Keeping life going: Plants and people today, yesterday and tomorrow

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Abstract
I review the contributions to this special issue by focusing on the relational qualities that bind people and plants together through religious ritualization of economic activities such as crop cultivation or plant gathering in the wild. I show how an attention to plants as teachers facilitates cross-cultural comparative analysis.

Keywords
personhood, plant intelligence, plants in rituals, religious symbolism, wild and domesticated nature

Résumé
Dans cette lecture comparative des contributions formant le numéro spécial, j’offre une réflexion personnelle sur les qualités relationnelles des liens qui peuvent unir les gens aux plantes. Je me penche tout particulièrement sur les rites religieux accompagnant les activités agricoles ou la cueillette des plantes en milieu sauvage. J’en conclus qu’une approche focalisée sur le rôle pédagogique des plantes facilite l’analyse comparative.

Mots-clés
intelligence et vie des plantes, nature sauvage et domestiquée, symbolisme religieux, théories de la personne, usage rituel des plantes

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For botanist Robin Wall Kimmerer (2013: 213), ‘plants are our oldest teachers’. As she shows so compellingly in her profoundly poetic *Braiding Sweetgrass*, plants teach humans not to separate scientific knowledge from spirituality. Kimmerer (2013: 214) pays particular attention to the teachings of immigrant plants, ‘those who make themselves welcome, and those who do not’, as she specifies. With specific examples (garlic mustard that forces death upon native species by poisoning the soil, or tamarisk that uses up all the water with no regard for the needs of others), she carefully distinguishes ‘foreign invaders’ from naturalized citizens. The latter do not take over the homes of others by ‘growing without regard to limits’. Instead, they ‘pledge to uphold the laws of the state’, and make themselves useful, coexisting with others and abiding by the original instructions of Nanabozho, a powerful spirit being who personifies life forces. Nanabozho is the Anishinaabe’s ‘great teacher of how to be human’ (Kimmerer, 2013: 205).

Kimmerer’s account of ‘the good ways of learning’ taught by plants who have become so well integrated in a place that we think of them as native resonates with a great deal of anthropological literature, although this is not immediately visible to the reader interested not only in secular scientific knowledge, but also in indigenous spirituality, including the religious lives of plants. I cannot show here for lack of space how her approach would renew our understanding of Frazer’s (1922) *The golden bough*. However, I can illustrate how her explanations would shed a new light on Gruzinski’s (1985) discussion of Antonio Perez, a shepherd from Ecatzingo, central Mexico, who had become a healer, and found himself accused of holding heretic beliefs.

In 1761, 242 years after the arrival of Cortés, Antonio Perez told the Spanish inquisition: ‘I am God; I am the one who feeds the world’ (Gruzinski, 1985: 106, my translation). Like many folk worshippers of colonial Mexico, Antonio had altered wooden images of St Mary the Virgin by creating secret holes in the chest and the head. In the statue’s chest, he had introduced small pieces of the inner part of a maize stalk, a cob fragment, kernels of different colours, and a minuscule flask containing the blood extracted from his virgin daughter’s right hand. In the statue’s head, he had inserted the heart of a white pigeon. To attract Jesus in St Mary’s womb, the folk priest had then presented the statue to two kernels of maize, a simple and practical gesture, which helped him and folks like him to come to term with the abstractions of the Catholic doctrine of Immaculate Conception. Antonio Perez patiently told the inquisitors that Jesus’ soul was made of corn, which explains why when Jesus died and was buried, a stalk grew from his heart. He explained that Jesus’ heart formed within the young ear on the growing stem, and caused the kernels to ripe into grain. Having heard that Jesus’ soul was there, the crows stole the precious ear of corn, and hid it in some grassland. Fortunately, an angel who had witnessed the crime recovered the hidden cob, which he gave to Saint Isidore and Saint Lucas, ordering them to prepare a field. The saints made the furrows and sowed all the kernels diligently, and the maize grew abundantly (Gruzinski, 1985: 149–152). This is why, Antonio Perez added, the soul of Jesus has spread all over the world, before concluding:

my god is the ear of maize and the three ears of maize that make up the Trinity [. . .] God is the Lord of death, of life, and of the maize that gets born, germinates, and dies. God is in the cereal, and Antonio has God in his chest (Gruzinski, 1985: 146, my translation).
The sacralization of human/maize inter-dependence and the religious ritualization of agricultural activities at the root of Antonio Perez’ folk Catholicism are still widespread among Central American indigenous communities, as the ethnographic record makes plain. Rafael Girard (1949) abundantly demonstrates, for instance, that the Chorti of eastern Guatemala and western Honduras cultivate their maize fields (milpas) with the same sacred awe and religious devotion as their Mayan forebears did, including the use of bird sacrifice, blood and food offerings, astronomic observations, and calendric calculations. They ask permission to the Earth before working the land, open a cave in the milpa to lay offerings, and multiply bloody sacrifices, including their own blood, if the rains are late. They believe that maize plants undergo a process of transformation very similar to the one humans go through, a process which culminates with rebirth in a new form. Once inserted in the darkness of the soil, the maize kernels are thought to fight adverse forces in order to surge anew, exactly like dead humans and foetuses do. Countless ethnographies of Mesoamerican rural communities illustrate how contemporary indigenous cultivators continue to imagine the human person as made of two separate substances, flesh and spirit, each with its own temporality and qualities. The body, at once flesh, corn, and food (López Austin, 1988: 162) constitutes the envelope in which a spark of cosmic energy (sun heat, sun ray, fire) is lodged; blood, with its fertilizing power and flow of vital energy, is thought to link body and soul together in a fragile and unstable state of unity.

Nahua ideas about personhood, rooted in peasant concerns for maize, rain, sunlight, and life, have not only endured to this day, but also given shape to the grammar of Aztec sacrifice, guiding the Aztec rulers in choosing to sacrifice the body to the soul. The high value the Aztecs placed on ritual violence and killing was rooted in ‘cosmological understandings of the creative and transformative capacities of violence, as well as of the use made of these ideas in imperial ideology’ (Wolf, 1999: 193). As I have argued elsewhere (Rival, 2013), by constructing and projecting ideal systems that strived to connect power with visions of life, in a search to intensify vitality even if the price of doing so was death, the Aztec came to practice two very different types of human sacrifice. While heart excision executed on captured warriors transformed potential affines into adopted sons according to a logic akin to ‘ontological animism’, the beheading of god impersonators transformed daughters and sisters into brides according to a logic much closer to ‘ontological analogism’. Dying of heart excision favours the amplification of the soul through the fusion of tonalli (conquered destiny and courageous mind) and teyolia (individual energy, intensified spark of life, the force which causes the body to grow), or mind and heart. Beheading allows the third soul, ihíyotl (passion, personal courage, vitality and artistic qualities), to take centre stage in persons whose tonalli has been entirely colonized by divine presence. If the heart-excised war captive performed animistic predation, the beheaded god image brought forth an outburst of unfurled ecological connections between the maize plant and its environment (Rival, 2013).

Some of the authors of this special issue similarly explore plant teachings that point to diverse forms of religious ritualization of agricultural activities. Liu Pi Chen discusses the religious beliefs and ritual practices of the Pangcash/Amis (‘the grass eating people’) who engage in upland field farming in eastern Taiwan. He shows how mixed farming of
millet, dry rice and broomcorn, combined over millennia with pig and chicken husbandry, hunting, and the gathering of over 200 wild edible plants has created a coherent and resilient livelihood system. Even in the parts of the territory most disrupted by the forces of economic modernization, shamanic understandings of the world and elaborate plant knowledge continue to inform the rituals that ensure the continuity of life for both humans and plants. Liu Pi Chen’s piece richly illustrates the sophistication of the elaborate symbols that surround the farming cycle and food processing of both millet and sticky upland rice. Symbolic efficacy in the sensory ecology of the Pangcash/Amis operates on many fronts. It relies as much on the sensuous qualities of plants as it does on animist understandings of life, soul, and personhood. Through ritual performativity, ‘organic networks’ unfold leading to the lifting up of boundaries ‘between nature (sun), plants (millet, upland rice), people, ancestors and deities’. All can now ‘mutually connect to one another and exist physically in the same universe’.

Discussing millet rituals in other parts of Taiwan, Benoît Vermander invites the readers to a more theoretical, historical, and comparative analysis of what he calls ‘spiritual hybridization’. The author does not focus on particular examples of indigenous appropriation of Christianity; he chooses instead to outline the main characteristics of globalizing systems of symbolic representation. He shows that these are often associated with civilizations relying on the cultivation of cereals. Cereals are thus apprehended as ‘civilizational plants’. Vermander proposes four approaches to apprehend their qualities and the religious symbolism attached to them: (a) setting up exhaustive lists of associations or repertories; (b) focusing on types of action which equally apply to ways of treating plants and animals, and people; (c) examining them through the lens of power dynamics and political institutions; and, finally, (d) identifying the bodies of knowledge and the meanings mobilized in processing techniques used by different cultural groups to transform their cultivated cereals into a wide range of foods. With these four approaches, the comparative analyst can then reconstruct synthetically the overall symbolic role played by any particular kind of cereal, as well as the symbolism attributed to the co-existence of various civilizational plants within any given cultural milieu. Cereals, thus, are to be approached as some sort of cultural keystone species (Coe and Gaoue, 2020). Furthermore, the author argues that associating practices and mental representations facilitates the comparative analysis, offering cues as to the ‘sacramental becoming’ of multifarious cereals. ‘Sacramental’ here is defined as the capacity to link together dissimilar orders of reality at any particular point in time, in any particular place around the world. To demonstrate the analytical power of this analytical framework, Vermander applies it to ‘controlled cultural hybridization’ strategies that have been used in Taiwan historically. The last part of his essay compares and contrasts strategies adopted by communities, which combine the cultivation of indigenous cereals such as millet, with that of naturalized cereals such as rice and wheat.

In contrast to Liu Pi Chen and Vermander, Else Demeulenaere and colleagues choose a more traditional ethnobotanical approach to survey the biological and cultural place occupied by certain trees on various Micronesian islands (Palau, Yap, Guam and Rota). These trees all belong to species of the genus *Serianthes* (in the pea family, Fabaceae). Their approach, akin to that pioneered by Fikret Berkes (2018) in *Sacred ecology*, is careful to include the role Micronesian communities attribute to *Serianthes* trees in
connecting them spiritually to their natural environments. Berkes’s sacred ecology depends on a generic, non-dualistic view of nature and culture, which does not exclude spiritual and moral considerations, while at the same time emphasizing the prime importance of scientific knowledge. It is this harmonious fusion of moral, spiritual, and scientific considerations which, according to Berkes, leads to good conservation science and policy. Like the Cree hunters and fishers with whom Berkes studied, the Micronesians discussed by Demeulenaere and colleagues seem to have kept impressive systems of biological classification, as well as having retained the capacity to successfully manage varied resources over countless generations. They show that collaboration between traditional knowledge holders and scientists promotes conservation practices guided by spirituality and respect, which enables people to restore nature where it has been degraded. Although the study is still ongoing, this initial survey of *Serianthes* (a Micronesian cultural keystone species?) illustrates that people in Palau, Yap, Guam and Rota do not consider humankind to exist in a realm separate from nature, and that their apprehension of nature, though concrete and scientific, does not desacralize or objectify life. Here too sound resource management includes a clear moral and spiritual dimension, which gets activated through ritual activity.

Both the contributions by Sveta Yamin-Pasternack and Igor Pasternack, and by Denis Monnerie contrast with that of Demeulenaere and colleagues with respect to the integration of spirituality with science. Yamin-Pasternack and Pasternack’s approach to the ritualization of people’s relationship to the arctic vegetation in Chukotka is less influenced by landscape ecology (Johnson and Hunn, 2010) than by recent ontological debates. The ethnographers describe the revival of a ‘ceremony of gratitude, reconciliation and remembrance’ practised by the villagers living in Akkani on the Russian Pacific coast, near the Bering Strait. Whether born Chukchi or having embraced Chukchi spirituality through residence in post-Soviet Akkani, people celebrate their interactions with ‘the many kinds of dwellers in the beyond-the-human world’ through what Vermander would call sacramental rites. These rites though are not dedicated to specific domestic crops, but to the tundra vegetation apprehended as a living, sentient and thinking landscape, which shares some characteristics with what we commonly call ‘wilderness’. In this context, conservation ethos relies on a reconceptualization of human biophilic attachment to the wild.

Equally concerned with the changing relationship between ‘wild’ and ‘domesticated’, Monnerie discusses the symbolic associations that the Arama of New Caledonia draw between a fruit tree called *nôôle* and the yams they cultivate. The category ‘yam’ (*uvi* in Kanak) is comprised of a number of wild and domesticated species, all belonging to the family *Dioscoreaceae* (genus *Dioscorea*), with cultivars of *Dioscorea alata* L. constituting the Arama’s cultural keystone species. Yam, as Monnerie notes, is a civilizational plant by excellence. A methodological focus on various types of ceremonial offering as well as on the signification attributed to ritual sequencing enables the author to show how these come together in the context of new religious and economic forces to form a synthetic whole. Ceremonies and their ritual sequencing are thus deeply implicated in the processes through which Kanak people recreate the cultural coherence of society and cosmos at a time of rapid changing and transformation. Equipped with this refreshed semiological method, the author is now able to elucidate the ways in which religious symbolism plays on reciprocal influences between intrinsic qualities and relational
dynamics. He is also now in a better position to demonstrate the enduring importance of anteriority as a prevailing value among the Arama.

To conclude, this special issue brings additional support to the view that anthropologists need not rely on ‘plant intelligence’ studies to highlight the benefits of including plant symbolism in their analyses of ‘native ontologies’ (Rival, 2018). It also illustrates convincingly the shortcomings of analyses that search for a ‘pure’, ancestral, or generalized state of ‘religion’ (Nazarea and Gagnon, 2021). Modernists fail to comprehend the dynamics of ‘syncretic’ engagements with the present, which all authors reviewed here show to be at the heart of every living spiritual tradition. It is through exchange with contemporary ‘others’ that ancient traditions are maintained. Even excellent ethnographies such as Harvey Feit’s (2001) account of intercultural discourse in northern Quebec tend to underplay the passion with which indigenous people seek to share their views. Feit interprets the metaphoric use of ‘garden’ by the Cree as a necessary ploy corresponding to a reverse form of strategic essentialism. For Feit, Cree spokespersons choose to appear more like the whites by using values, beliefs, and representations of nature associated with the dominant settler culture. However, a different interpretation is possible. In their efforts to mobilize the public in support of Cree autonomy and to broaden popular respect for cultural difference, these Cree spokespersons may well have tried to challenge dominant understandings of gardens as domesticated spaces devoid of wilderness, thus inviting white Canadians to see nature as the Cree do. The Cree, as all the cultural groups discussed in this special issue, not only dynamically interact with ecological and historical constraints through sensory and investigatory experience, but they also transform them into choices and values. Every one of them, like the Cree, have indigenized European symbols, concepts, and collective representations. In each case as well, local appropriation of Christianism has worked hand in hand with a certain Christianization of the relationship to the other. However, the essays in this special issue illustrate a reciprocal influence as well, by which ecological knowledge binds scientific objectivity to religious ideas and ethical norms, as if biological life could not but simultaneously mobilize both reason and emotion.

By exploring the lives plants make possible on earth, as well as their ritual importance in places as varied as the Arctic, Micronesia, New Caledonia, and the south China Sea, the authors of this special issue ask pressing questions: What are the lessons we, modern humans, have so far failed to learn from plant intelligence? How can plants help us avoid catastrophic collapse? What do we need to learn from them to rapidly adapt to global warming? Like Kimmerer, they show that plant teachings need to be apprehended holistically through analytical frameworks which fully acknowledge acculturation processes, without ignoring mutual and reciprocal aspects. Once enriched by the sentient ecology of plant teachings, semiotics becomes an analytical lens we can productively return to. In a remarkable, but half-forgotten essay, James Fernandez (1986) already pointed to the role of phenomenological experience in constituting the hold symbols have on us. His insights shed light on the plant teachings and ritual performances discussed by the contributors to this special issue. For instance, he remarks that ‘revitalization movements return to the whole [knowing that] the whole is never fully graspable’ (Fernandez, 1986: 182). Wholes are culturally constructed, most often as ‘imagenes mundi’, which play a crucial role in world reconstitution (that is, reassertion of experiences of coherence and wholeness) in communities whose worlds have been
shattered. No wonder then that acts of cultural revitalization are enacted and performed as returns to the whole. In other words, when *imagenes mundi* are acted out on a cosmological plane, a return to the whole ensues in at least three separate ways: by iteration, by the discovery of replication, and by the creation of novel semantic categories of wide classification (Fernandez, 1986: 175). Symbols, in other words, are necessary to restore vitality as an experience of wholeness, which explains why wholeness and adaptation are ‘in significant relation’ (Fernandez, 1986: 181). Such healing, of course, corresponds to a new materialism which far from excluding the symbolic, understands the power and efficacy of symbolic healing (Fernandez, 1986: 180). Much theoretical work is needed to give shape and coherence to the renewed semiology we urgently need in these threatening times. This special issue is a welcome start on this path.

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**References**
Berkes F (2018) *Sacred ecology: Traditional ecological knowledge and resource management*. Abingdon: Routledge.

Coe MA and Gaoue OG (2020) Cultural keystone species revisited: Are we asking the right questions? *Journal of Ethnobiology and Ethnomedicine* 16(70): 1–11.

Feit HA (2001) Hunting, nature and metaphor: Political and discursive strategies in James Bay Cree resistance and autonomy. In: Grim JA (ed) *Indigenous traditions and ecology*. Cambridge: Center for the Study of World Religions, Harvard Divinity School and Harvard University Press, pp.411–452.

Fernandez J (1986) The argument of images and the experience of returning to the whole. In: Tuner VW, Bruner EM and Geertz C (eds) *The anthropology of experience*. Urbana, IL: University of Illinois Press, pp.160–187.

Frazer J (1922) *The golden bough: A study in magic and religion*. London: Macmillan.

Girard R (1949) *Los chortis ante el problema maya: historia de las culturas indígenas de América, desde su origen hasta hoy*. México: Antigua Librería Robredo.

Gruzinski S (1985) *Les hommes-dieux du Mexique: pouvoir indien et société coloniale 16e–18e siècles*. Paris: Éditions des Archives Contemporaines.

Johnson LM and Hunn ES (eds) (2010) *Landscape ethnoecology: Concepts of biotic and physical space*. New York: Berghahn books.

Kimmerer RW (2013) *Braiding sweetgrass. Indigenous wisdom, scientific knowledge and the teachings of plants*. Minneapolis, MN: Milkweed editions.

López Austin A (1988) *The human body and ideology: Concepts of the ancient Nahua*. Salt Lake City, UT: University of Utah Press.

Nazarea VD and Gagnon T (eds) (2021) *Moveable gardens. Itineraries and sanctuaries of memory*. Tucson, AZ: The University of Arizona Press.

Rival L (2013) The Aztec sacrificial complex. In: Zachhuber J and Meszaros J (eds) *Sacrifice in modern thought*. Oxford: Oxford University Press, pp.163–179.
Rival L (2018) Comment on Ludwig’s revamping the metaphysics of ethnobiological classification. Current Anthropology 59(4): 428.

Wolf E (1999) Envisioning power: Ideologies of dominance and crisis. Berkeley, CA: University of California Press.

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