



# UNIVERSITY OF CALGARY

**University of Calgary**

**PRISM: University of Calgary's Digital Repository**

---

University of Calgary Press

University of Calgary Press Open Access Books

---

2009

## Biocultural diversity and indigenous ways of knowing : human ecology in the Arctic

Kassam, Karim-Aly S.

University of Calgary Press

---

Karim-Aly S. Kassam. "Biocultural diversity and indigenous ways of knowing : human ecology in the Arctic". Northern lights series 12, University of Calgary Press, Calgary, Alberta, 2009.

<http://hdl.handle.net/1880/48645>

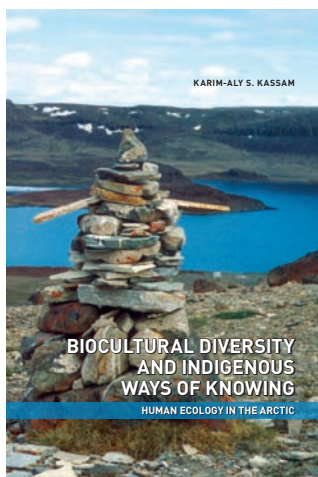
book

---

<http://creativecommons.org/licenses/by-nc-nd/3.0/>

Attribution Non-Commercial No Derivatives 3.0 Unported

Downloaded from PRISM: <https://prism.ucalgary.ca>



## BIOCULTURAL DIVERSITY AND INDIGENOUS WAYS OF KNOWING: HUMAN ECOLOGY IN THE ARCTIC

by Karim-Aly S. Kassam

ISBN 978-1-55238-566-1

**THIS BOOK IS AN OPEN ACCESS E-BOOK.** It is an electronic version of a book that can be purchased in physical form through any bookseller or on-line retailer, or from our distributors. Please support this open access publication by requesting that your university purchase a print copy of this book, or by purchasing a copy yourself. If you have any questions, please contact us at [ucpress@ucalgary.ca](mailto:ucpress@ucalgary.ca)

**Cover Art:** The artwork on the cover of this book is not open access and falls under traditional copyright provisions; it cannot be reproduced in any way without written permission of the artists and their agents. The cover can be displayed as a complete cover image for the purposes of publicizing this work, but the artwork cannot be extracted from the context of the cover of this specific work without breaching the artist's copyright.

**COPYRIGHT NOTICE:** This open-access work is published under a Creative Commons licence.

This means that you are free to copy, distribute, display or perform the work as long as you clearly attribute the work to its authors and publisher, that you do not use this work for any commercial gain in any form, and that you in no way alter, transform, or build on the work outside of its use in normal academic scholarship without our express permission. If you want to reuse or distribute the work, you must inform its new audience of the licence terms of this work. For more information, see details of the Creative Commons licence at: <http://creativecommons.org/licenses/by-nc-nd/3.0/>

### UNDER THE CREATIVE COMMONS LICENCE YOU **MAY**:

- read and store this document free of charge;
- distribute it for personal use free of charge;
- print sections of the work for personal use;
- read or perform parts of the work in a context where no financial transactions take place.

### UNDER THE CREATIVE COMMONS LICENCE YOU **MAY NOT**:

- gain financially from the work in any way;
- sell the work or seek monies in relation to the distribution of the work;
- use the work in any commercial activity of any kind;
- profit a third party indirectly via use or distribution of the work;
- distribute in or through a commercial body (with the exception of academic usage within educational institutions such as schools and universities);
- reproduce, distribute, or store the cover image outside of its function as a cover of this work;
- alter or build on the work outside of normal academic scholarship.

# References

- Agrawal, Arun. 1995. Dismantling the Divide between Indigenous and Scientific Knowledge. *Development and Change* 26:413–39.
- Akasofu, Syun-Ichi. 2001. Aurora Research during The Early Space Age. In *Fifty More Years Below Zero*, edited by D. W. Norton. Fairbanks, Alaska: Arctic Institute of North America. Pp. 171–75.
- Argyris, Chris, Robert Putnam, and Diana McLain Smith. 1985. *Action Science: Concepts Methods, and Skills for Research Intervention*. San Francisco: Jossey-Bass.
- Aristotle. 1998. *The Metaphysics*. Translated by H. Lawson-Tancred. London: Penguin.
- . 2004. *The Nichomachean Ethics*. Translated by J. A. K. Thomson. London: Penguin.
- Armstrong, Karen. 1993. *A History of God: The 4000-Year Quest of Judaism, Christianity and Islam*. New York: Alfred A. Knopf.
- Arvelo-Jimenez, N. and K. Conn (1995). “The Ye’kuana Self-Demarcation Process.” *Cultural Survival Quarterly* 18(4): 40–42.
- Attar, Farid ud-Din. 1984. *Conference of the Birds*. Translated by A. Darbandi and D. Davis. New York: Penguin Classics.
- Balikci, Asen. 1970. *The Netsilik Eskimo*. Garden City, NY: The American Museum of Natural History.
- Bateson, Gregory. 2002. *Mind and Nature: A Necessary Unity*. Cresskill, NJ: Hampton Press.
- Battiste, Marie, and James Youngblood Henderson. 2000. *Protecting Indigenous Knowledge and Heritage*. Saskatoon, Saskatchewan: Purich Publishing.
- Belyea, Barbara. 1992. Amerindian Maps: The Explorer as Translator. *Journal of Historical Geography* 18 (3): 267–77.
- Berg, Bruce L. 1995. *Qualitative Research Methods for the Social Sciences*, 2nd ed. Needham Heights, MA: Allyn & Bacon.

- Berger, Thomas R. 1977. *Northern Frontier, Northern Homeland: The Report of the MacKenzie Valley Pipeline Inquiry*. Ottawa: Minister of Supply and Services Canada.
- Berkes, Fikret. 1999. *Sacred Ecology: Traditional Ecological Knowledge and Resource Management*. Philadelphia: Taylor and Francis.
- Berman, Morris. 1984. *The Reenchantment of the World*. Toronto: Bantam Books.
- Bible. 1989. *The Revised English Bible*. Cambridge: Cambridge University Press.
- Bigstone Cree Nation and Metis People of Kituskeenow. 1999. *Kituskeenow Cultural Land-Use and Occupancy Study*. Calgary: Arctic Institute of North America.
- Blake, William. 1991. *Poems and Prophecies*. London: Everyman's Library.
- Boas, Franz. 1964. *The Central Eskimo*. Lincoln: University of Nebraska Press.
- . 1998. *Franz Boas among the Inuit of Baffin Island, 1883–1884: Journals and Letters Edited and Introduced by Ludger Müller-Wille*. Translated by W. Barr. Toronto: University of Toronto Press.
- Bodenhorn, Barbara. 1990. I'm Not the Hunter, My Wife Is. *Inuit Studies* 14 (1–2): 55–74.
- Bone, Robert M. 1992. *The Geography of the Canadian North: Issues and Challenges*. Toronto: Oxford University Press.
- Borden, Richard J. 1988. Foreword. In *Human Ecology: Research Applications*, edited by R. J. Borden and J. Jacobs. College Park, MD: The Society for Human Ecology.
- . 1990. Human Ecology Coming of Age: SHE's First Decade. In *Human Ecology: Steps to the Future*, edited by J. Pratt and G. L. Young. Sonoma, CA: Society for Human Ecology. Pp. 5–10.
- Braund, Stephen. 1993. North Slope Subsistence Study Wainwright 1988 and 1989. In *Technical Report No. 147*. Anchorage: Alaska OCS Environmental Studies Program.
- Bravo, Michael T. 1996. The Accuracy of Ethnoscience: A Study of Inuit Cartography and Cross-cultural Commensurability. *Manchester Papers in Social Anthropology* (2).
- Bridgewater, P.B. 2002. Biosphere Reserves: special places for special people. *Environmental Science & Policy* 5:9–12.
- Brody, Hugh. 1988. *Maps and Dreams*. Vancouver: Douglas & McIntyre.
- . 2000. *The Other Side of Eden: Hunters, Farmers and the Shaping of the World*. Vancouver: Douglas & McIntire.
- Bruhn, John G. 1974. Human Ecology: A Unifying Science? *Human Ecology* 2 (2): 105–25.
- Bruner, Aaron G, Raymond E. Gullison, Richard E. Rice, and Gustavo A. B. da Fonseca. 2001. Effectiveness of Parks in Protecting Tropical Biodiversity. *Science* 291:125–29.
- Burch, Ernest S., Jr. 1998. *The Inupiaq Eskimo Nations of Northwest Alaska*. Fairbanks: University of Alaska Press.
- . 2005. *Alliance and Conflict: The World System of the Inupiaq Eskimos*. Calgary: University of Calgary Press.

- CAFF. 2001. *Arctic Flora and Fauna: Status and Conservation*, edited by Conservation of Arctic Flora and Fauna. Helsinki: Edita.
- Chambers, Robert. 1991. *Rural Development: Putting the Last First*. Essex, England: Longman Scientific & Technical.
- . 1997. *Whose Reality Counts? Putting the First Last*. London: Intermediate Technology Publications.
- Coates, K. S., and W. R. Morrison. 1996. Writing the North: a survey of contemporary Canadian writing on northern regions. *Essays on Canadian Writing* 59 (Fall):5–25.
- Coleridge, Samuel T. 1991. *Poems*. London: Everyman's Library.
- Collard, Ian F., and R. A. Foley. 2002. Latitudinal patterns and environmental determinants of recent cultural diversity: Do humans follow biogeographical rules? *Evolutionary Ecology Research* 4: 371–83.
- Comiso, Josefino C. 2003. Warming Trends in the Arctic from Clear Sky Satellite Observations. *Journal of Climate* 16 (21): 3498–3510.
- Condon, Richard G. 1981. *Inuit Behaviour and Seasonal Change in the Canadian Arctic*. Ann Arbor, MI: UMI Research Press.
- . 1987. *Inuit Youth: Growth and Change in the Canadian Arctic*. New Brunswick, NJ: Rutgers University Press.
- . 1996. *The Northern Copper Inuit: A History*. Norman: University of Oklahoma Press.
- Cruikshank, Jane. 1998. *The social life of stories: Narrative and Knowledge in the Yukon territory*. Vancouver: University of British Columbia Press.
- Cruikshank, Julie. 2001. Glaciers and Climate Change: Perspectives from Oral Tradition. *Arctic* 54 (4): 377–93.
- Daly, Herman E., and John B. Cobb. 1990. *For the Common Good: Redirecting the Economy Towards Community, the Environment and a Sustainable Future*. London: Green Print.
- Damas, David. 1984. Copper Eskimo. In *Handbook of North American Indians*, edited by W. C. Sturtevant. Washington, DC: Smithsonian Institution.
- Darwin, Charles. 1996. *The Origin of Species [electronic resource]*. Oxford: Oxford University Press.
- Dasmann, Raymond F. 1991. The Importance of Cultural and Biological Diversity. In *Biodiversity: Culture, Conservation, and Ecocodevelopment*, edited by M. L. Oldfield and J. B. Alcorn. Boulder, CO: Westview Press. Pp. 7–49.
- David, Robert G. 2000. *The Arctic in the British Imagination 1818–1914*. Manchester: Manchester University Press.
- Dene Tha Nation. 1997. *Dene Tha' Traditional Land-Use and Occupancy Study*. Calgary: Arctic Institute of North America.

- Dewey, John. 1933. *How We Think*. New York: Heath.
- Dobzhansky, Theodosius. 1961. *Genetics and the Origin of Species*. New York: Columbia University.
- Dostoevsky, Fyodor. 1913. *The Brothers Karamazov*. London: William Heinemann.
- Dreyfus, Hubert L., and Stuart E. Dreyfus. 1986. *Mind Over Machine: The Power of Human Intuition and Expertise in the Era of the Computer*. New York: The Free Press.
- Duerden, Frank. 2004. Translating Climate Change Impacts at the Community Level. *Arctic* 57 (2): 204–12.
- Ecological Society of America. 2004. *About ESA 2004* [cited October 6th 2004]. Available from <http://www.esa.org/aboutesa/>.
- Editors. 1972. Introductory Statement. *Human Ecology* 1 (1):1.
- Eikeland, Olav. 2006. Phrónêsis, Aristotle, and Action Research. *International Journal of Action Research* 2 (1): 5–53.
- Eghenter, C. 2000. Mapping Peoples' Forests: The Role of Mapping in Planning Community-Based Management of Conservation Areas in Indonesia. *Peoples, Forests and Reefs Program Discussion Paper Series*. Washington, DC: Biodiversity Support Program.
- Ellen, Roy, and Holly Harris. 2000. Introduction. In *Indigenous Environmental Knowledge and its Transformations*, edited by R. Ellen, P. Parkes, and A. Bicker. Amsterdam: Harwood Academic Publishers. Pp. 1–33.
- Feiler, Bruce. 2002. *Abraham: A Journey to the Heart of Three Faiths*. New York: HarperCollins.
- Fenge, Terry. 1987. Land-Use Planning in Canada's North: A Wind of Change or a Bag of Wind? In *Hinterland or Homeland? Land Use Planning in Northern Canada*, edited by T. Fenge and W. E. Rees. Ottawa: Canadian Arctic Resources Committee (CARC). Pp. 19-51.
- Feyerabend, Paul. 2002. *Against Method*. New York: Verso.
- Fienup-Riordan, Ann. 1995. *Freeze Frame: Alaska Eskimos in the Movies*. Seattle: University of Washington Press.
- Flyvbjerg, Bent. 2001. *Making Social Science Matter: Why Social Inquiry Fails and How Can It Succeed Again*. Cambridge: Cambridge University Press.
- Fort McKay First Nations. 1994. *There is Still Survival Out There*. Calgary: Arctic Institute of North America and Canada-Alberta Partnership Agreement in Forestry.
- Foucault, Michel. 1980. *Power/Knowledge: Selected interviews and other writings, 1972–1977*. Brighton, UK: Harvester.
- . 1987. *The Archaeology of Knowledge*. New York: Pantheon Books.
- Freeman, Milton, et al. 1998. *Inuit, Whaling, and Sustainability*. London: Altamira Press.

- Fuller, Alan S., and John C. George. 1999. Evaluation of Subsistence Harvest Data from the North Slope Borough 1993 Census for Eight North Slope Villages: For the Calendar Year 1992. Barrow, AK: North Slope Borough, Department of Wildlife Management.
- Fusfeld, Daniel R. 1982. *The Age of the Economist*. Glenview, IL: Scott, Foresman and Co.
- Geertz, Clifford. 2000. *The Interpretation of Cultures: Selected Essays*. First ed. published in 1973. New York: Basic Books.
- Gibbons, Michael, et al. 1994. *The New Production of Knowledge*. London: Sage.
- Glover, Richard. 1983. Matonabbee (ca. 1736–1782). *Arctic* 36 (2): 206–7.
- Gonzales N., et al. 1995. Ethn cartography in the Darien. *Cultural Survival Quarterly* 18 (4): 31–33.
- Grace, Sherrill E. 2002. *Canada and the Idea of North*. Montreal: McGill-Queen's University Press.
- Graddol, David. 2004. The Future of Language. *Science* 303 (5662):1329–31.
- Greenwood, Davydd J. 1984. *The Taming of Evolution*. Ithaca, NY: Cornell University Press.
- Greenwood, Davydd J., and Morten Levin. 1998. *Introduction to Action Research: Social Research for Social Change*. London: Sage.
- Grim, John A. 2001. *Indigenous Traditions and Ecology: The Inter-being of Cosmology and Community*. Cambridge, MA: Harvard University Press.
- Gunderson, Lance H., and C. S. Holling, eds. 2002. *Panarchy: Understanding Transformations in Human and Natural Systems*. Washington, DC: Island Press.
- Harley, J. B. 1992. Rereading the Maps of the Columbian Encounter. *Annals of the Association of American Geographers* 82 (3): 522–42.
- . 2001. *The New Nature of Maps: Essays in the History of Cartography*. Baltimore, MD: Johns Hopkins University Press.
- Harmon, David. 2001. On the Meaning and Moral Imperative of Diversity. In *On Biological Diversity: Linking Languages, Knowledge, and the Environment*, edited by L. Maffi. Washington, DC: Smithsonian Institution Press. Pp. 53–70.
- . 2002. *In light of Our Differences: How Diversity in Nature and Culture Makes Us Human*. Washington, DC: Smithsonian Institution Press.
- Harris, Marvin. 1968. *The Rise of Anthropological Theory: A History of Theories of Culture*. New York: Crowell.
- Hawley, Amos H. 1950. *Human Ecology: A Theory of Community Structure*. New York: Ronald Press.
- . 1984. Sociological Human Ecology: Past, Present, and Future. In *Sociological Human Ecology: Contemporary Issues and Applications*, edited by M. Micklin and H. M. Choldin. Boulder, CO: Westview Press. Pp. 1–15.

- . 1986. *Human Ecology: A Theoretical Essay*. Chicago: University of Chicago Press.
- . 1998. Confessions of a Sometime Ecologist (Mostly Human). In *Continuities in Sociological Human Ecology*, edited by M. Micklin and D. L. Poston. New York: Plenum Press. Pp. 345–49.
- Helm, June. 1989. Matonabbee's Map. *Arctic Anthropology* 26 (2): 28–47.
- Hodgson, Dorothy L. and Richard A. Schroeder. 2002. Dilemmas of Counter-Mapping Community Resources in Tanzania. *Development and Change* 33:79–100.
- Howard, Albert, and Frances Widdowson. 1996. Traditional Knowledge Threatens Environmental Assessment. *Options Politiques* November:34–36.
- Hughes, D. 1999. Mapping the Hinterland: Land Rights, Timber, and Territorial Politics in Mozambique. *Policy Paper no. 44*. Berkeley: Institute on Global Conflict and Cooperation, University of California.
- Huntington, Samuel P. 1996. *The Clash of Civilizations and the Remaking of World Order*. New York: Simon & Schuster.
- Ingold, Tim. 2000. *The Perception of the Environment: Essays in Livelihood, Dwelling and Skill*. London: Routledge.
- Innis, Harold A. 1973. *The Bias of Communication*. Toronto: University of Toronto Press.
- . 1995. *Staples, Markets and Cultural Change*. Montreal & Kingston: McGill-Queen's University Press.
- Ivie, Pamela and William Schneider. 1988. Wainwright: Land Use Values through Time in the Wainwright Area. Fairbanks, Alaska: The North Slope Borough and the Anthropology and Historic Preservation Section of the Cooperative Park Studies Unit, University of Alaska, Fairbanks.
- Jacob, Francois. 1982. *The Possible and the Actual*. Seattle: University of Washington Press.
- Jenness, Diamond. 1922. The Life of the Copper Eskimos. In *Report of the Canadian Arctic Expedition 1913–18*. Vol. 12(A). Ottawa.
- . 1975. *The People of the Twilight*. Chicago: University of Chicago Press.
- Johannessen, Ola M., et al. 2004. Arctic Climate Change: Observed and Modelled Temperature and Sea-Ice Variability. *Tellus* 56A (4): 328–41.
- Johnson, Martha, ed. 1992. *Lore: Capturing Traditional Environmental Knowledge*. Ottawa: Dene Cultural Institute and the International Development Research Centre.
- Juzek, Charles, and Susan Mehrtens. 1974. *Earthkeeping: Readings In Human Ecology*. Pacific Grove, CA: Boxwood Press.
- Kalvak, Helen. 1964. *Interviews (Tapes 2 to 18)*. Prince of Wales Museum, Northwest Territories, Canada.
- Kareiva, Peter, and Michelle Marvier. 2003. Conserving Biodiversity Coldspots: Recent Calls to Direct Conservation Funding to the World's Biodiversity Hotspots May Be Bad Investment Advice. *American Scientist* 91 (July–August): 344–51.



- Kassam, Karim-Aly. 2001. Life North of 60°: Homeland or Frontier? In *A Passion for Identity: Canadian Studies for the 21st Century*, edited by D. Taras and B. Rasporich. Scarborough: Nelson Thomson Learning. Pp. 433–55.
- Kassam, Karim-Aly, and the Soaring Eagle Friendship Centre. 2001. *So That Our Voices Are Heard: Forest Use and Changing Gender Roles of Dene Women in Hay River, Northwest Territories*. Calgary: CIDA-Shastri Partnership.
- Kassam, Karim-Aly, and Sean Maher. 2000. Indigenous, Cartesian and Cartographic: Visual Metaphors of Knowledge in Arctic (Tundra) and Sub-Arctic (Taiga) Communities. In *Links between Cultures and Biodiversity*. Kunming China: Yunnan Science and Technology Press. Pp. 785–811
- Kassam, Karim-Aly S., and John Graham. 1999. Indigenous Knowledge, Community Participation and Traditional Land-Use Mapping. In *Social Work with Rural and Northern Communities*, edited by R. Delaney, K. Brownlee and M. Sellick. Thunder Bay: Centre for Northern Studies, Lakehead University. Pp. 192–216.
- Kassam, Karim-Aly S., and the Wainwright Traditional Council. 2001. *Passing on the Knowledge: Mapping Human Ecology in Wainwright, Alaska*. Calgary: Arctic Institute of North America.
- Kassam, Karim-Aly, and Wisdom Tettey. 2003. Academic as Citizens – Collaborative Applied Interdisciplinary Research in the Service of Communities. *Canadian Journal of Development Studies* 24 (1): 155–74.
- Kawagley, Oscar. 1995. *A Yupiaq World View: A Pathway to Ecology and Spirit*. Prospect Heights, IL: Waveland Press.
- Kawagley, Oscar et al. 1998. The Indigenous Worldview of Yupiaq Culture: Its Scientific Nature and Relevance to the Practice and Teaching of Science. *Journal of Research in Science Teaching* 35 (2): 133–44.
- Keates, J. S. 1982. *Understanding Maps*. New York: John Wiley & Sons.
- King, J. C. H., and Henrietta Lidchi. 1998. *Imagining the Arctic*. Seattle: University of Washington Press.
- Knudtson, Peter, and David Suzuki. 1992. *Wisdom of the Elders*. Toronto: Stoddart.
- Kolacny, A. 1969. Cartographic Information: A Fundamental Concept and Term in Modern Geography. *Cartographic Journal* 6 (1): 47–49.
- Kormondy, Edward J., and Daniel E. Brown. 1998. *Fundamentals of Human Ecology*. Upper Saddle river, NJ: Prentice Hall.
- Kroeber, Alfred Lewis. 1965. *Cultural and Natural Areas of Native North America*. New York: Kraus Reprint.
- Krupnik, Igor, and D. Jolly, eds. 2002. *The Earth Is Faster Now: Indigenous Observations of Arctic Environment Change*. Fairbanks, AK: Arctic Research Consortium of the United States and the Arctic Science Center, Smithsonian Institution.

- Kuhnlein, H. V., O. Receveur, H. M. Chan, and E. Loring. 2000. Assessment of Dietary Benefit/Risk in Inuit Communities. Ste-Anne-de-Bellevue and Ottawa: Centre for Indigenous Peoples' Nutrition and Environment (CINE) and Inuit Tapirisat of Canada.
- Latour, Bruno. 1986. Visualization and Cognition: Thinking with Eyes and Hands. In *Knowledge and Society: Studies in the Sociology of Culture Past and Present*, edited by H. Kuklick and E. Long. London: Jai Press Inc. Pp. 1–40.
- . 1987. *Science in Action*. Cambridge, MA: Harvard University Press.
- Leopold, Aldo. 1949. *A Sand County Almanac*. New York: Oxford University Press.
- Lewin, Kurt. 1935. The Conflict between Aristotelian and Galilean Modes of Thought in Contemporary Psychology. In *A Dynamic Theory of Personality*. New York: McGraw Hill. Pp. 1–42.
- . 1948. *Resolving Social Conflicts: Selected Papers on Group Dynamics*. New York: Harper & Brothers.
- . 1951. *Field Theory in Social Science: Selected Theoretical Papers*. New York: Harper & Row.
- Lewis, Malcolm G. 1998. *Cartographic Encounters: Perspectives on Native American Map-making and Map Use*. Chicago: University of Chicago Press.
- Lewontin, Richard C. 1974. The Analysis of Variance and the Analysis of Causes. *American Journal of Human Genetics* 26 (3):400–411.
- . 1982. *Human Diversity*. New York: Scientific American Library.
- Lovejoy, Arthur O. 1936. *The Great Chain of Being: A Study of the History of an Idea*. Cambridge, MA: Harvard University Press.
- Luton, Harry Heathcote, Jr. 1986. Wainwright, Alaska: The Making of Inupiaq Cultural Continuity in a Time of Change, University of Michigan, Michigan.
- Mackenzie Valley Pipeline Inquiry. 1976. *Proceedings at Community Hearings, Holman, Northwest Territories, Volume 41*. Burnaby: Allwest Reporting.
- Maffi, Luisa. 2001. The Interdependence of Biological and Cultural Diversity. In *On Biological Diversity: Linking Languages, Knowledge, and the Environment*. Washington: Smithsonian Institution. Pp. 1–50.
- . 2002. *Endangered Languages, Endangered Knowledge*. Oxford: UNESCO, Blackwell.
- Magnuson, John J. 2000. Historical Trends in Lake and River Ice Cover in the Northern Hemisphere. *Science* 289 (September): 1743–46.
- Mayr, Ernst. 1982. *The Growth of Biological Thought*. Cambridge, MA: Harvard University Press.
- McNeely, Jeffrey A. 1997. Interaction between Biological Diversity and Cultural Diversity. In *Indigenous Peoples, Environment, and Development: IWIGA Document No. 85*.

- Micklin, Michael. 1984. The Ecological Perspective in the Social Sciences: A Comparative Overview. In *Sociological Human Ecology: Contemporary Issues and Applications*, edited by M. Micklin and H. M. Choldin. Boulder, CO: Westview Press.
- Milan, F.A. 1980. *The Human Biology of Circumpolar Populations*. New York: Cambridge University Press.
- Milton Freeman Research Limited. 1976a. *Inuit Land Use and Occupancy Project*, vol. 1: *Land Use and Occupancy*. Ottawa: Indian and Northern Affairs Canada.
- . 1976b. *Inuit Land Use and Occupancy Project*, vol. 2: *Supporting Studies*. Ottawa: Indian and Northern Affairs Canada.
- . 1976c. *Inuit Land Use and Occupancy Project*, vol. 3: *Land Use Atlas*. Ottawa: Indian and Northern Affairs Canada.
- Molnar, Stephen, and Iva M. Molnar. 2000. *Environmental Change and Human Survival: Some Dimensions of Human Ecology*. Upper Saddle River, NJ: Prentice-Hall.
- Moore, Joslin L., et al. 2002. The Distribution of Cultural and Biological Diversity in Africa. *Proceedings of the Royal Society of London. Series B, Biological Sciences* 269:1645–53.
- Mudimbe, V. Y. 1996. *Open the Social Sciences: Report of the Gulbenkian Commission on Restructuring of the Social Sciences*. Stanford: Stanford University Press.
- Muhlhausler, P. 1994. Babel Revisited. *UNESCO Courier* 47 (2): 16–22.
- Myers, N., R. A. Mittermeier, C. G. Mittermeier, G. A. B. da Fonseca, and J. Kent. 2000. Biodiversity Hotspots for Conservation Priorities. *Nature* 403 (6772): 853–58.
- Nabhan, Gary P., Patric Pynes, and Tony Joe. 2002. Safeguarding Species, Languages, and Cultures in the Time of Diversity Loss: From the Colorado Plateau to Global Hotspots. *Annals of the Missouri Botanical Garden* 89: 164–75.
- Nelson, Richard K. 1969. *Hunters of the Northern Ice*. Chicago: University of Chicago Press.
- . 1982. Harvest of the Sea: Coastal Subsistence in Modern Wainwright. In *Report for the North Slope Borough's Coastal Management Program*. Barrow, Alaska: North Slope Borough.
- Nepstad, Elaine, and Per Nielsen. 1993. Towards a Better Understanding of Human/Environment Relationships In Canadian National Parks. In *Occasional Paper No. 5*. Ottawa: Canadian Parks Service.
- Nettle, Daniel, and Suzanne Romaine. 2000. *Vanishing Voices: The Extinction of the World's Languages*. Oxford: Oxford University Press.
- Neumann, Klaus. 1992. The Effects of ANCSA and Oil Production, Towards the Interrelationship of Subsistence and Cash Economy on the North Slope of Alaska, with Special Consideration of Nuiqsut.
- Nichols, Johanna. 1992. *Linguistic Diversity In Space and Time*. Chicago: University of Chicago Press.

- Nichols, Theresa, et al. 2004. Climate Change and Sea Ice: Local Observations from the Canadian Western Arctic. *Arctic* 57 (1): 68–79.
- Nietschmann, B. 1995. Defending the Miskito Reefs with Maps and GPS. *Cultural Survival Quarterly* 18(4): 34–37.
- Norton, David W. 2002. Coastal Sea Ice Watch: Private Confessions of a Convert to Indigenous Knowledge. In *The Earth is Faster Now: Indigenous Observations of Arctic Environmental Change*. Fairbanks, AK: Arctic Research Consortium of the United States and the Arctic Science Center, Smithsonian Institution. Pp. 126–55.
- Nuffield, Edward W. 2001. *Samuel Hearne: Journey to the Coppermine River 1769–1772*. Vancouver: Haro Books.
- Nuttall, Mark. 1998. *Protecting the Arctic: Indigenous Peoples and Cultural Survival*. The Netherlands: Harwood Academic Publishers.
- Odum, Eugene P. 1989. *Ecology and Our Endangered Life-Support Systems*. Sunderland, MA: Sinauer Associates.
- . 1997. *Ecology: A Bridge between Science and Society*. Sunderland, MA: Sinauer Associates.
- OED. 2003. Oxford English Dictionary Online: Oxford University Press.
- Pagel, Mark, and Ruth Mace. 2004. The cultural wealth of nations. *Nature* 428 (18 March): 275–78.
- Park, Robert E. 1952. *Human Communities: The City and Human Ecology*. Glencoe, IL: The Free Press.
- Park, Robert E., and Ernest W. Burgess. 1969. *Introduction to the Science of Sociology*. Chicago: University of Chicago Press.
- Parry, Captain William Edward. 1969. *Journal of a Second Voyage of Discovery of a North-West Passage from the Atlantic to the Pacific Performed in the Years 1821–22–23, In His Majesty's Ships Fury and Hecla*. New York: Greenwood.
- Peluso, N. L. 1995. Whose Woods Are These? Counter-Mapping forest Territories in Kalimantan, Indonesia. *Antipode* 27 (4): 383–406.
- Pennisi, Elizabeth. 2004a. The First Language. *Science* 303 (5662): 1321–23.
- . 2004b. Speaking in Tongues. *Science* 303 (5662): 1319–20.
- Peretti, Jonah H. 1998. Nativism and Nature: Rethinking Biological Invasion. *Environmental Values* 7: 183–92.
- Poole, P. 1995. *Indigenous Peoples, Mapping and Biodiversity Conservation: An Analysis of current Activities and Opportunities for Applying Geomatics Technologies*. Washington, DC: Biodiversity Support Program.
- Pratt, Jeremy. 1990. Proceedings of Session III: Recommendations for the Attention of Human Ecologists. In *Human Ecology: Steps to the Future*, edited by J. Pratt and G. L. Young. Sonoma, CA: Society for Human Ecology. Pp. 69–75.

- Quammen, David. 1997. *The Song of the Dodo: Island Biogeography In An Age of Extinctions*. New York: Touchstone.
- Quran. 1975. *The Holy Quran*. Translated by A. Y. Ali. London: Islamic Foundation.
- Rasmussen, Knud. 1932. Intellectual Culture of the Copper Eskimos. In *Report of the Fifth Thule Expedition 1921–24. Vol. 10(3)*. Copenhagen.
- Reason, Peter, and Hilary Bradbury, eds. 2001. *Handbook of Action Research: Participative Inquiry and Practice*. London: Sage Publications.
- Rees, William E. 1987. Introduction: A Rationale for Land-Use Planning. In *Hinterland or Homeland? Land Use Planning in Northern Canada*, edited by T. Fenge and W. E. Rees. Ottawa: Canadian Arctic Resources Committee (CARC). Pp. 1–18.
- Reidlinger, D., and F. Berkes. 2001. Contributions of Traditional Knowledge to Understanding Climate Change in the Canadian Arctic. *Polar Record* 37 (203): 315–28.
- Robinson, Arthur H., and Barbara Pechenik. 1976. *The Nature of Maps: Essays toward Understanding Maps and Mapping*. Chicago: University of Chicago Press.
- Robinson, Michael P., and Karim-Aly S. Kassam. 1998. *Sami Potatoes: Living with Reindeer and Perestroika*. Calgary: Bayeux Arts.
- Robinson, Mike, Terry Garvin, and Gordon Hodgson. 1994. *Mapping How We Use Our Land: Using Participatory Action Research*. Calgary: Arctic Institute of North America.
- Rojas, Martha. 1992. The Species Problem and Conservation: What are We Protecting? *Conservation Biology* 6 (2): 170–78.
- Ross, John. 1969. *Narrative of a Second Voyage in Search of a North-west Passage and of a Residence in the Arctic Regions During the Years 1829, 1830, 1831, 1833*. New York: Greenwood.
- Rundstrom, Robert A. 1990. A Cultural Interpretation of Inuit Map Accuracy. *Geographical Review* 80 (12): 155–68.
- Ryle, Gilbert. 1984. *The Concept of Mind*. Chicago: University of Chicago Press.
- Sahlins, Marshall. 2000. *Culture in Practice: Selected Essays*. New York: Zone Books.
- Said, Edward. 1993. *Culture and Imperialism*. London: Chatto & Windus.
- . 1994. *Orientalism*. New York: Vintage.
- Schön, Donald A. 1983. *The Reflective Practitioner: How Professionals Think in Action*. New York: Basic Books.
- Scoones, I. 1999. New Ecology and the Social Sciences: What Prospects for a Fruitful Engagement? *Annual Review of Anthropology* 28:479–507.
- Scott, James C. 1976. *The Moral Economy of the Peasant: Rebellion and Subsistence in Southeast Asia*. New Haven, CT: Yale University Press.
- Secretariat of the Convention on Biological Diversity. 2001. *Handbook of the Convention on Biological Diversity*. London: Earthscan Publications.

- Service, Robert. 1990. *The Best of Robert Service*. Philadelphia: Running Press.
- Shelley, Mary. 1993. *Frankenstein or, The Modern Prometheus*. New York: The Modern Library.
- Sillitoe, Paul. 1998. The Development of Indigenous Knowledge: A New Applied Anthropology. *Current Anthropology* 39 (2): 223–52.
- Sirait, M., et al. 1994. Mapping Customary Land in East Kalimantan, Indonesia: A Tool for Forest Management. *Ambio* 23 (7): 411–17.
- Smith, Eric A. 2001. On the Coevolution of Cultural, Linguistic, and Biological Diversity. In *On Biological Diversity: Linking Languages, Knowledge, and the Environment*, edited by L. Maffi. Washington: Smithsonian Institution. Pp. 95–117
- Sorokin, Pitrim A. 1962. *Social and Cultural Dynamics* (4 vols.). New York: Bedminster Press. Original edition, 1937.
- Sparke, M. 1998. A Map that Roared and an Original Atlas: Canada, Cartography, and the Narration of Nation. *Annals of the Association of American Geographers* 88 (3): 463–95.
- Speck, Gordon. 1983. Samuel Hearne (1745–1792). *Arctic* 36 (1): 100–101.
- Spiegel, Henry William. 1983. *The Growth of Economic Thought*. Durham, NC: Duke University Press.
- St. Martin, K. 2001. Making Space for Community Resource Management in Fisheries. *Annals of the Association of American Geographers* 91 (1): 122–42.
- Statistics Canada. 2003a. *2001 Census Analysis Series Aboriginal Peoples of Canada: A Demographic Profile*. [cited January 21st, 2003]. Available from [www.statcan.ca](http://www.statcan.ca).
- . 2003b. *Aboriginals Peoples Survey 2001 – initial findings: Well-being of the non-reserve Aboriginal Population*. [cited September 24th, 2003]. Available from [www.statcan.ca](http://www.statcan.ca).
- . 2003c. *Aboriginals Peoples Survey 2001: Community Profiles – Holman*. [cited December 6th, 2004]. Available from [www.statcan.ca](http://www.statcan.ca).
- Stefansson, Vilhjalmur. 1913. *My Life with the Eskimo*. New York: MacMillan.
- . 1921. *The Friendly Arctic*. New York: MacMillan.
- Stevenson, Marc G. 1996. Indigenous Knowledge in Environmental Assessment. *Arctic* 49 (3): 278–91.
- . 1997. *Inuit Whalers and Cultural Persistence: Structure in Cumberland Sound and Central Inuit Social Organization*. Oxford: Oxford University Press.
- Stewart, Philip. 1975. Slobodkin on Bateson: A Comment. *Human Ecology* 3 (1): 59–60.
- Straus, Donald B. 1990. Human Ecology: The Specialty of Generalizing. In *Human Ecology: Steps to the Future*, edited by J. Pratt and G. L. Young. Sonoma, CA: Society for Human Ecology. Pp. 13–23.

- Thorpe, Natasha Naikak Hakongak Sandra Eyegetok and the Kitikmeot Elders. 2001. *Thunder on the Tundra: Inuit Qaujimaqatuqangit of the Bathurst Caribou*. Ikaluktuutiak, Nunavut: Tuktu and Nogak Project.
- Tomlinson, John. 1999. *Globalization and Culture*. Chicago: University of Chicago Press.
- Turnbull, David. 2000. *Masons, Tricksters and Cartographers: Comparative Studies in the Sociology of Scientific and Indigenous Knowledge*. Amsterdam: Harwood Academic Publishers.
- . 2003. *Assemblage and Diversity: Working with Incommensurability: Emergent Knowledge, Narrativity, Performativity, Mobility and synergy: Presentation to the Scott Polar Institute, Cambridge University (UK)*.
- Usher, Peter J. 1965. *Economic Basis and Resource Use of the Coppermine – Holman Region, N.W.T.* Ottawa: Department of Northern Affairs and National Resources.
- Vayda, Andrew P. 1988. Actions and Consequences as Objects of Explanation in Human Ecology. In *Human Ecology: Research Applications*, edited by R. J. Borden and J. Jacobs. College Park, MD: The Society for Human Ecology. Pp. 9–18.
- Wenzel, George W. 1999. Traditional Ecological Knowledge and Inuit: Reflections on TEK Research and Ethics. *Arctic* 52 (2): 113–24.
- West, Douglas A. 1995. Limits of northern identity: an assessment of W. L. Morton's northern vision. *Northern Review* 14 (Summer): 92–115.
- Whitfield, Peter. 2000. *Mapping the World: A History of Exploration*. London: The Folio Society.
- Wiebe, Rudy. 2003. *Playing Dead: a contemplation concerning the Arctic*. Edmonton: NeWest Press.
- Wight, Darlene Coward. 2001. *Holman: Forty Years of Graphic Art*. Winnipeg, Manitoba: Winnipeg Art Gallery.
- Williams, Raymond. 1989. *Keywords: A vocabulary of culture and society*. London: Fontana Press.
- Wilson, Edward O. 1975. *Sociobiology: The New Synthesis*. Cambridge, MA: Belknap Press of Harvard University Press.
- . 1999a. *Consilience: The Unity of Knowledge*. New York: Vintage.
- . 1999b. *The Diversity of Life*. New York: W.W. Norton.
- Winichakul, Thongchai. 1994. *Siam Mapped: A History of the Geo-Body of a Nation*. Honolulu: University of Hawaii Press.
- Wright, Ronald. 1993. *Stolen Continents: The "New World" Through Indian Eyes*. Toronto: Penguin Books.
- Young, Gerald L. 1991. Minor Heresies in Human Ecology. In *Human Ecology: Strategies for the Future*, edited by M. S. Sontag, S. D. Wright and G. L. Young. Fort Collins, CO: Society for Human Ecology. Pp. 11–25.

