of Healing," *Pennsylvania Geographer* 35 (1997): 136–150; Klaus Frantz, "Education on the Navajo Indian Reservation: Aspects of the Maintenance of Cultural Identity as Seen From a Geographical Point of View," in *Ethnic Persistence and Change in Europe and America: Traces in Landscape and Society*, eds. K. Frantz and R. Sauder (Innsbruck, Austria: Office for Public Relations and Scientific Transfer of the University of Innsbruck, 1996), 223–246; id., "The Salt River Indian Reservation—Land Use Conflicts and Socio-Economic Change on the Outskirts of the City of Phoenix" (trans. German, "Die Salt River Indianerreservierung: Land-nutzungskonflikte und sozio-ökonomischer Wandel am Rande der Grossstadt Phoenix"), *Geographische Rundschau* 48 (1996): 206–212; George Van Otten, "Economic Development on Arizona's Native American Reservations," *Journal of Cultural Geography* 13 (1992): 1–14.

Stephen Cornell and his associates have also worked closely with both tribes and geographers and have presented their findings at AAG annual meetings. See Stephen Cornell and Joseph P. Kalt, eds., *What Can Tribes Do?: Strategies and Institutions in American Indian Economic Development* (Los Angeles: UCLA American Indian Studies Center, 1992); id., "Pathways from Poverty: Economic Development and Institution-Building on American Indian Reservations," *American Indian Culture and Research Journal* 14:1 (1990): 89–125; id., *Harvard Project on American Indian Economic Development* (Los Angeles: UCLA

American Indian Studies Center, 1996); Stephen Cornell and Marta Gil-Swedberg, "Sociohistorical Factors in Institutional Efficacy: Economic Development in Three American Indian Cases," *Economic Development and Cultural Change* 43 (1995): 237–268.

Finally, tribal land development issues also have gained prominence within urban planning literature, which overlaps with that of geography. See A. Pinkham, "A Traditional American Indian Perspective on Land Use Management," *Landscape and Urban Planning* 36 (1996): 93–101; id. and D. Ruppert, "Introduction," *Landscape and Urban Planning* 36 (1996): 91–92; A. Sweeney, *Tribal Land-use Power: A Primer for Planners*, APA-Planning Advisory Service Memo (American Planning Association, 1996); and N. Zaferatos, "Planning the Native American Tribal Community: Understanding the Basis of Power Controlling the Reservation Territory," *Journal of the American Planning Association* 64 (1998): 395–410. Pinkham, a Nez Perce leader, and Ruppert co-edited a special issue on tribal planning for *Landscape and Urban Planning* in 1996.

42. R. Armstrong, "Developing Social Indicators for Registered Indians Living on Reserve: The DIAND experience," *Social Indicators Research* 32 (1994): 235–249; Karl Eschbach, "Changing Identification Among American Indians and Alaskan Natives," *Demography* 30 (1993): 635–652; R. Gregory and A. Daly, "Welfare and Economic Progress of Indigenous Men of Australia and the U.S.: 1980–1990," *Economic Record* 73 (1997): 101–119; J. McKean, R. Taylor, and Wen Liu, "Inadequate Agricultural Databases for American Indians," *Society and Natural Resources* 8 (1995): 361–366; Matthew Shumway and Richard Jackson, "Native American Population Patterns," *Geographical Review* 85 (1995): 185–201.

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