

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Great Plains Research: A Journal of Natural and
Social Sciences

Great Plains Studies, Center for

2003

Review of *Science and Native American Communities: Legacies of Pain, Visions of Promise* Edited by Keith James

Dave Pruett

James Madison University

Ernest Stromberg

California State University Monterey Bay

Follow this and additional works at: <https://digitalcommons.unl.edu/greatplainsresearch>



Part of the [Other International and Area Studies Commons](#)

Pruett, Dave and Stromberg, Ernest, "Review of *Science and Native American Communities: Legacies of Pain, Visions of Promise* Edited by Keith James" (2003). *Great Plains Research: A Journal of Natural and Social Sciences*. 668.

<https://digitalcommons.unl.edu/greatplainsresearch/668>

This Article is brought to you for free and open access by the Great Plains Studies, Center for at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Great Plains Research: A Journal of Natural and Social Sciences by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

Science and Native American Communities: Legacies of Pain, Visions of Promise. Edited by Keith James. University of Nebraska Press, 2001. x+173 pp. Illustrations, bibliography, index. \$40.00 cloth, \$17.95 paper.

Science and Native American Communities, a provocative collection of essays from an unprecedented 1997 conference of Native American professionals in academia, science, engineering, and health sciences, explores "the uneasy meeting ground" between Western science and traditional wisdom.

Education, particularly in the sciences, is not value-neutral to Native peoples. Rather than education's poster children, many of the text's nineteen contributors are survivors of failed educational experiments: mission schools, boarding schools, externally imposed values, forced relocations. To editor Keith James (Onondaga), a professor of psychology, "Education has historically been associated with physical and sexual abuse and the emotional and cultural battery of Indian people." Told by a mission school guidance counselor, "You are average; you will never go to college," Gerri Shangreaux (Oglala Lakota) was relocated by the BIA from Pine Ridge to Los Angeles to train as a nurse's aide. A professor of nursing, Shangreaux, like most contributors, weaves a touching personal story into her professional commentary, which makes for compelling reading. To James Lujan (Taos Pueblo), Dean of Instruction at Southwest Indian Polytechnic Institute, the biggest issue facing Native America is "helping Indians manage and integrate competing world views." *Science and Native American Communities* pulses with the personal and social tensions of that struggle.

The boundaries of the struggle lie at two extreme positions: "that science has nothing to offer Native people, and that Indian cultures have nothing to offer science." Ultimately, to the editor, both are wrong. On the one hand, many facets of Indian community life could benefit from mainstream scientific expertise: health care, economics, infrastructure, governance, and education. For Native communities to move beyond economic

dependence upon gaming, for example, science education to support selected high-technology industry is desirable. Tradition and science need not conflict. An expert in geographic information systems (GIS), Jhon Goes in Center (Oglala Lakota), recently facilitated the Squamish First Nation's negotiation of a formal treaty with the provincial government of British Columbia. GIS provided the maps of traditional and current territories for the initial stages of negotiation. To Goes in Center, "the Indianization of GIS can help us honor our ancestors and carry on their philosophies of understanding the interconnectedness of this world and the effects of our actions on the next seven generations."

Mainstream science purports to have no intrinsic "perspective." "Nonsense," to editor James. Scientific *methodology* may be value-free, but its *applications*—the problems science addresses—are shaped by societal values. Here, traditional holistic views have something to offer the mainstream. For Freda Porter-Locklear, an applied mathematician, "Everything is connected," to an awareness fostered by her Lumbee roots and by her professional work in modeling groundwater. Lillian Dyck (Cree), a biochemist, asserts, "We must find a way to heal the hurt we have done to Mother Earth and to ourselves; aboriginal science can lead the way." Jane Mt. Pleasant (Tuscarora), an agronomist at Cornell University, would agree. Modern agriculture—dependent upon fertilizer, pesticides, and petroleum—is not sustainable, she observes. In contrast, for centuries, the "Three Sisters" agriculture of the Iroquois provided sustainable yields *and* balanced diets. Planted without tillage or the use of draft animals, corn stalks served as beanpoles, beans reciprocated with nitrogen for the corn, and the low, broad leaves of squash suppressed weeds.

Oscar Kawageley (Yup'ik), a professor of education at Fairbanks, believes that "Western thought is finally moving closer to traditional Native perspectives" and envisions a "world made seamless again." Through creative and practical models of cultural cross-fertilization, *Science and Native American Communities* offers real hope for Indian communities, for the fulfillment of Kawageley's vision, and for a sustainable future. There are other hopeful signs. At this moment, the Smithsonian's National Museum of the American Indian (NMAI) is under construction on the Washington Mall, adjacent to the Air and Space Museum. When viewed from above, NMAI will occupy the seat of highest honor at a gigantic banquet table, with the nation's Capitol at its head. Symbolically, this juxtaposition, whether by accident or grand design, suggests a nascent awareness that modern science and ancient wisdom can listen to and learn from one another. **Dave Pruett,**

*Department of Mathematics and Statistics, James Madison University, and
Ernest Stromberg, Institute of Human Communication, California State
University Monterey Bay.*