

## The Biology of Culture

BY BRIAN D. FARRELL

### WE ARE NATURE.

This is the idea behind this issue of *ReVista*, to explore the connections between the arts and sciences through the lens of the biological aspects of human culture. Biological research is science, and cultural studies fall within the humanities. One obvious area of overlap concerns our connections to the environment through the plants and fungi used as food, as domestic materials and as spiritual facilitators. Contributors to this *ReVista* include two DRCLAS Visiting Scholars (Sampeck and Zimmerer) and a DRCLAS Graduate Student Associate (Daniels), as well as Harvard faculty (Pfister, Farrell), other Harvard affiliates (Africa) and a Guatemalan textile expert (Reiche). It seems apropos that we begin with an emphasis on our connections to nature, particularly through plants. A future issue may explore other ways in which the marks of a long prehistory are manifest in everyday culture.

Julia Africa's contribution suggests that there is a measurable health value beyond nutrition in the cultural practices explored by the other contributors, particularly the emphases on use of plants through scents, touch, taste or sight, all of which are combined in the practice of forest bathing, known in Japan as *shinrin-yoku* and in Scandinavia as *friluftsliv*. Aromatherapy has this much in common with the Haitian ritual bathing with aromatic herbs, the Andean improvised selection among dozens of potato tubers to plant a field, the selection, drying and grinding of cacao, and the Guatemalan immersion of deepest blue dyes. All involve a primarily sensual experience in a ritualistic context, reinforcing the sense of participation in something larger. This is at the core of religions, according to William James, the strength of belief of participation in something larger, older and more important than one's self, a feeling that is reinforced by sensory input from smell, sight and sound.



Taino stone zemi.

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The arrival of people from Asia to the Americas more than 10,000 years ago sets the time frame within which they first discovered the uses of the unique biodiversity they encountered, then applied selective breeding where appropriate, and finally developed a rich cultural milieu centered on their relationships to their new environment. The plants they domesticated included the tiny tubers of ancestral potatoes that through generations of selective breeding increased in size and diversity to finally numbering over 4,000 different kinds, each with a special quality valued by their breeders. Same for chile peppers. Corn, cacao, peanuts, cassava and innumerable beans and squashes are just a few more of the results of this history. On the other hand, many fungi used as food in southern temperate Chile were not domesticated but do have close relatives in northern temperate regions including Asia. These are surely independent discoveries of

their uses on each side of the equator, but the willingness to explore and consume fungi is a cultural value that may well have persisted through the thousands of years of slow migration across the tropics from the northern temperate zone to southern temperate Chile (the wonder is why some cultures have lost this value).

People so closely in tune with their environment would surely experiment widely with plants and fungi they encountered, and no doubt some of these particular species proved to have the psychoactive effects famously documented by Richard Schultes, extending the natural environment to the spiritual world.

The particular examples outlined in these contributions to *ReVista* only hint at the almost unfathomable, cumulative, cultural impact of a intimate, daily connection of humans with their environment over tens of thousands of years, and are only a very few of the fruits of this long history. Imagine what cultural wealth was lost when the vast majority of indigenous peoples disappeared from the Americas, a wealth only hinted at in the very few remaining codices of the Aztecs and Mayans.

Knowing more about these intertwined elements of biology, nature and culture can only increase our appreciation and with it, the positive effects on our lives.

*Brian D. Farrell is the director of the David Rockefeller Center for Latin American Studies. He is also a Professor of Biology in the Harvard Department of Organismic and Evolutionary Biology.*