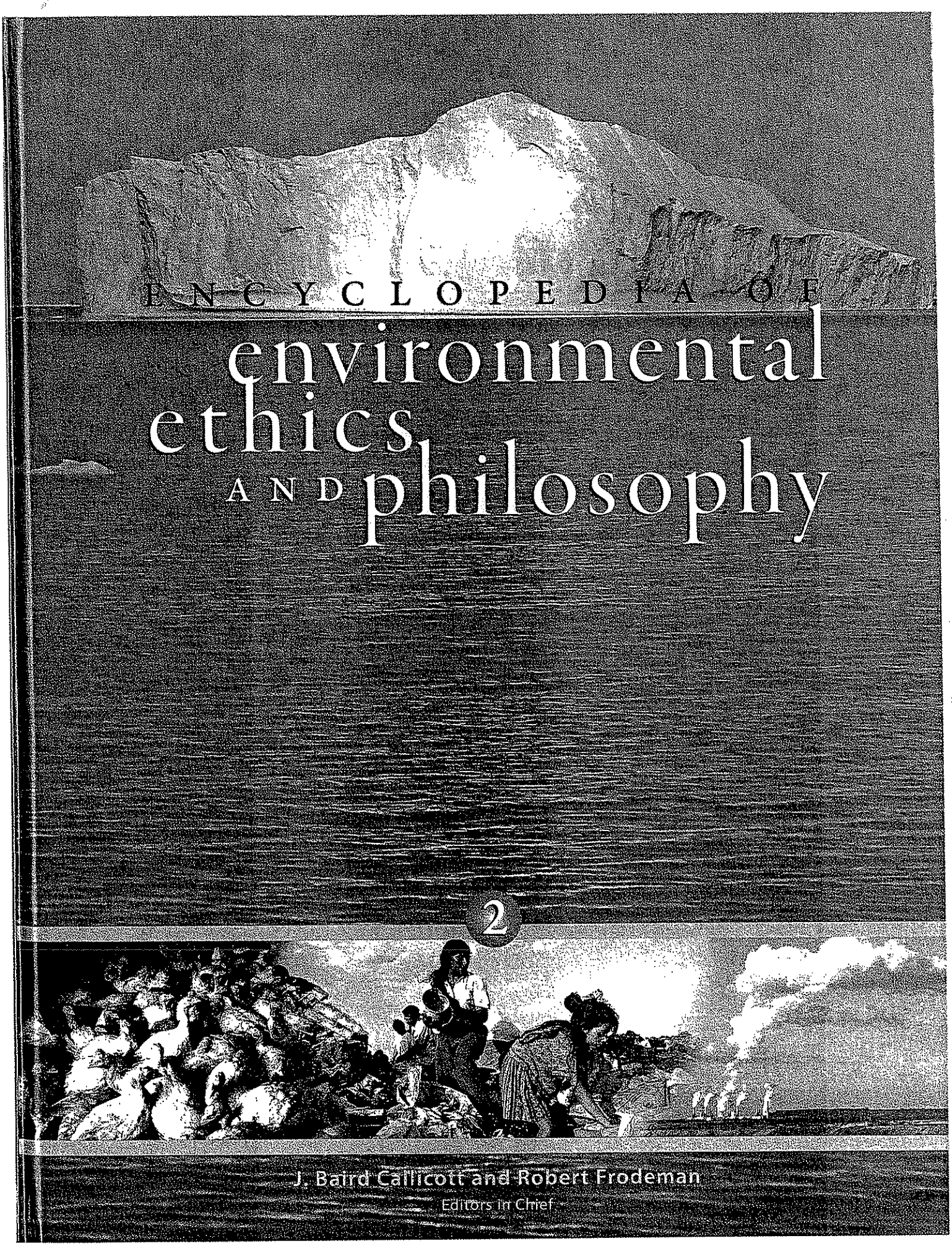

ENCYCLOPEDIA OF environmental ethics AND philosophy

2

J. Baird Callicott and Robert Frodeman
Editors in Chief

Encyclopedia of Environmental Ethics and Philosophy

VOLUME 2

JACKSON TO WRIGHT
APPENDICES, INDEX

J. Baird Callicott and Robert Frodeman
EDITORS IN CHIEF

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sought out to restore ruined villages. He later was appointed a samurai officer and helped the government restore the Nikko area, where he died and was enshrined.

Sontoku's environmental thoughts and practices were based on the premodern ecological worldview that was characteristic of preindustrial Japanese society; it consisted mainly of Shintoism mixed with Japanese Confucianism and Buddhism. Sontoku believed that all humans and nature exist in a circle within which everything exists in fusion and unity (*ichi-en yu-go*). This is reminiscent of the Great Ultimate of Chu Hsi, the synthesizer of Neo-Confucianism in the Sung Dynasty in China, which also took the form of a circle as the monistic origin or ground from which everything was brought forth. The circle that represents the Confucian unification of humans and nature might be considered a symbol of the ecoholistic view.

The circle expresses the unity of all things. Nothing can be outside the circle, and everything is contained within it. The circle also expresses the limits of humans and nature as a whole, in which reside all dualistic principles such as yin and yang, masculine and feminine, light and dark, life and death, good and evil, and rich and poor. A circle also expresses the idea that everything within the circle will change not in the direction of progress but in a cyclical way. This holistic way of thinking leads to the conclusion that a one-sided increase in the welfare of humans or nature will destroy the balance; that is, an increase in the welfare of humans will lead to a decrease in the welfare of nature.

Sontoku's practical solution to the problem of the relationship of human beings to nature lay in the symbiotic coelaboration of both. Human beings owe gratitude (*on*) to heaven and earth (the great father and mother), to their ancestors, parents, and lords, and are obliged to repay the debt. The main virtues Sontuku practiced and recommended were diligent labor (*kin*), frugality (*ken*), and concession (*jo*) in agriculture and economics to increase natural produce by "assisting the transforming and nourishing process of Heaven and Earth" (Tu 1989, p. 86). This is part of Sontoku's teaching of "reward for virtue" (*hotoku*).

Sontoku eventually rescued more than six hundred villages and tens of thousands of people. He not only restored devastated farms but also saved people from mental collapse by helping them be financially and morally independent. To help distressed people, he used large sums of money from his successful projects, leaving none for his own family. The voluntary credit union organized by his followers, the Society for Rewarding Virtue (*Hotoku-sha*), was highly successful, with many branches throughout Japan; it continues to exist. Sontoku's achievements testified to his belief that Confucian morals (*jen*), politics, and economics rather than Western power politics and self-interested economics can both make people happy and restore nature.

In prewar Japan, Sontoku was a national hero who was cited in elementary school textbooks on moral education called *shushin* ("cultivating oneself") as a model of Confucian and other virtues. All elementary schools had a bronze statue of him on a pedestal near the main entrance in which he carried on his back a bundle of firewood gathered in the mountains, reading a book while walking. Boys and girls were encouraged to work hard and study diligently so that they would become decent citizens and successful people. Thus, his influence was felt not only in agriculture and economics but also in moral education in Confucian virtues. In postwar Japan, he was neglected and his school of thought was almost forgotten. However, his thoughts and practices have been revived by the International Ninomiya Sontoku Association, which was founded in 2003.

SEE ALSO *Confucianism; Japan.*

BIBLIOGRAPHY

Sontoku, Ninomiya. 1970. *Sage Ninomiya's Evening Talks*, trans. Isoh Yamagata. Westport, CT: Greenwood Press.

Tu, Weiming. 1989. *Centrality and Commonality: An Essay on Confucian Religiousness*. Albany: State University of New York Press.

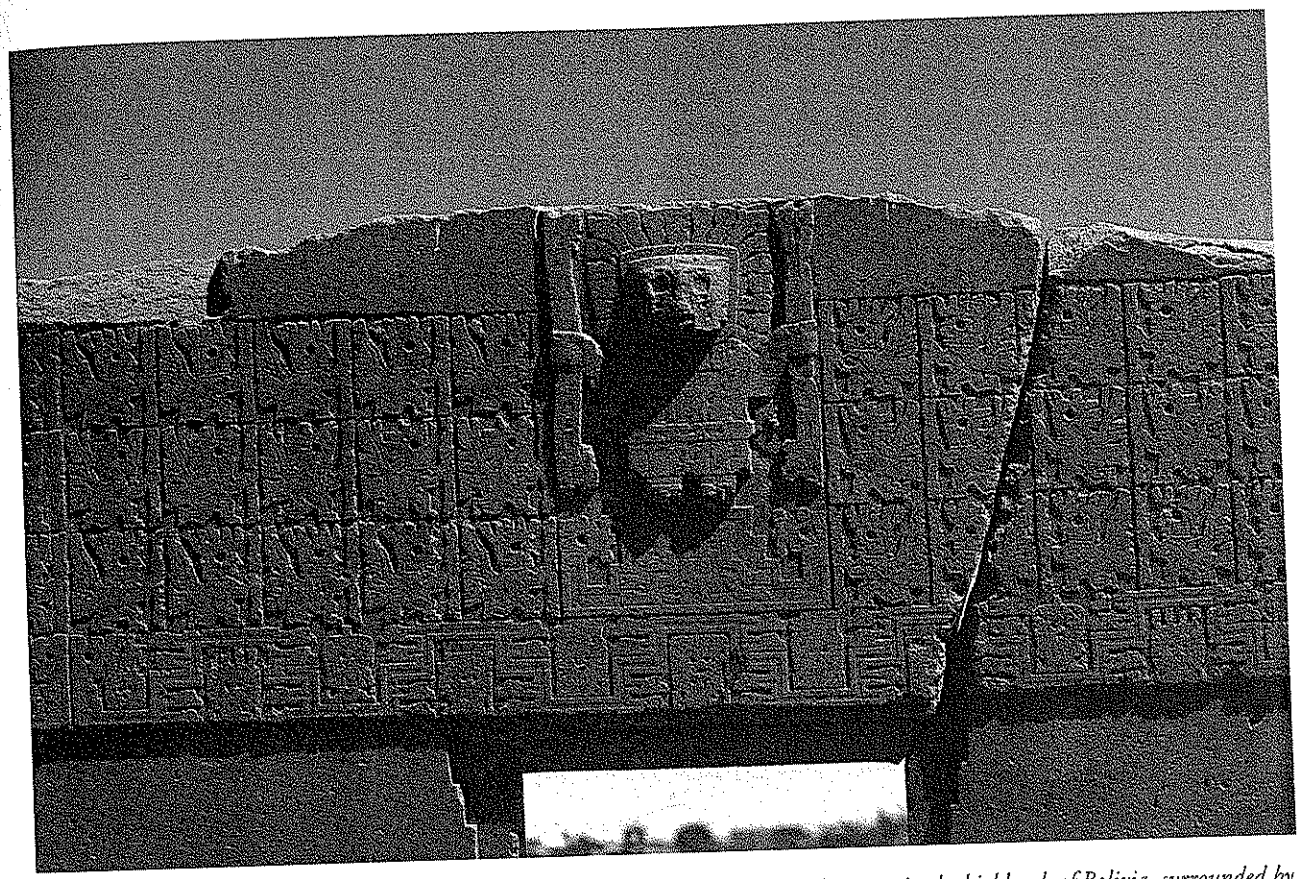
Uchimura, Kanzo. 1908. *Representative Men of Japan: Essays*. Tokyo, Japan: Keiseisha.

Yamauchi, T. 2004. "Sontoku's Environmental Ethics." In *Hotokugaku*. International Ninomiya Sontoku Association.

T. Yamauchi

SOUTH AMERICA

The cultural and biogeographic identity of South America, as well as the history of its environmental philosophy, is embodied in the Andes Cordillera, the great mountain system that crosses the continent from south to north and is home to the emblematic Andean Condor. According to Tiahuanaco pre-Inca culture, in ancestral times *Viracocha* (one of the most important deities in the Inca pantheon) emerged from Lake Titicaca in the heights of the Andes and created the sun with his light; the rain and water with his tears; the heavens, the stars, the humans and the other living beings that inhabited the region (Kusch 1962). Today, along this Andean backbone, there is a mosaic of altiplanic, rain-forest, wetland, desert, coastal, glacial, steppe, and prairie ecosystems hosting most of the world's plant and animal biodiversity (Mittermeier et al. 2003). The highest mountain peaks in the Americas, as well as the vast Amazonian basin, Pantanal wetlands, Chaco savannas, and Patagonian high latitudes



Gateway of the Sun. *The figure of* Viracocha *in the center of the Sun Gate in Tiahuanaco in the highlands of Bolivia, surrounded by human-condor guardians illustrates how deities, humans, and nature have been and are still united in Amerindians' worldviews and lives.* © TINA MANLEY/ARCHEOLOGY/ALAMY.

are still inhabited by endemic biological species, cultures, and languages. Amerindian people have coevolved with each of these unique and diverse landscapes, ecosystems, and biota, developing a plethora of environmental worldviews and practices that have come under consideration by South American environmental philosophers since the 1980s (Rozzi 2001).

ENVIRONMENTAL ISSUES

The principal environmental concern in South America is the threat to this, the world's treasure trove of biodiversity. The drivers of biodiversity destruction and losses of cultural diversity in South America are many (Primack et al. 2006). Global climate change is provoking a rapid retreat of high Andean glaciers. Sine 1970, glaciers in the Andes have lost 20 percent of their volume, with drastic water supply consequences that are affecting mountain communities, agriculture, and ecosystem integrity. Ozone depletion in the Earth's stratosphere has its strongest expression in the Antarctic ozone hole. At the beginning of the 2000s, in this area of the Antarctic stratosphere ozone levels have dropped 33 percent of their pre-1975 values, with a variety of human health and ecological consequences, such as increases in skin cancer, damage to plants, and reduction of plankton populations and photosynthetic capacity. Exotic invasive species represent another major threat to South American biodiversity. Exotic mammals (such as feral goats, European rabbits, or North American beavers and minks) are especially harmful in archipelagoes such as Galapagos, Juan Fernandez, and Cape Horn. Exotic predatory fish, such as trout and salmon, have a high impact on Andean and temperate freshwater ecosystems.

Mining is also a main driver of rapid and intensive changes in freshwater, marine, and terrestrial biological diversity, as well as cultural diversity involving displacement of communities from their ancestral territories, and destruction of their habitats. In addition to direct habitat destruction, mining frequently involves pollution. For example, mercury pollution caused by the amalgamation of gold in tropical regions such as the Amazon affects the health of aquatic invertebrates, fish, and humans downstream from gold-mining activities. Dams and construction of waterways represent a frequent source of social

conflicts and environmental impacts. One of the most debated mega-projects in South America is the Hidrovia, in which the Paraguay-Parana River would be dredged to let large ships carry cargo from Buenos Aires on the Argentinean coast 3000 km north to Bolivia, Paraguay, and Brazil. This project could cause significant drainage of the Pantanal, the world's largest wetland, which is the habitat of endangered jaguars, giant otters, thousands of invertebrates, and tens of Indian tribes. The latter have joined scientists, artists, humanists, and numerous non-governmental organizations (NGOs) in their protest. This type of mega-project often involves serious and rapid environmental degradation, but they have a widespread presence throughout South American geography and post-Columbian history. Currently, extensive monospecific plantations of eucalyptus are replacing native forests in Colombia, southern Brazil, Uruguay, and Chile, and large-scale plantations of genetically modified sugarcane and soybean are replacing vast areas of tropical forests. At the same time, tropical and temperate coastal marine biodiversity of South America is threatened by shrimp and salmon aquaculture, respectively.

As the process of globalization accelerated over the last quarter of the twentieth century, South America's agriculture industrialized—one element of which is an economy of scale—forcing subsistence farmers off their smallholds, for which they had no legal title. As the twenty-first century unfolds, South America not only continues to supply a hungry world with mineral, wood, and food resources, but also an energy-starved world with biofuels—more especially ethanol derived from sugar cane, further exacerbating social dislocation and environmental degradation. In spite of this pressing scenario, South America is still the home of vigorous peasant, indigenous, and diverse rural and urban communities, who value and defend their biological and cultural heritage. Thus South American environmental philosophy has from its start integrated social and often political analysis with environmental concerns. Today, they are frequently involved in conservation, ecological and social justice, and sustainable development initiatives.

SOUTH AMERICAN ENVIRONMENTAL PHILOSOPHY

There are two main sources of South American environmental philosophy (Rozzi 2001). The first is rooted in the ancient ethos and biocultural landscapes of Amerindian people, as well as African American, old peasant, and contemporary rural and urban communities. Since the 1960s these rich biocultural landscapes have been increasingly studied and valued by academics through historical and critical thinking (Mignolo 1995, Escobar 1996), liberation philosophy and theology (Boff 1995), ecofeminism (Parentelli 1996, Gebara 1999), and biocultural conservation (Rozzi 1997, 2001). The second source is the incorporation of international environmental thinking and philosophy in South American universities. This trend was first sparked in the 1970s by the United Nations Environment Programme that focused on sustainable development and interdisciplinary education (PNUMA/UNESCO 1985, Carrizosa 2001, Leff 2002, Porto-Gonçalves 2006). Second, in the 1990s, the spontaneous interest of South American scholars initiated the discussion and translation into Spanish the work of environmental philosophers in Europe, Australia and the United States, thereby introducing Deep Ecology, Social Ecology, ecocentric ethics, and animal liberation into Latin America (Sosa 1990; Bugallo 1995; Kwiatkowska and Issa 1998; Valdés 2004; Rozzi 1997, 2007).

Roots of South American Environmental Philosophy The Argentine philosopher Rodolfo Kusch was a pioneer in understanding the links between regional landscapes and Amerindian cultures in the Andean region. He realized that no genuine philosophy in the Americas can be conceived without incorporating the Amerindian cultures (1962). Kusch's efforts pitted him against the almost determined ignorance of indigenous thought and lives in South American academic philosophy.

In the1960s Kusch began to develop studies in comparative ethno-philosophy while working in northern Argentina at the University of Salta. Kusch was interested in learning how much of the Inca legacy persisted in twentieth-century peasant communities in Bolivia and northwest Argentina. In "Geoculture of the American Man" (1976) Kusch coined the term *geoculture*; thanks to the insights yielded by this concept, South American geography was no longer seen merely through "colonial lenses" as a virgin territory to be conquered and used. Instead, it was understood as a source of cultural meanings. Kusch disclosed the embeddedness of various South American ethos in the environment, "always situated, always grounded" (Gutierrez 2008, p. 2). Kusch's philosophical inquiry was motivated by a need, felt by Latin-American intellectuals since the second half of the nineteenth century, to discover or renew the cultural identity of the Americas (Mignolo 1995). The Andean biocultural geography inspired this search for identity in the southern cone of South America.

Decolonization Research Program and Environmental Philosophy In the 1980s the Argentine-Mexican philosopher Enrique Dussel developed the notion of transmodernity. This notion, combined with Kusch's geocultural approach, inspired another Argentine philosopher, Walter Mignolo, to develop the notions of *border thinking*,

An Indigenous Community in Bolivia. *Indigenous Quechua and Aymara communities in the high Andes have many celebrations and rituals to pay* (pagos) *and thank* (despachos) *the Earth or* Pachamama. *These rituals seek renovation and purification, fostering reciprocity among people, the land, and deities. The picture illustrates a celebration at Sajama National Park in Bolivia.* PHOTO BY JUERGEN CZERWENKA. COURTESY OF RICARDO ROZZI.

border epistemology, and *pluritopic hermeneutics* (Mignolo 1995). Dussel's liberation philosophy aims to overcome eurocentric modernity not simply by negating it "but by thinking it from the underside, from the perspective of the excluded other": the colonized indigenous people, poor peasant communities, and urban marginal citizens and workers (1996, p. 14).

At Duke University Mignolo has further developed this project through the Latin American Modernity/Coloniality Research Program (LAMCRP). He affirms "the 'West and the rest,' in Huntington's phrase, provides the model to overcome, as the 'rest' . . . emerges in its diversity" (Mignolo 2000, p. 310). In contradistinction to eurocentric abstract universals, the alternative proposed by Mignolo is a kind of border thinking that "engages the colonialism of Western epistemology from the perspective of epistemic forces that have been turned into subaltern (traditional, folkloric, religious, emotional, etc.) forms of knowledge" (Mignolo 2001, p. 11). He emphasizes the need to permit the expression of "pluriversal" epistemologies and local histories and communities that exist at the borders of globalization (Mignolo 1995).

At the University of North Carolina at Chapel Hill, another LAMCRP researcher, the Colombian philosopher Arturo Escobar, has developed a geopolitical perspective by working closely with African American communities in the Colombian Pacific on projects about globalization, culture, women, environment, and place. In these communities Escobar finds powerful elements of ecological sustainability in the reinterpretation of anthropological practices related to mythical and symbolic traditions and ecosystemic contexts (Noguera 2007). However, growing violence, poverty, and environmental and social degradation in Latin America are replacing these realities. In "Invention of the Third World," Escobar affirms that "it suffices to take a quick look to the biophysical, economic, and cultural landscapes of the Third World to realize that the Development Project is in crisis" (1996, p. 9). Against this background Escobar calls for a postdevelopment era, which emphasizes local economies rather than global markets and consumerist lifestyles.

Liberation Theology and Environmental Philosophy In contrast to Escobar, Leonardo Boff, a Brazilian liberation theologian and leading environmental philosopher, asserts in his landmark book *Ecology and Liberation: A New Paradigm* (1995), that "what is today in crisis is not so much the development model, but the model of society that dominates the world" (p. 31). He proposes a holistic, ecosocial approach to environmental ethics, affirming that "the new model of society has to aim at a reconstruction of the social fabric, starting from the multiform potentialities of human beings and society" (1995, p. 36). At the same time Boff calls for broadening the spectrum of environmental ethics to encompass a notion of environmental justice that would incorporate the interests of poor people. In *Cry of the Earth, Cry of the Poor* (1997), he situates the social and political concerns of liberation theology in broader ecological frameworks: "We need to refine the concept of ecological justice, but without a minimum of social justice it is impossible to make ecological justice fully effective. The one involves the other" (p. 45). Boff's concept of ecological justice demands an overcoming of both anthropocentrism and ethnocentrism; social well-being requires consideration of biological and ecological diversity as much as of social classes, native languages, worldviews, and cultural practices.

Boff demands integration at multiple levels of relations, repeatedly calling for an interior ecology (psychological, spiritual) and a reconnection with the earth as a whole, a *dignitas terrae.* He highlights the importance of revering the masculine and feminine, a position that echoes the philosophy of leading South American ecofeminists and liberation theologians Gladys Parentelli (Uruguay and Venezuela) and Ivone Gebara (Brazil). Based on their work with poor women, Parentelli (1996) and Gebara (1999) have inaugurated a Latin American theology from the "optic" of women, pointing out that poverty is not a gender-neutral category. Frequently, poor women are victims of physical and sexual violence; they also lack control over maternity and often are left to provide the primary economic support for their children. Since the 1980s ecofeminists have created new networks and journals that explore the relationship between the oppression of women, indigenous people, and nature in Latin America. South American ecofeminists have called attention to the daily lives of women in slums, showing the ways that the exclusion of the poor is linked to the destruction of their lands. This approach concurs with the perspective that in Latin America the most negative impacts of environmental degradation affect poor people; they are the main victims, not the agents of most degradation (Rozzi 2001).

Biocultural Conservation and Environmental Philosophy Working with indigenous communities in southern South America, the Chilean ecologist and philosopher Ricardo Rozzi has integrated ecological sciences and environmental philosophy. He has developed epistemological and ethical frameworks that are designed to gain a better understanding of the differences and similarities between contemporary scientific knowledge and indigenous ecological knowledge. His work has two main goals: (1) enhancing communication and respect among different sociocultural actors and (2) promoting biocultural conservation. In South America numerous case studies show that indigenous and other local communities agree with scientists and other scholars that, where biodiversity has been protected, local communities enjoy higher levels of autonomy and social well-being (Primack et al. 2006). This convergence between indigenous and scientific views is also supported by the concept of "environmentalism of the poor" developed in South America by the Spanish ecological economist Juan Martinez Alier (2002). Likewise, Rozzi (2001) has called for a "field environmental philosophy" approach whereby philosophers participate in long-term interdisciplinary biocultural conservation projects that involve "direct encounters" with human and nonhuman beings living in their habitats. This field environmental philosophy approach aims to prevent the imposition of global epistemological and development models and to promote instead the expression of diverse ethos and traditional ecological knowledge by local communities.

ENVIRONMENTAL PHILOSOPHY AND SOUTH AMERICAN ACADEMIA

There are two main sources of the influence that environmental philosophy has come to have in South American academia: (1) UNEP's support for environmental academic programs and (2) the efforts of individual scholars.

United Nations Environment Programme (UNEP) At the beginning of the 1970s, the United Nations launched two important programs that promoted environmental thought in South American universities. In 1970 the United Nations Educational, Scientific, and Cultural Organization (UNESCO) created the Man and Biosphere Programme (MAB), which "proposes an interdisciplinary research agenda and capacity building aiming to improve the relationship of people with their environment globally" (UNESCO 2008). In 1972 UNEP was founded, and it immediately proposed to establish "an international program on interdisciplinary environmental formal and informal education" (PNUMA/UNESCO 1985).

In 1977 UNESCO and UNEP organized the International Conference on Environmental Education in Tbilisi, Russia; the conference issued a call for each continent to establish a regional network devoted to

environmental thought and education. The most successful such undertaking was the Latin American and Caribbean network, which was consolidated in 1985 at the University and Environment Conference held at the Universidad Nacional de Colombia (UNC). Three central concepts emerged from this meeting: (1) The environment includes not only biotic-physical elements but also sociocultural ones; (2) environmental problems are associated with human development; and (3) university education requires interdisciplinary approaches to address the interactions among nature, technology, and society (PNUMA/UNESCO 1985).

The University and Environment Conference triggered the creation of the Institute on Environmental Studies (IDEA) at UNC, which in 1987 gave rise to the *Pensamiento Ambiental* (Environmental Thought) working group. Since the 1990s this group has researched the relationships between environmental ethics, epistemology, and politics, questioning the technocratic character that prevails in public administration and environmental sciences (Noguera 2005). Since 2000 IDEA has collaborated with the Mexican environmental economist Enrique Leff in publishing the *UNEP Series on Environmental Thought*, an essential bibliographic source on South American environmental philosophy.

Among the philosophers from IDEA, Augusto Angel-Maya stands out for having pioneered an influential school of environmental thought in Colombia. He criticizes the rationalist tradition of philosophy that separates humans from nature. Angel-Maya affirms that "Platonism has drowned Western philosophy" (2002, p. 85). Angel-Maya urges philosophers to turn away from Platonic metaphysics by rediscovering the work of the Ionian pre-Socratic philosophers, with their immersion in the multidimensional complexities of immanent, here-and-now reality, a task he believes is best accomplished through interdisciplinary approaches.

Influences of Anglo-Saxon Environmental Philosophy As an academic subdiscipline, environmental ethics emerged during the early 1970s, mainly in U.S., British, and Australian universities (Callicott and da Rocha 1996). Since the 1990s a few South American scholars have begun to translate and discuss Anglo-Saxon environmental philosophers. In Argentina Alicia Bugallo did extensive research in Deep Ecology and published *De Dioses, Pensadores, y Ecologistas* (Of Gods, Thinkers, and Ecologists) (1995). In Uruguay Eduardo Gudynas introduced the work of the American anarchist ecologist Murray Bookchin and created the Latin American Center of Social Ecology in 1989. In Brazil Sonia Felipe has adapted the work of the animal-liberation philosophers Peter Singer and Tom Regan, participating in the journal *Revista Brasileira de Direito Animal* (Brazilian Animal Rights Review). In Chile Ricardo Rozzi has worked on ecological ethics and introduced the work of Baird Callicott and Eugene Hargrove through a collection of articles in the journal *Ambiente y Desarrollo* since 1996. To enhance the dialogue between South American and Anglo-Saxon environmental philosophers, the University of North Texas and Chilean universities have collaborated on a number of programs in environmental philosophy and biocultural conservation, including a series of occasional papers published online by the International Society of Environmental Ethics (Rozzi 2007).

Social Movements and Environmental Philosophy Since 2000 social movements have played an increasingly influential role in South American environmental philosophy. "Another world is possible" is the slogan of the World Social Forum (WSF) first held in Porto Alegre, Brazil, in 2001. The WSF has brought together countless social movements and leading environmental philosophers and scholars, helping to forge an approach to environmental philosophy that builds on the knowledge of indigenous, peasant, and other subaltern or minority groups to envision other ways of coexisting with a multiplicity of human and nonhuman beings. In the words of the "Manifesto for Life: Ethics for Sustainability," "The ethic for building a sustainable society leads to an emancipation process which, as Paulo Freire taught, recognizes that no one frees anyone else and no one frees himself alone; human beings are only freed in communion" (in Reichman 2004, p. 18). This manifesto, prepared by 35 distinguished Latin American scholars, was signed during the Thirteenth Forum of Ministers of the Environment of Latin America held in Rio de Janeiro, Brazil, in October 2001 and ratified by leading South American environmental philosophers at the Symposium on Environmental Ethics and Sustainable Development in Bogota, Colombia, in 2002; it suggests that a future of South American environmental philosophy is oriented toward a dialogue among the multiplicity of human and nonhuman forms of life.

SEE ALSO *Antarctica; Biocultural and Linguistic Diversity; Biodiversity; Caribbean; Dams; Exotic Species; Fish Farming; Forests; Global Climate Change; Invasive Species; Mining: I. Overview; Ozone Depletion; Traditional Ecological Knowledge; United Nations Environment Programme.*

BIBLIOGRAPHY

Angel-Maya, Augusto. 2002. *El Retorno de Icaro*. Bogota, Colombia: PNUD.

Boff, Leonardo. 1995. *Ecology and Liberation: A New Paradigm*. New York: Orbis Books.

Boff, Leonardo. 1997. *Cry of the Earth, Cry of the Poor*. New York: Orbis Books.

Bugallo, Alicia. 1995. *De Dioses, Pensadores, y Ecologistas.* Buenos Aires, Argentina: Grupo Editor Latinoamericano.

Callicott, J. Baird, and Fernando J. R. da Rocha. 1996. *Earth Summit Ethics: Toward a Reconstructive Postmodern Environmental Philosophy on the Atlantic Rim.* Albany, NY: SUNY Press.

Carrizosa, Julio. 2001. *Que es Ambientalismo?* Bogota, Colombia: IDEA-PNUMA.

Dussel, Enrique. 1996. *The Underside of Modernity: Apel, Ricoeur, Rorty, Taylor, and the Philosophy of Liberation,* ed. and trans. Eduardo Mendieta. New York: Humanity Books.

Escobar, Arturo. 1996. *Encountering Development: The Making and Unmaking of the Third World.* Princeton, NJ: Princeton University Press.

Gebara, Ivonne. 1999. *Longing for Running Water: Ecofeminism and Liberation.* Minneapolis, MN: Augsburg Fortress Press.

Gutierrez, Daniel E. 2008. "Environmental Thought in Argentina: A Panoramic View." South American Philosophy Section, International Society of Environmental Ethics Occasional Papers 3. http://www.cep.unt.edu/iseepapers/gutierrez-engl.pdf

Kusch, Rodolfo. 1962. *América Profunda.* Buenos Aires: Hachette.

Kusch, Rodolfo. 1976. *Geocultura del Hombre Americano.* San Antonio de Padua, Argentina: Editorial Castañeda.

Kwiatkowska, Teresa, and Jorge Issa, eds. 1998. *Los Caminos de la Ética Ambiental: Una Antología de Textos Contemporáneos.* Mexico City: Plaza y Valdés.

Leff, Enrique. 2002. *Etica, Vida, Sustentabilidad.* Bogota, Colombia: IDEA-PNUMA.

Martinez-Alier, Joan. 2002. *The Environmentalism of the Poor.* Cheltenham, UK: Edward Elgar.

Mignolo, Walter. 1995. *The Darker Side of the Renaissance: Literacy, Territoriality, and Colonization.* Ann Arbor: University of Michigan Press.

Mignolo, Walter. 2000. *Local Histories/Global Designs.* Princeton: Princeton University Press.

Mignolo, Walter. 2001. "Local Histories and Global Designs: An Interview with Walter Mignolo," *Discourse* 22(3): 7–33.

Mittermeier, Russell A., Cristina Goettsch Mittermeier, Patricio Robles Gil, and John Pilgrim 2003. *Wilderness: Earth's Last Wild Places.* Arlington, VA: Conservation International.

Noguera, Ana Patricia. 2005. "Editorial." *Ideas Ambientales* 1: 2–3.

Noguera, Ana Patricia. 2007. "Horizons of Environmental Ethics in Colombia: From Anthropocentric Environmental Ethics to Complex Environmental Ethics." International Society for Environmental Ethics Occasional Papers 2. http://www.cep.unt.edu/iseepapers/noguera-eng.pdf

Parentelli, Gladys. 1996. "Latin America's Poor Women." In *Women Healing Earth: Third World Women on Ecology, Feminism, and Religion,* ed. R. R Ruether. Maryknoll, NY: Orbis Books.

PNUMA/UNESCO. 1985. *Universidad y Medio Ambiente En America Latina y EL Caribe.* Bogota: ICFES.

Porto-Gonçalves, Carlos Walter. 2006. El Desafío Ambiental. PNUMA, Mexico City, Mexico.

Primack; Richard; Ricardo Rozzi; Peter Feinsinger; Rodolfo Dirzo; and Francisca Massardo. 2006. *Fundamentos de Conservación Biológica: Perspectivas Latinoamericanas.* Mexico City: Fondo de Cultura Económica.

Reichman, Jorge. 2004. *Etica Ecologica.* Madrid: Nordan.

Rozzi, Ricardo. 1997. "Hacia una Superación de la Dicotomía Antropecentrismo/Biocentrismo." *Ambiente y Desarollo* XIII (3): 48–58.

Rozzi, Ricardo. 2001. "Éticas Ambientales Latinoamericanas: Raíces y Ramas." In *Fundamentos de Conservación Biológica: Perspectivas Latinoamericanas,* eds. R. Primack; R. Rozzi; P. Feinsinger; R. Dirzo; and F. Massardo. Mexico City: Fondo de Cultura Económica.

Rozzi, R. 2007. *Environmental Ethics: South American Roots and Branches.* International Society for Environmental Ethics Occasional Papers 1. http://www.cep.unt.edu/iseepapers/introduction.pdf

Sosa, Nicholas. 1990. *Etica Ecológica.* Madrid, España: Libertaria.

UNESCO. 2008. Man and Biosphere Programme. http://www.unesco.org/mab/mabProg.shtml

Valdés, Margarita. 2004. *Naturaleza y Valor: Una Aproximación a la Ética Ambiental.* Mexico City: Fondo de Cultura Económica.

Ricardo Rozzi

SOUTHEAST ASIA

Southeast Asia forms a major part of the Indomalayan bioregion. Myanmar (Burma), Thailand, peninsular Malaysia, Singapore, Laos, Cambodia, and Vietnam belong to the Asian mainland, and have a biota that is similar to that of the Indian subcontinent. The insular Sabah and Sarawak (Malaysia), Brunei Darussalam, the Philippines, Indonesia, Timor-Leste, and Papua New Guinea make up most of the great Malay Archipelago, linking Indomalaya to the Australian bioregion. Southeast Asia is also usually considered to include the Andaman and Nicobar islands (India), and the Australian islands of Christmas and Cocos (Keeling).

POPULATION AND POLITICS

Geologically complex and biodiversity rich, this region is home to more than 8 percent of the world's human population and has a land area of about 5 million square kilometers (comparable to that of the European Union). With an average of about 125 people per square kilometer, its population density is similar to that of China and Europe, less than half that of India but four times greater than that of the United States. Although the two major divisions (mainland and archipelago) have many biotic and ethnic connections, the differences give rise to a variety of environmental challenges compounded by cultural diversity and a wide range of political systems: a military dictatorship (Myanmar), a communist state (Laos), a socialist republic (Vietnam), democracies (constitutional monarchies in Thailand, Malaysia, Cambodia, and Papua New Guinea; and presidencies in Singapore, Philippines, Indonesia, and Timor-Leste), and a