On the (In)sentience and Buddha-Nature of Plants

by Karin Meyers

In recent years there has been an explosion of scientific and popular interest in the question of plant *intelligence*. While many scientists are hesitant to extend terms previously reserved for humans (and an increasing number of animals) to plants, research continuously reveals that plants are remarkably complex responders to information about their environments; predators; kin; beneficial partnerships with other plants, animals, and insects; as well as their own bodies and growth. Plants appear to be able to remember, learn, make choices, communicate, and have complex social lives. Plants also move--although usually too slowly (and occasionally too quickly) for us to notice (Calvo 2022, 95).

Do these abilities suggest that plants are *intelligent*? Does it mean that they are *conscious*, aware of themselves and what's around them? Do they model their worlds and make plans? Do they have intentions? Do they feel and avoid pain or seek pleasure? What would it be *like*, if anything, to be a plant? Does one need a brain to experience and act in the world? Contemporary science can't answer these questions, but it also has little to say about our own consciousness--where it comes from or precisely how it relates to our brains, bodies, and social and physical environments.

Karin Meyers 2024: "On the (In)sentience and Buddha-nature of Plants", *Insight Journal*, 51: 33–48.

Part of why research into plant intelligence is so controversial is that it is difficult to understand the complexity of plant "behavior" without anthropomorphizing, without projecting our own inner lives onto plants. In her recent book, *The Light Eaters*, science journalist Zoë Schlanger relates how even scientists who are careful not to attribute human qualities like agency to plants in their scientific papers, speak freely about plants in casual conversation as if they were aware, make choices, have preferences, and so on. She also notes that it was not that long ago when Western intellectual elites considered non-human animals to be mere automatons incapable of feeling fear or pain during vivisection, and wonders what it would be like to bring plants into our circle of ethical concern, as many of us have done with (at least some) animals.

In this disorienting era of ecological crisis fueled by modern industry and lifeways, many of us are reevaluating our relationship to the more-than-human world. We are seeking knowledge from scientific research as well as from spiritual traditions as we reconsider our ethical responsibilities to other forms of life on the planet as well as to future generations of human beings. Popular interest in plant intelligence runs parallel to and often intersects with a growing respect for Indigenous, often animist, ways of relating to the more-than-human world, as well as for the healing powers of plant medicines and plant spirits or teachers. These themes converge in a number of recent books, such as Robin Wall Kimmerer's *Braiding Sweetgrass* (2015), Jeremy Narby and Rafael Chanchari Pizuri's *Plant Teachers* (2021), and evolutionary ecologist Monica Gagliano's fascinating memoir, *Thus Spoke the Plant* (2018), in which she recounts how her scientific research into plant learning and memory was inspired and, at times, *directed* by plant spirits, whom she met through dreams, *dieta*, and fasting supported by Shipibo and Aboriginal plant doctors. Interest in these themes have also led earth-conscious Buddhists to wonder how plants figure in traditional Buddhist doctrine and what role they might play in our spiritual practice. To help support this inquiry, this essay provides an overview

of Indian Buddhist views on the sentience of plants and later East Asian views on their Buddha-nature, and concludes with a few idiosyncratic reflections on what this all means for practice.

Are Plants Sentient?

In early Buddhism, there are four comprehensive terms for living beings, which function as quasi-synonyms: *prāṇin/pāṇin* ("animate," possessing breath or energy, *prāṇa/pāṇa*), *sattva/satta* ("sentient"), *jīva* ("living being"), and *bhūta* ("being"). All of these imply sentience, or the possession of mind-heart (*citta*) and capacity to feel pleasure and pain. In some of the oldest Buddhist texts, we find plants listed among the category of living and sentient beings. For example, in the Sutta-Nipāta, a *Vāseṭṭha-sutta* list of animate beings begins with "grasses and trees" (*tiṇarukkha*) (Schmithausen 2009, 23), and the *Karanīya-mettā-sutta* advises those who aspire to be skilled in *mettā* to wish for the safety and happiness of all beings:

> Whatever living beings (*pāṇa*) there may be, mobile (*tasa*) or stationary (*thāvara*), omitting none,
> Those who are long or great, middling, short or small...

Most English translations render *tasa* and *thāvara* as "weak" or "frail" and "strong" or "firm," respectively, but their literal meaning is closer to "mobile" and "stationary." The Sutta-Nipāta commentary explains that *thāvara* should be taken metaphorically--as spiritual and emotional stability, in contrast to *tasa*, which it connects via homonym to craving (*tṛṣ*) and trembling with fear (*tras*). In other words, *thāvara* beings are arhats, and *tasa*, the rest of us. This somewhat contrived explanation coheres with the later settled Buddhist view that plants are not sentient. However, the pre-Buddhist meaning of the phrase is well attested with "mobile" (*tasa*) referring to

animals, and "stationary" (*thāvara*) referring to plants (Schmithausen 1991, 2009). This was meant to be inclusive of all living beings, much like the English phrase, "fauna and flora." This phrase is found in older Buddhist verse, but also in a few suttas, typically in connection with the instruction not to "injure" or "oppress" beings, but to protect them and suffuse them with *mettā* (Schmithausen 1991, 60).

The idea that plants were not only alive but to some degree sentient was commonplace in ancient India. It is found in Vedic and Hindu thought and is a central tenet of Jainism. According to Lambert Schmithausen, who has done the most in-depth research on the topic, early Buddhists neither confirmed nor denied plant sentience, but instead treated plants as a "borderline case," as somewhere on the boundary between sentient and insentient (1991, 2009). They either didn't feel the need to decide the matter or found it pragmatically useful to avoid doing so. Thus, we find early Buddhists using the older Indian nomenclature that included plants as sentient beings, and making prohibitions against injury to plants for monastics and occasionally for lay followers, but nothing like the Jain view that killing plants violates the precept against taking life. Schmithausen speculates that from a practical perspective, it would have been unseemly for Buddhist monastics to violate rules commonly followed by other ascetics, but it would also have been impractical for lay Buddhists to refrain from farming or carving up fruits and vegetables. This is supported by a commentarial explanation of the monastic prohibition against injury to plants that explains that (some) people (not necessarily Buddhist) believe plants are sentient (Schmithausen 1991, 16, 27). Other commentarial explanations include the ideas that trees and other plants or the fields where they grow may be the abode for small living beings, or that trees may be the home for spirits or deities-- a view still found in South Asia today. There are also a few places where injury or harm to a tree that has provided one with shade or fruit is admonished as disloyalty or ingratitude (Schmithausen 1991, 74).

It is only later that South Asian Buddhist traditions, both Theravāda and Mahāyāna, affirm the view that plants are neither sentient nor living (again, these concepts were regarded co-extensive). Schmithausen suggests that this coincides with a general push towards the rationalization of Buddhist thought as it appears to be guided by conceptual clarity and rational consistency rather than by empirical observation (1991, 95). A clearer theoretical distinction between the sentient and insentient also helped support the vegetarianism proposed in some Mahāyāna texts beginning in the 5th century (Schmithausen 2005).

Though the sentience of plants was not a primary topic of inquiry, it came up during debates on topics such as karma. Whereas the Jains regarded plants' positive and negative responses to stimulation and their growth and movements towards sun, water, and nutrients as signs of *feeling* pleasure and pain and indicative of some form of consciousness and perception related to the sense faculty of touch, Mahāyāna polemicists insisted that these were merely *automatic* processes. They compared plants' movements to iron filings moving under the force of a magnet, and then cited lack of autonomous movement as a sign of plants' insentience.[1] For when an interlocutor countered with the example of the mimosa plant, which has the habit of curling up when touched, the Buddhist replied that this is simply like the curling of a hair when exposed to a flame (Schmithausen 1991, 88). The mimosa was not only a favorite for ancient plant observers, but for modern researchers as well, owing to the fact that we can

[1] Interestingly, the example of a magnet is used elsewhere to illustrate how an intention (*cetanā*) is attracted to an object or goal (Meyers 2023). Though lack of autonomous movement is the primary argument against plant sentience, Buddhists also explained their insentience based on differences from animals, e.g., the fact they lack bodily heat; and do not breathe, get tired, blink, answer when addressed, or pull away when injured; and can regenerate their limbs (Schmithausen 1991, 91-94). Interestingly, it seems plants can, in fact, be put to sleep or at least anesthetized (Calvo 2022, "Introduction").

see its curling movement in real time--without any need for the time lapse photography that helps bring plants alive for us in nature documentaries. [2] It is also one of the plants Gagliano used to study plant learning and memory. Because mimosas also curl up when they are dropped, she dropped mimosas a bunch of times (without hurting them) to see if they could remember the experience and learn to relax, given that there was no real danger. They did.[3]

If experiments like this cause us to doubt whether plants are truly insentient, incapable of feeling pain and completely devoid of any mind (even one radically different from our own), Buddhists who choose not to eat meat for ethical reasons or as part of their understanding of the first precept may still, like the Indian Mahāyanists, want to draw a distinction between plants and animals. This has to do with the ethical implications of plant sentience for us human beings, but how about for plants themselves?

Are Plants Subject to Karma and Rebirth?

Ancient Indian theories of rebirth sometimes involved journeys through various elemental, vegetal, and animal realms, and at the time of the Buddha, Jains and some Hindus considered plants subject to the cycle of rebirth. However, Buddhists adopted what Schmithausen (1991, 96) calls the human "zig-zag" model of rebirth with a sojourn in another world before returning to human form. From this human-centric perspective, other realms of existence, even the animal realm, are essentially pre- and post-human births, and there is no place in this cycle for plants (or for fungi). Though Buddhist teachings and practices may help us relate more wholesomely to other forms of life, classical Indian Buddhist

[2] "Shame Plant: This Plant is Socially Awkward." https://www.youtube.com/watch?v=xEQJ0byHMXw

[3] For an entertaining summary of the experiment see, "Can Plants Remember?" https://www.youtube.com/watch?v=KyoeCFTIXKk

doctrine is aimed squarely at the problem of *human* suffering, and offers little insight into other forms of life except as reflections of the positive potential and negative consequences of human action.

In addition to being able to feel pleasure and pain, life as a sentient being (*sattva*) entails having a mind (*citta*) and intentions (*cetanā*). In a pre-Buddhist usage, the term *cetanā* (intention or intending) meant basic sentience. This meaning is reflected in the Buddhist suttas when they explain that without *cetanā*, a body is dead like a block of wood, or becomes food for other beings (Meyers 2023). Classical Buddhist doctrine builds on this meaning when it defines karma in terms of *cetanā*--as in the Aṅguttara Nikāya (6.63) when the Buddha says, "I say, oh monks, Intention (*cetanā*), is karma. Intending, one acts with the body, speech, or mind." According to the classical Buddhist view, if plants are sentient, they would be, like us, subject to karma, suffering, and rebirth--unless they choose to take up the path and become liberated. Though I am personally inclined to think of some or maybe all plants as in some way sentient and as free of the kinds of suffering we humans experience, I must confess that it seems odd (and more than a little anthropocentric) to think of plants as subject to karma and rebirth or to place them on a hierarchy of beings according to the quality of their karma. Would birth as a plant be lower or higher than a human birth? How would plants compare to the insects and the other animals they often outwit?

Ellison Banks Findly (*Plant Lives: Borderline Beings in Indian Traditions*, 2008) has proposed that plants' borderline status in early Buddhism, including their inability to accumulate karma[4] and their stability (i.e., the fact they are

[4] In various strands of ancient Indian thought, there was the idea that some or all non-human beings simply "consume," that is, experience the results of karma, rather than create or "accumulate" new karma, and plants were sometimes put in this category. Schmithausen 1991, 101; 2009, 75, fn. 180.

"stationary," *thāvara* beings), suggests that they were regarded as saintly beings akin to arhats. Though the textual evidence doesn't appear to support this view,[5] we do find Jātākas (tales of the Buddha's previous lives) in which the bodhisattva is born as a tree *spirit*, and even as a spirit inhabiting kusha grass (*Kusanāḷi-jātaka).* In one story, a tree spirit also refers to the tree as her "body" (*Bhaddasāla-jātaka*), but the more common view is that trees can be homes for spirits-- such that the spirit can move to another tree or survive the felling of their tree and complain to the Buddha about the loss of their home (Schmithausen 1991, 15-16, 28 fn 149).

Some texts also draw similes between the behavior of arhats and that of trees, such as in the *Milindapañha* when the Buddhist monk Nāgāsena compares the mind of the arhat to the unshakeable trunk of a mighty tree, which remains still even when the tree's branches and leaves are agitated by the wind; or when he compares the tree's impartial offer of shade to all kinds of (human) persons, to the virtue of equanimity (*upekkhā*).[6] While these similes and others that commend the arhat-like qualities of various animals and natural phenomena can inspire our practice, they do not suggest that South Asian Buddhists considered trees and other plants as sentient, much less saintly beings. With their borderline status, they regarded plants as, at best, barely sentient with only one sense faculty (that of touch).[7] Like arhats, plants do not accumulate karma, but they also lack minds--something that, in an interesting twist of fate, came to be seen as a virtue in some strains of East Asian Buddhism.

---

[5] See Schmithausen 2009, 58-76; 89-97.

[6] See Jason Wirth's essay in this issue of *Insight Journal*.

[7] Schmithausen reports that the view of trees as beings with one faculty is still common in some places in South and Southeast Asia today (1991, 15). Modern research shows that some plants can not only "touch," but also see, hear, smell, and taste. https://www.newscientist.com/round-up/plant-senses/

The Buddha-nature of the Insentient

From the 6th through 9th centuries, Chinese Buddhists debated whether "insentient" beings might possess the quality of buddhahood or Buddha-nature. Eventually, the idea that Buddha-nature is present in (or as) everything, including plants and trees-- as well as stones, tiles (human artifacts), and even particles of dust, became widespread in China. The Chinese may have been particularly open to the idea in part because they had no concept of "sentient" versus "insentient" beings prior to the arrival of Indian Buddhism (Sueki 2018). The Daoist idea of a single principle or way (*dao*) pervading the human and natural world and various indigenous animist ideas may also have contributed to their openness. However, according to Robert Sharf, the debate in China was also fueled by scholastic interests in the formal arts of textual interpretation (or hermeneutics) and Chan gong'an (koan) dialectics (Sharf 2007).

The seeds of the debate were sown in the 5th century with the question of whether all *sentient* beings have Buddha-nature in the sense of the capacity to attain awakening. According to an earlier recension of the *Nirvāṇa-sūtra*, sentient beings without faith (*icchantikas*) cannot awaken, but the monk Daosheng (360-434) objected, and by the 5th century a version of the sūtra stating that all sentient beings have Buddha-nature had appeared. By the 6th century, this view was widely accepted, and Chinese thinkers began contemplating an even more universal notion of Buddha-nature: a Buddha-nature that pervades the entire phenomenal world. Since this sense of Buddha-nature would seem to extend to insentient as well as sentient beings, they needed to reconcile it with the *Nirvāṇa-sūtra* claim that only *sentient* beings have Buddha-nature, and developed different strategies for doing so. For example, Huiyuan (523-592) distinguished between Buddha-nature that *knows* (the mind in sentient beings) and the dharma-realm or emptiness, which *is known* and pervades everywhere. The latter presumably includes the insentient,

though Huiyuan did not say this directly. Jizang (549-623) went further, claiming, from a Madhyamaka perspective, that while there is no ultimate attainment or non-attainment or ultimate difference between sentient and insentient beings, at a provisional level, one can say that "grasses and trees have no minds, thus, they have no delusion," and so cannot awaken (Sharf 2007, 212).

The Tiantai teacher Zhanran (711-782) is usually credited as the first Chinese thinker to positively affirm the Buddha-nature of insentient things. He draws on the *Lotus Sūtra* teaching that everything is mind to directly challenge the *Nirvāṇa-sūtra* restriction of awakening to sentient beings:

> The individual of the perfect [teaching] knows, from beginning to end, that the absolute principle is non-dual, and that there are no objects apart from mind. Who then is sentient? What then is insentient? Within the Assembly of the Lotus there are no differences. (Sharf 2007, 214)

While it is possible that the topic of the Buddha-nature of the insentient had some intrinsic appeal for Zhanran and other Chinese thinkers, according to Sharf (2007), Zhanran was specifically inspired by the unorthodox positions taken when the topic became the center of fierce dialectical competition between the early Chan schools.

In a twist on the earlier contention that insentient things cannot awaken because they do not have minds and delusion, one Chan master drew on the idea of the *dao* (way) to argue that "precisely because they lack mind and sentience and thus have no thought of 'me' or 'mine,' grasses and trees are in accord with the Way." Another suggested that insentient things can even "cultivate realization" and "become buddhas" (Sharf 2007, 217-218). However, the most influential statement on the matter was made by Nyanyang Huizhong (675-775). A particular verse had become central in the debate:

> Lush groves of emerald bamboos,
> Are wholly suchness.
> Luxuriant clusters of chrysanthemums,
> Nothing is not gnosis.

Commenting on this verse, Huizhong draws on the *Huayan* (*Avataṃsaka*) *sūtra* to explain that the entire universe is the body of Vairocana Buddha:

> The buddha-body fills the dharma-realm and manifests itself before all beings. It responds in accord with conditions, extending everywhere, yet it remains ensconced on the seat of awakening. (Sharf 2007, 221)

He famously explains that as the body of Vairocana, the insentient continuously "preach the Dharma"--even if only those who are awakened can hear it (Sharf 2007, 224).

Several decades later, the founders of Japanese Buddhist schools developed this idea. They were likely primed to receive the more radical Chinese notions of Buddha Nature due, in part, to Shinto animist ideas, such as the idea that plants and humans share a common divine ancestry (Parkes 1997) or that grasses and trees existed and even spoke before the arrival of "people grass" (*hitogusa*) or humankind (Sueki 2018).

Saichō (766-882), the founder of the Tendai school, seems to have been the first to refer to the "Buddha-nature of rocks and trees," but Kūkai (774-835), the founder of Shingon (a tantric school), was the first to elaborate on the idea of the Buddha-nature of the phenomenal, and especially, natural world (Parkes 1997, 114). Like Huizhong, Kūkai draws on the idea of the world as the body of Vairocana Buddha, and refers specifically to the Buddha-nature of plants and trees, explaining that this fact can only be seen by opening one's "Buddha eye" (Parkes 1997, 114). He further explains that although Vairocana expounds the Dharma through his body, this is not necessarily for us humans, but rather for his own enjoyment. Kūkai describes the entire natural world as a sūtra:

> Being painted by brushes of mountains, by ink of oceans,
> Heaven and earth are the bindings of a sutra revealing the truth.
> (Parkes 1997, 116)

Dōgen (1200-1253), the founder of the Sōtō Zen school, seems to have been influenced by Kūkai as well as earlier Chan teachers. He famously reinterprets the *Nirvāṇa-sūtra* statement that all sentient beings *have* Buddha-nature as, "All is sentient being, all beings *are* Buddha-nature" (Parkes 1997, 116-117). Echoing Kūkai, Dōgen also identifies the entire phenomenal universe with the sūtras:

> When you endeavor in right practice, the voices and figures of streams and the sounds and shapes of mountains, together with you, bounteously deliver eighty-four-thousand gathas [teaching verses]. Just as you are unsparing in surrendering fame and wealth and the body-mind, so are the brooks and mountains. (Parkes 1997, 117)

> What we mean by the sutras is the entire cosmos itself ...the words and letters of beasts...or those of hundreds of grasses and thousands of trees.... The sutras are the entire universe, mountains and rivers and the great earth, plants and trees; they are the self and others, taking meals and wearing clothes, confusion and dignity. (Parkes 1997, 118)

Like Huizhong and Kūkai, Dōgen also explains why we may fail to hear the Dharma expounded by insentient beings:

> The way insentient beings expound the true teachings should not be understood to be necessarily like the way sentient beings do. ... It is contrary to the Buddha-way

> to usurp the voices of the living and conjecture about those of the non-living in terms of them. (Parkes 1997, 117)

Though the voices of the living and non-living are different, with each kind of being or entity expounding the teaching in its own way, Dōgen sees this preaching as a collective endeavor of the sangha of the whole great earth:

> Trees and grasses, wall and fence expound and exalt the Dharma for the sake of ordinary people, sages, and all living beings. Ordinary people, sages, and all living beings in turn preach and exalt the Dharma for the sake of trees, grasses, wall and fence. (Waddell and Abe, 2002)

Conclusion: On the Dharma of Plants

Though thought provoking, I have to admit that I find these historical Buddhist perspectives on plants a little unsatisfying. The view that the entire natural world is continuously preaching the Dharma is inspiring, but I am uneasy with East Asian Buddhists' embrace of the later Indian Buddhist view that plants are insentient–and not even alive(!). I also have trouble lumping plants together with tiles and other human artifacts (like the great pacific garbage patch). I'm inclined to agree with the Thai Forest teachers, Ajahns Chah and Buddhadāsa, who were quoted at the beginning of this issue of *Insight Journal*, and claim that there are particularly deep lessons for us in the Dharma of the natural world. I think this may be true–even if the Dharma of plants is not specifically *for* us, as Kūkai suggests.

Dōgen's teaching that beings and entities express the Dharma in their own distinctive ways also resonates strongly with the wonder I feel in the face of the extraordinary complexity and *otherness* of plants revealed by modern science, as well as in the energetic intimacy I sometimes feel

when I commune with trees in particular. Not only each species, but each individual tree seems to embody a distinctive "personality"--an energetic pattern or "medicine" that can have an unexpectedly profound effect on my body and mind. Is this the tree *speaking*? Is this the tree teaching what it "means to cool down from the heat of our confusion, despair, anxiety, and suffering" as Buddhadāsa puts it? Or am I just projecting my own human-centeredness onto the tree?

While Indian Buddhists regarded the saintliness of trees as mere metaphor, there are trees in whose presence I question this, who seem viscerally to embody equanimity, patience, generosity, and other dharmic virtues. I also wonder if some of our Buddhist forebears, however awakened in other respects, might have suffered from occasional “plant blindness” with their focus on *human* suffering and potential. I have more questions than answers, but that’s probably how it should be, and the time seems ripe for a more intimate and experiential exploration of the Dharma of Plants. I am grateful to the contributors to this volume for helping to initiate this.

Works Cited

Calvo, Paco. 2022. *Planta Sapiens: The New Science of Plant Intelligence.* New York, NY: Little Brown.

Findly, Ellison Banks. 2008. *Plant Lives: Borderline Beings in Indian Traditions*. New Delhi, India: Motilal Banarsidass.

Gagliano, Monica. 2018. *Thus Spoke the Plant*: *A Remarkable Journey of Groundbreaking Scientific Discoveries and Personal Encounters with Plants*. Berkeley, CA: North Atlantic Books.

Meyers, Karin. 2023. "Intention in the Pali Suttas and Abhidharma." *Oxford Research Encyclopedia of Religion*. Accessed 9 July, 2024.

Narby, Jeremy and Rafael Chanchari Pizuri. 2021. *Plant Teachers: Ayahuasca, Tobacco, and the Pursuit of Knowledge*. Novata, CA: New World Library.

Parkes, Graham. 1997. "Voices of Mountains, Trees, and Rivers: Kūkai, Dōgen, and a Deeper Ecology." In *Buddhism and Ecology: The Interconnection of Dharma and Deeds*, edited by Mary Evelyn Tucker and Duncan Ryuken Williams. Cambridge, MA: Harvard University Press, 111-128.

Schlanger, Zoë. 2024. *The Light Eaters*: *How the Unseen World of Plant Intelligence Offers a New Understanding of Life on Earth*. New York, NY: Harper Collins.

Schmithausen, Lambert. 1991. *The Problem of the Sentience of Plants in Earliest Buddhism*. The International Institute for Buddhist Studies.

Schmithausen, Lambert. 2005. "Meat-eating and nature: Buddhist Perspectives." *Supplement to the Bulletin of the Research Institute of Bukkyo University.* March, 183-201.

Schmithausen, Lambert. 2009. *Plants in Early Buddhism and the Far Eastern Idea of the Buddha-Nature of Grasses and Trees*. Lumbini, Nepal: Lumbini International Research Institute.

Sharf, Robert H. 2007. "How to Think with Chan Gong'an." *Thinking with Cases: Specialist Knowledge in Chinese Cultural History*, edited by Charlotte Furth, Judith T. Zeitlin, and Ping-chen Hsiung. Honolulu, HI: University of Hawai'i Press. 205-243.

Sueki, Fumihiko. 2018. "The Buddhahood of Plants and the Japanese View of Nature." *Dharmaworld*, July-December, 3-5.

Waddell, Norman and Masao Abe, trans. 2002. *The Heart of Dōgen's Shōbōgenzō*. Albany: SUNY Press.