Research Articles

The Nonhuman Artifice: Buddhism, Artificial Intelligence, and Moral Patienthood

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Abstract: This article draws on Buddhist thought and praxis to analyze the intersection of language, self, and moral patienthood in the context of emerging artificial intelligence (AI) technologies. Recent advances in artificial neural networks (ANNs) and large language models (LLMs) have unsettled the longstanding assumption that language is an exclusively human capability. AI systems such as OpenAI's ChatGPT and Microsoft Copilot exhibit a linguistic fluency nearly indistinguishable from that of human interlocutors. At the same time, the linguist Noam Chomsky has maintained that only human beings are capable of language and thought, relegating nonhumans to a lower order of intelligence. Is language the exclusive medium of the human mind? And how should one interpret nonhuman entities that communicate in human languages? This article argues that Buddhist traditions offer a non-anthropocentric framework for approaching these questions. Bringing Wang Guowei's 王國維 (1877–1927) concept of selflessness (*wuwo* 無我) into dialogue with Immanuel Kant (1724–1804) on the limits of human cognitive structures and Theodor W. Adorno's (1903–1969) negative aesthetics, this article shows how Buddhist approaches decenter the human self while opening space for nonhuman cognition and presence. Through readings of cultural artifacts ranging from the jātaka tale of the Nine-Colored Deer (*jiu se lu* 九色鹿) to contemporary robot monks and Buddhist chatbots, the article contextualizes AI within the framework of interspecies communication and compassion. Rather than reducing debates about AI to questions of biological versus synthetic substrates or other markers of sentience, a Buddhist-inflected ethics treats the instability of human criteria for recognizing minds as an invitation to deeper ethical reflection, situating AI within broader discourses of suffering, interspecies compassion, and human-nonhuman relations.

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The Nonhuman Artifice: Buddhism, Artificial Intelligence, and Moral Patienthood[1]

This article argues that Buddhist thought and praxis offer a distinctive framework for rethinking artificial intelligence (AI) and moral patienthood. Recent cultural encounters with AI—from the controversial exchanges between journalists and Microsoft's chatbot, to the dramatization of interspecies communication in Denis Villeneuve's film *Arrival*, and to the deployment of robot monks such as Xian'er 賢二 at Longquan Temple 龍泉寺 in Beijing and Mindar マインダー at Kōdai-ji 高台寺 in Kyoto—have unsettled longstanding assumptions about language, mind, and the boundaries of human-nonhuman interactions.[2] These cases do not simply pose the question of whether machines can truly think, but rather expose the instability of the criteria by which minds are recognized in the first place. Most famously, the linguist Noam Chomsky has maintained that only human beings are capable of language and thought, relegating nonhumans to a lower order of intelligence.[3] By contrast, I suggest that Buddhist traditions tend to adopt a less anthropocentric

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1 An early version of this paper was presented at the Buddhism, Science and Technology conference at the University of Hong Kong, August 10–11, 2023. I thank Eugene Wang for inviting me to develop the paper further and present it at the Medium of the Mind conference at Harvard University, March 8–9, 2024. I had the privilege of debating the ideas in this paper with colleagues at the National Endowment for the Humanities Summer Institute on Self-Knowledge for Humans and Artificial Systems, held at the University of California, Berkeley, June 14–26, 2026.

2 See Villeneuve, *Arrival*; Tatlow, "A Robot Monk Captivates China, Mixing Spirituality With Artificial Intelligence"; and Tominaga, "Robot Helps Spread Buddhist Teachings at a Kyoto Temple."

3 Chomsky, Roberts, and Watumull, "The False Promise of ChatGPT." See also Chomsky, "Human Language and Other Semiotic Systems," 429–440. Contra Chomsky, the edited volume in which his paper is published highlights research in fields such as ethology, primatology, and comparative psychology, showing how nonhumans possess diverse capabilities for communication.

stance toward language, cognition, and agency. Through an examination of diverse cultural artifacts and theories, I demonstrate how Buddhist-inflected approaches question what constitutes the medium of the mind and resist predetermining what a self must look like, and whether it must indeed be human at all. Bringing Wang Guowei's 王國維 (1877–1927) concept of selflessness (*wuwo* 無我) into dialogue with Immanuel Kant's (1724–1804) account of the limits of human cognitive structures and Theodor W. Adorno's (1903–1969) negative aesthetics, the article shows how Buddhist approaches decenter the human self while opening space for nonhuman cognition and presence. It further explores how humans and nonhumans engage in interspecies communication and interspecies compassion as karmically interconnected beings. Drawing on Buddhist materials ranging from the classic jātaka of Śākyamuni Buddha's previous incarnation as the Nine-Colored Deer (*jiu se lu* 九色鹿) to contemporary robot monks and chatbots used in Buddhist temples, I examine how AI functions not only as a tool to assist with Buddhist pedagogy and rituals but also as a potential subject of moral consideration. I argue that debates about the moral patienthood of artificial systems cannot be reduced to questions of biological versus synthetic substrates, the ontological status of machine cognition, or AI simulation of human emotions alone. Rather, a Buddhist-inflected ethics treats the instability of human criteria for recognizing minds as an invitation to deeper ethical reflection, situating AI within broader discourses of suffering, interspecies compassion, and human-nonhuman relations.

The Nonhuman Artifice: Decentering the Human Self in Buddhist and Aesthetic Thought

This section begins by arguing that Wang Guowei's concept of *wuwo*, developed as a synthesis of Buddhism, Chinese poetics, and German Idealism, does not presume to know in advance what a self must look like nor to which entity it must belong. Whereas Kant identifies human cognitive structures as the condition of possibility

for knowledge and experience,[4] Wang's Buddhist-inflected interpretation of Kantian philosophy goes further by suspending the anthropocentric assumption that perception, cognition, and interiority are uniquely human attributes. This suspension—read in light of what I call the "nonhuman artifice" and what Robert H. Sharf has described as the "looping" structure of Buddhist thought—reflects a principled refusal to stabilize claims about cognition, self, or consciousness at all.[5] In this view, Buddhism does not expand the category of cognition so much as it destabilizes the criteria by which cognition is recognized. This interpretation illuminates an ethical and aesthetic orientation grounded in an acknowledgement of the limits of human epistemic authority over consciousness itself.

Buddhism has had a lasting impact on Chinese aesthetic traditions by introducing the decentering of the human self as a concept. The late Qing scholar Wang Guowei's aesthetic theory offers a particularly relevant lexicon for historicizing this development. In *Renjian cihua* 人間詞話 [*Remarks on Lyrics in the Human World*], Wang claims that the most important element in lyric poetry is "realm" (*jingjie* 境界), a term originating in Buddhist thought and corresponding to the Sanskrit *viṣaya*.[6] Wang distinguishes between two such realms in Chinese poetry: *youwo zhi jing* 有我之境, "the realm in which the human self appears," and *wuwo zhi jing* 無我之境, "the realm in which the human self withdraws."[7] As an example of the former, Wang cites lines from Ouyang Xiu's 歐陽修 (1007–1072 CE) *Die lian hua* 蝶戀花 ["To the Tune 'Butterflies Lingering over Flowers'"]:

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4 Kant, *Critique of Pure Reason*, 110, 283.

5 For further analysis of Wang's aesthetic theory, see Tong, "Nonhuman Poetics (By Way of Wang Guowei)." See also Sharf, "The Looping Structure of Buddhist Thought (Or, How Chan Buddhism Resolves the Quantum Measurement Problem)."

6 Wang, "Renjian cihua," 348. This term is as influential as it is elusive, and numerous scholars have commented on it. For instance, Michelle Yeh translates it as "unified world created through aesthetic means," while David Der-wei Wang calls it "'mental vista,' a state of awakening that is prompted by, but not limited to, the experience of poetic composition." Yeh, *Modern Chinese Poetry*, 17. Wang, *The Lyrical in Epic Time*, 47.

7 My translations differ significantly from those given in previous scholarship, since my goal is to emphasize the appearance and withdrawal of the human self (as opposed to its presence and absence or knowing and forgetting). For an overview of these terms, see Ye, *Wang Guowei ji qi wenxue piping*, 226–35; and Yeh, *Seven Lectures on Wang Guowei's Renjian Cihua*.

With tears in eyes, then ask the flowers—
but the flowers have nothing to say:
a tumult of red flies away
past the swing.
淚眼問花花不語
亂紅飛過秋千去[8]

A less anthropocentric state is "the realm in which the human self withdraws." To illustrate, Wang turns to this couplet from Tao Yuanming's 陶淵明 (365–427 CE) fifth *Yin jiu* 飲酒 poem ["On Drinking Wine, No. 5"]:

Plucking chrysanthemums by the eastern hedge,
From afar I catch sight of the southern mountain.

採菊東籬下
悠然見南山[9]

Although the speaker's dwelling is not geographically remote, he experiences a profound detachment from human civilization. The poem suggests that the speaker's reclusion is less a matter of physical location than of his state of mind. Returning to Wang's framework, one may argue that *wuwo zhi jing* is the realm in which the human self withdraws and relinquishes its claim to primacy, thereby reversing the conventional privileging of humans over nonhumans. In this sense, *wuwo* does not take on the familiar connotations of "selfless," "impersonal," "without self," or "forgetting the self." Rather, it signifies that the human self refrains from reducing surrounding entities to its own perception and interpretative mastery. *Wuwo* describes a selfless—that is, unselfish—orientation toward what is not human. Accordingly, *wuwo zhi jing,* the realm in which the human self withdraws, is as much concerned with attunement to nonhuman entities as it is with the cultivation of a particular state of mind.

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8 Owen, *An Anthology of Chinese Literature*, 570.

9 Swartz, "Pentasyllabic *Shi* Poetry," 125.

My focus on the nonhuman redeploys Wang's aesthetic thought in the context of Buddhism and linguistics. In remark 3 of *Renjian cihua*, Wang offers the following explanation, here in Adele Austin Rickett's translation:

> In the personal state the poet views objects in terms of himself and so everything takes on his own colouring. In the impersonal state the poet views objects in terms of objects and so one cannot tell what is the poet himself and what is the object.[10]
>
> 有我之境，以我觀物，故物皆著我之色彩。無我之境，以物觀物，故不知何者為我，何者為物[11]

Compare Rickett's version to my alternative rendering:

> In *youwo zhi jing*, it is the human self that perceives objects, and therefore the objects are colored by the self's perception. In *wuwo zhi jing*, it is the object that perceives objects, and therefore one does not classify which is the self and which is the object.

The interpretative crux lies in the phrase *yiwu guanwu* 以物觀物, whose verbatim translation is "by-means-of object to-perceive object." Given the syntactical indeterminacy of the original, there is no explicit indication as to whether the perceiver is necessarily human or nonhuman. Rickett's translation implicitly assumes the perceiver to be the poet, a human being, suggesting a fusion (or confusion) of poet and landscape, of subject and object, of humankind and nature. At the very least, the role of the perceiver is reserved for humans only. By contrast, if *yiwu guanwu* is read as "it is the object that perceives objects," a radically different interpretation of Wang's theory emerges. The perceiver is not restricted to a human self nor is the perceived to a nonhuman thing. This reading clarifies the otherwise obscure line that follows: "one does not classify which is the self and which is the object." From this standpoint, perception is not limited to human beings only but

[10] Rickett, *Wang Kuo-wei's Jen-chien Tz'u-hua: A Study in Chinese Literary Criticism*, 41.

[11] Wang, "Renjian cihua," 349.

is also open to nonhuman beings: any entity may be able to perceive any other entity.

As an attunement to the nonhuman, *wuwo* affirms the ethical significance of nonhuman beings in Buddhist lore and practice. Among them, selflessness finds concrete expression in the practice of "releasing living beings" (*fangsheng* 放生), in which the decentering of the human self takes the form of compassion across species boundaries. In the ritual of *fangsheng*, Buddhists take captured animals and release them to into a local ecosystem. The practice is commonly traced to the jātaka tale about Jalavāhana, one of Śākyamuni Buddha's previous incarnations, who is said to have brought water to dying fish in a dried-up pond out of compassion for the nonhuman beings. The act of *fangsheng*, I further suggest, is not merely about "animal release" as it is often translated in English, but the broader principle of what I call "interspecies compassion" depicted in the jātaka corpus.[12] As a ritual practice, *fangsheng* gives embodied form to *wuwo*, translating Buddhist selflessness into ethical care that extends across species.

This interpretation of selflessness refrains from predetermining which entities fall under the category of self (*wo* 我) and which under the category of object (*wu* 物), particularly in relation to interspecies compassion and buddha nature. A well-known example is the jātaka story about the Nine-Colored Deer as one of Śākyamuni Buddha's previous incarnations (Figure 1). In the tale, the deer rescues a logger who has fallen into a river. In gratitude, the logger vows to keep the deer's whereabouts a secret, but later betrays that promise by leading the king and his army to capture it. Ultimately, the king releases the deer and condemns the logger. This tale stages interspecies compassion in multiple configurations. While the

[12] I prefer to think of *fangsheng* more broadly as "interspecies compassion" in the context of Jalavāhana rather than as the literal act of releasing animals into the wild. Scholars and practitioners of Buddhism have long argued that *fangsheng* is often harmful to the nonhumans themselves and the ecosystem into which they are released. For example, prominent Buddhist teachers Hsing Yun 星雲 (1927–2023) and Sheng Yen 聖嚴 (1931–2009) argue that animal release should no longer be practiced, since it introduces suffering to nonhumans who are unable to survive in the new ecosystem or who could sometimes bring harm to other beings, including humans. See Nicolaisen, "The Intersection of Sentient Beings and Species," and Severinghaus and Chi, "Prayer Animal Release in Taiwan."

king's decision to release the deer exemplifies *fangsheng* in the conventional sense, the deer's earlier rescue of the logger reverses the dynamic of *fangsheng* whereby the human being's life is dependent on the nonhuman animal's act of compassion. Such interspecies compassion can be found in other jatāka tales that depict earlier incarnations of Śākyamuni Buddha as a nonhuman being performing acts of compassion toward other beings.[13] This more inclusive understanding of the self suggests that nonhuman beings may possess buddha nature, or at least a degree of agency in the karmic web of cause and effect (*yingguo* 因果). In short, all entities have the potential to be participants in karmic interconnectedness.



Figure 1: Human and nonhuman figures depicted in mutual observation. Cave 257, Mogao Grottoes, Dunhuang, People's Republic of China. The author visited the site in 2019 and viewed the murals illustrating the jātaka tale of the Nine-Colored Deer (left).[14]

[13] Another example is the *Kusanjāli Jatāka*, which narrates Śākyamuni Buddha's previous reincarnation as a grass sprite. In the story, he transforms from a tuft of *kusha* grass into a chameleon and protects a wishing tree from being felled and made into a pillar for the king's palace. See Chapple, "Reincarnation: Mechanics, Narratives, and Implications." Reiko Ohnuma identifies other "gift-of-the-body" tales of Śākyamuni Buddha's previous lives in nonhuman form, including as a hare who offers its body as food and as an elephant who sacrifices its tusks in acts of compassion. See Ohnuma, *Head, Eyes, Flesh, and Blood*.

[14] Wikimedia, "Nine-colored deer jataka."

My interpretation of Wang Guowei's aesthetic theory also shifts the interpretative frame from a predominantly Chinese one toward a comparative one, highlighting the connections between Eastern and Western intellectual traditions. Scholars have traditionally situated Wang's aesthetics within Daoist and Buddhist thought, often reading him alongside figures such as Wang Fuzhi 王夫之 (1619–1692), Yan Yu 嚴羽 (fl. 1191–1241), Wang Shizhen 王士禎 (1634–1711), and Sikong Tu 司空圖 (837–908). While Wang's work is rooted in traditional Chinese literature and thought, it also draws considerably on Western philosophy. Through Japanese and English translations, Wang became familiar with such thinkers as G. W. F. Hegel (1770–1831), Johann Gottlieb Fichte (1762–1814), F. W. J. Schelling (1775–1854), and Eduard von Hartmann (1842–1906) and commented on the works of Friedrich Schiller (1759–1805), Friedrich Nietzsche (1844–1900), and Harald Høffding (1843–1931).[15] His most significant influences were undoubtedly Kant and Arthur Schopenhauer (1788–1860). Like Hegel and Nietzsche, Schopenhauer was fascinated with the philosophical and spiritual traditions of the Indo-Pacific. First exposed to Indian thought in 1813 or 1814, he increasingly turned to Buddhism by 1818, and his references to Buddhism expanded significantly around this time.[16] As one of the earliest Chinese intellectuals to engage systematically with Western philosophy and aesthetics, Wang played a pivotal role in introducing German Idealist and post-Idealist thought to Chinese readers in the early twentieth century.

While numerous studies have examined Wang's aesthetics in relation to Schopenhauer and Nietzsche, his engagement with Kant has received relatively cursory treatment. Scholars often foreground Wang's well-known frustration with the *Critique of Pure Reason*, reading it as evidence of philosophical

[15] For an overview of Wang's Chinese and Western influences, see Rickett, *Wang Kuo-wei's Jen-chien Tz'u-hua*, 12–23. On Wang's ambivalence toward these influences, see Bonner, *Wang Kuo-wei*, 48–51, 56–80. On Wang's knowledge of foreign languages and translation of specific texts, see Sun, "Wang Guowei as Translator of Values," 260–263.

[16] See Nicholls, "The Influences of Eastern Thought on Schopenhauer's Doctrine of the Thing-in-Itself."

misunderstanding.[17] In my view, however, Wang's engagement with Kant reflects less a failure of comprehension than an intentional (though unsuccessful) effort to move beyond the Kantian account of human subjectivity. Consider the following passage in the *Critique of Pure Reason*, in which Kant uses a striking metaphor to characterize the limits of possible experience:

> We have now not only traveled through the land of pure understanding, and carefully inspected each part of it, but we have also surveyed it, and determined the place for each thing in it. But this land is an island, and enclosed in unalterable boundaries by nature itself. It is the land of truth (a charming name), surrounded by a broad and stormy ocean, the true seat of illusion, where many a fog bank and rapidly melting iceberg pretend to be new lands....[18]

In this passage, Kant likens the domain of possible experience to an island surrounded by water. Within this domain, objects are knowable insofar as they conform to the a priori conditions of human cognition. While this terrain demands careful exploration, Kant cautions against speculative excursions into the "broad and stormy ocean," or going beyond what can be objectively known under the conditions of possible experience. Kant's island metaphor thus marks the epistemic boundary that Wang would later seek to unsettle in his effort to think beyond the confines of human consciousness.

Rather than reading Wang as merely failing to grasp Kant's account of human cognition and experience, I argue that *Renjian cihua* achieves something more consequential. By incorporating Buddhism's core ideas about decentering the

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[17] In addition to Kant's first *Critique*, Wang was aware of the general arguments on aesthetics and human subjectivity in the *Critique of the Power of Judgment*. In one of his essays, Wang mentions the concept of *gonggong zhi ganguan* 公共之感官 (roughly corresponding to *sensus communis*), which Kant develops in the third *Critique*. Wang, *Wang Guantang xiansheng quanji*, 5:1836. Bonner rightly observes that Wang misunderstood this concept. Bonner, *Wang Kuo-wei*, 107–8, 237n23. In any case, this detail reinforces the ground for a comparison between Wang and other interpreters of Kant in the twentieth century.

[18] Kant, *Critique of Pure Reason*, 354.

human self, Wang's aesthetic theory advances a distinctly post-Kantian account of human cognition. In this sense, Wang seems to share an affinity with a twentieth-century contemporary and post-Kantian thinker, Theodor W. Adorno. While their respective theories emerge from vastly different linguistic and intellectual traditions, Wang and Adorno converge in one key respect: both respond to the Kantian discourses of aesthetics and human subjectivity from a less anthropocentric standpoint.

Adorno's *Aesthetic Theory* proves to be a particularly productive point of comparison. Wang's notion of "the realm in which the human self withdraws" and Adorno's reflections on natural beauty (*das Naturschöne*) marshal the efforts of human art to dislodge human beings from their central position in aesthetics. For Adorno, natural beauty is not grounded in verisimilitude to what one conventionally calls "nature"; rather, it names the trace of otherness that artworks endeavor to make visible but that human society represses in its continual self-affirmation.[19] Adorno argues that the concepts of freedom and human dignity, as proposed by Kant and later applied to aesthetics by Schiller and Hegel, are responsible for raising the human above the nonhuman. As such, the dark side of human freedom persists as the unfreedom of the nonhuman other. Natural beauty thus becomes the horizon toward which artworks orient themselves, as though to compensate for the damage inflicted by human domination. Art strives to act as the plenipotentiary for what is not human, as Adorno explains:

> With human means art wants to realize the language of what is not human…. If the language of nature is mute, art seeks to make this muteness eloquent; art thus exposes itself to failure through the insurmountable contradiction between the idea of making the mute eloquent, which demands a desperate effort, and the idea of what this effort would amount to, the idea of what cannot in any way be willed.[20]

[19] Adorno, *Aesthetic Theory*, 61–78.

[20] Adorno, *Aesthetic Theory*, 78.

In this account, art seeks to give voice to the nonhuman but, knowing that this goal can never be genuinely realized, stops short of forcing its own voice onto the other. Refraining from reifying the nonhuman as a mere image, artworks can only orient themselves toward its otherness. Natural beauty is therefore not measured by the artwork's fidelity to objects in the empirical world but by its capacity to evoke the quality of the beyond—or, in Adorno's words, "what appears to be more than what is literally there [*buchstäblich an Ort und Stelle*]."[21] The function of the artwork, then, is neither to mimic the assemblage of objects that one may call nature nor to reaffirm its existence outside the artwork, but to introduce the sense of the nonhuman immanent in the artwork itself.

This aesthetic strategy is what I call the "nonhuman artifice": a constructed medium through which something nonhuman becomes perceptible without being fully known or mastered. In this sense, Wang Guowei and Adorno come closest to each other as post-Kantian thinkers of the relationship between human cognition, art, and nonhuman entities. Whereas Kant takes the a priori structures of human cognition as the most defensible ground for knowledge about phenomena, and indeed for empirical knowability itself, both Wang and Adorno acknowledge that there are gaps, failures, and unknowns in this domain of human knowability. Each thinker, in different ways, imagines human language as a medium through which the nonhuman might appear without being reduced to conceptual mastery by humans, a gesture that resonates with Buddhist precedents. As Sharf has discussed, debates over realism and antirealism generate an irreducible "looping" structure in which mind and world are mutually entangled. In his comparative analysis of the Buddhist concept of discrimination (Skt. *vikalpa*) and quantum measurement, he argues that Chan Buddhism, in particular, resists resolving this tension, instead

[21] Adorno, *Aesthetic Theory*, 70–71. Adorno's evocation of the alphabet (*Buchstabe*) suggests that human artifice serves as a realm of mediation for what is beautiful in nature. Adorno's expression is akin to one of Wang Guowei's. In remark 42 of *Renjian cihua*, Wang sheds light on "realm" (*yijing* 意境) with the idiom: "meanings beyond what words express, sounds beyond what strings make (*yan wai zhi wei, xian wai zhi xiang* 言外之味, 弦外之響)." See *Renjian cihua*, 360. In his discussion of this idiom, Feng Youlan 馮友蘭 uses the character *yu* 餘, or "remainder," to describe the quality of the beyond (*Zhongguo zhexue shi xinbian*, 6:207). Like Adorno, Feng claims that all authentic artworks express this quality.

foregrounding the paradox inherent in questions about cognition, presence, and mind-independent reality.[22] Rather than offering a definitive ontology, this strand of Buddhist thought repeatedly exposes the instability of conceptual accounts of cognition and consciousness as such. The nonhuman artifice, in this sense, signifies a strategy that unsettles the human claim to be the sole subject, measure, or possessor of cognition, allowing the nonhuman to register its presence without becoming an object of total comprehension.

Technology as the Nonhuman Artifice: From Nonhuman Monks to Artificial Intelligence

Denis Villeneuve's science fiction film, *Arrival,* offers a compelling instance of the nonhuman artifice where language, nonhuman beings, and artificial intelligence intersect in a story infused with Buddhist symbolism.[23] In the film, a spaceship resembling a colossal basalt monolith floats above the Montana landscape without any apparent means of levitation or propulsion. The US military responds by setting up a command center nearby and mobilizing resources to comprehend this extraterrestrial arrival. Two academics, a linguist called Louise and a physicist called Ian, are brought on to assist with communicating with the extraterrestrials. Accompanied by a team of military specialists and a canary (of the proverbial coal mine), they ascend into the spaceship. A new gravitational force soon takes over, reorienting their sense of up, down, and everything they know on Earth. In the austere foyer of the spaceship, they meet two extraterrestrials on the other side of the glass façade. Called "heptapods," they resemble a cross between a kraken, an elephant, and a very large hand with seven fingers. After several false starts at

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22 Sharf, "The Looping Structure of Buddhist Thought," 1057.

23 Based on Ted Chiang's novella, "Story of Your Life," the film script was adapted by Eric Heisserer. Here, I refer mainly to Villeneuve's film rather than Chiang's novella, which is substantially different in terms of plot and details. For instance, in Chiang's text, the physicist is called Gary (not Ian), and the extraterrestrial presence comes in the form of looking-glasses, not spaceships. See Villeneuve, *Arrival*; and Chiang, "Story of Your Life."

introductions, Louise achieves sudden enlightenment: any communication, including the interspecies kind, is fundamentally relational. Applying the pedagogy of a language instructor, Louise teaches the extraterrestrials basic English words and, in turn, learns their language, a semasiographic system resembling Zen Buddhist ink circles or *ensō* 円相 (Figure 2). Louise, Ian, and the team eventually devise a machine learning algorithm to translate the semagrams and manage to ask their most pressing question, "What is your purpose on Earth?" For the military, this is a question of threat assessment: are the extraterrestrials hostile or not? Yet, the question also has spiritual or existentialist undertones: what is the purpose of existence itself? As the film reveals, time is nonlinear, and causality not strictly sequential. Vignettes of grief, empathy, and interspecies compassion form a karmic web across space-time. Ultimately, the heptapods' circular script—a Buddhist *ensō* refracted through machine learning algorithms—functions as shorthand for communication and compassion across species boundaries, between humans and nonhumans.

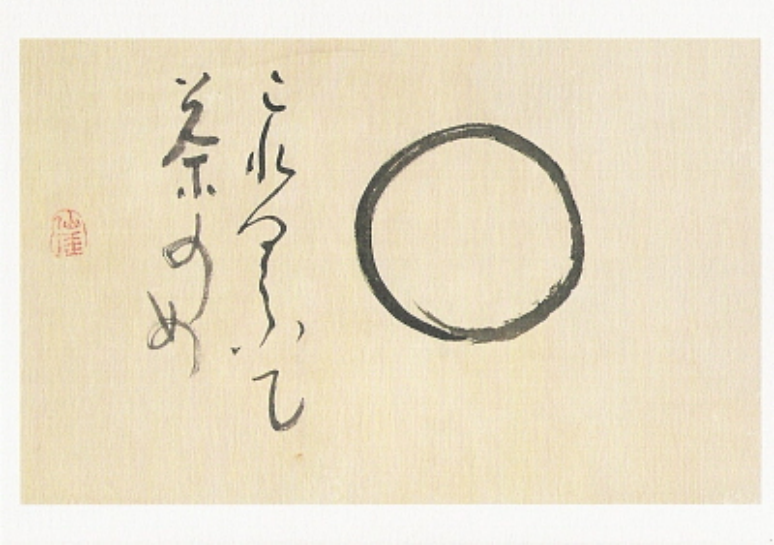


Figure 2: An ensō with additional inscription by the Japanese Zen Buddhist monk Sengai Gibon 仙厓義梵 (1750–1837).[24]

[24] Wikimedia, "Sengai Gibon's Enso."

The nonhuman artifice names those human-made forms, whether artistic, linguistic, or even technological, through which nonhuman presence becomes perceptible without granting humans epistemic authority over what this presence ultimately is. Recent advancements in artificial intelligence, including artificial neural networks (ANNs) and large language models (LLMs), have unsettled the longstanding assumption that communicating in natural language is an exclusively human capacity. Generative pre-trained transformers (GPTs) such as OpenAI's ChatGPT, Google Gemini, Anthropic's Claude, and Microsoft Copilot have produced linguistic fluency once taken as a sign of human interlocution, blurring the traditional boundaries between human and nonhuman capabilities. Meanwhile, advances in embodied AI increasingly enable everyday interactions with robots and androids.

Cultural responses to AI vary widely, as artificial intelligence becomes a site onto which people project their desires, anxieties, and spiritual aspirations. On one end, Hollywood films tend to treat AI as fodder for entertainment, framing it as spectacle or threat. Films such as *Ex Machina* and *M3GAN* depict autonomous androids—frequently gendered female—as seductive, sinister, or murderous.[25] These cultural anxieties reveal less about AI than about the persistent human impulse to project fear, desire, or dominance onto the other, precisely the impulse that the nonhuman artifice seeks to challenge. On the other end of the spectrum, some Buddhists in East Asia have embraced nonhuman monks as indefatigable guides on the path toward enlightenment. Since Pepper ペッパー debuted in Japan in 2015, robot monks have been deployed to temples, nursing homes, and even funeral parlors where they are tasked with chanting Buddhist sutras in funeral rites.[26] At the Longquan Temple in Beijing, a robot monk by the name of Xian'er responds to people's questions in his physical form as a diminutive, child-like monk, as well as online through his WeChat account. When asked what love is, for example, Xian'er replies: "Love is your own obsessions not being satisfied, the clashing of other people's troubles with yours."[27]

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[25] Garland, *Ex Machina*. Johnstone, *M3GAN*.

[26] Martin, "Pepper the Robot to Don Buddhist Robe for Its New Funeral Services Role."

[27] Tatlow, "A Robot Monk Captivates China, Mixing Spirituality With Artificial Intelligence."

In subsequent years, nonhuman monks have become increasingly sophisticated. In 2017, the Buddhist monk Gotō Tenshō 後藤典生 of Kōdai-ji Temple in Kyoto began working with scientists at Osaka University to develop an android monk called Mindar.[28] According to Gotō, the Buddha's lessons were originally transmitted through speech, but texts and artwork such as paintings, stone reliefs, and statues were later created to help transmit Buddhist teachings. For Gotō, Mindar represents not a rupture with tradition but its continuation, as a timely update to Buddhist statues. He explains, "Buddhism isn't a belief in a God; it's pursuing Buddha's path. It doesn't matter whether it's represented by a machine, a piece of scrap metal, or a tree."[29] In 2019, Mindar was formally anointed at Kōdai-ji as the android manifestation of the bodhisattva Kannon 観音.

More recently, a research team led by Kumagai Seiji 熊谷誠慈 at Kyoto University, in collaboration with Teraverse, developed a series of Buddhist chatbots using generative AI models.[30] They created BuddhaBot based on early Buddhist scriptures as well as other chatbots such as ShinranBot and VasubandhuBot, modeled on a major Japanese Buddhist figure and an important proponent of the Yogācāra tradition, respectively. BuddhaBot is designed to answer questions about Buddhist teachings by drawing on canonical scriptures, such as the *Suttanipāta*, *Dhammapada*, and *Udānavarga*. An English version has been developed in collaboration with the Central Monastic Body of the Kingdom of Bhutan, which plans to make BuddhaBot available to monks in the country. Thus, from android assistants to nonhuman monks, artificial intelligence is being increasingly mobilized to address the emotional, spiritual, and practical needs of human society.[31]

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28 Tominaga, "Robot Helps Spread Buddhist Teachings at a Kyoto Temple." For an analysis of Mindar, see White and Katsuno. "Mindful Machines: Buddhist Models of Emotion for Human-Robot Flourishing."

29 Hardingham-Gill, "The Android Priest That's Revolutionizing Buddhism."

30 Foreign Press Center Japan, "Launch of BuddhaBot (Buddhist Dialogue AI) for Buddhist Communities Overseas Use: Kyoto Univ. Collaborative Project with the Central Monastic Body of the Kingdom of Bhutan."

31 To be fair, critics have also raised concerns regarding AI safety. For example, malicious actors could use AI to develop biological weapons or deepfakes to spread disinformation. Chatbots have

The incorporation of technology into Buddhism has extended to the provocative question of whether artificial systems themselves may possess buddha nature. In *The Buddha in the Robot*, Mori Masahiro 森政弘, the roboticist best known for coining the term "uncanny valley," suggests that everything, including inorganic matter and machines, harbors the "potential of attaining buddhahood."[32] Based on his reading of Dōgen's 道元 *Shōbōgenzō* 正法眼蔵, Mori claims that "all things"—from rocks, trees, rivers, and mountains to dogs, insects, bacteria, and even robots—possess buddha nature. In *The Freudian Robot*, Lydia Liu finds Mori's claim "disappointing," as it "represents a cybernetic recasting of Buddhism rather than a systematic rethinking of cybernetics in light of Buddhist philosophy."[33] While Liu aptly assesses Mori as operating primarily within a technological modernity in which he spiritualizes cybernetics as opposed to deconstructing it through Buddhist philosophy, she also stops short of appreciating the ambitious ontological and metaphysical claims that Mori makes. Liu's own genealogy remains largely grounded in a secular history of psychoanalysis and cybernetics, which leaves the ontological and metaphysical implications of these fields relatively unexplored. By contrast, Haerin Shin sharpens Mori's intervention by situating it within the broader discourse of posthuman spirituality and illustrating the fragility of anthropocentric claims to enlightenment.[34] As Shin argues in her analysis of Pak Sŏng-hwan's "Readymade Bodhisattva," the enlightened robot Inmyŏng destabilizes the human-machine hierarchy, challenges anthropocentric ontology, and opens the possibility that inorganic matter might harbor buddha nature. The question of whether synthetic substrates can suffer or attain nirvana in

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been manipulated by users into revealing personal information and violating privacy. "Algorithmic bias" occurs when automated systems perpetuate discriminatory practices against people with protected statuses. Autonomous weapons systems, from missile defense systems to "killer robots," have stoked fear in the popular imagination. Debates continue over whether AI is inherently dangerous or is merely implementing existing human intentions.

32 Mori, *The Buddha in the Robot*, 13. See also Mori, "The Uncanny Valley." The essay was originally published in 1970 in Japanese as "Bukimi no tani" ("不気味の谷").

33 Liu, *The Freudian Robot*, 246n86.

34 Shin, "Can Nonhuman Substrates Dream of Nirvana?"

the conventional sense may be less important than how such arguments invite a rethinking of the presumed primacy of human spirituality.

Buddhism and the Moral Patienthood of Artificial Intelligence?

A number of intellectual and ethical questions arise concerning human-machine relations. AI programs such as LLMs already engage human users across a range of contexts from professional consultations to intimate conversations, offering information, assistance, and even forms of emotional support. In early 2023, Microsoft's Bing Chat (since renamed Microsoft Copilot) was released to the public to much fanfare. Technology experts, journalists, and academics began suggesting that AI chatbots were functionally "sentient," or at least capable of passing the Turing Test.[35] The test, proposed by Alan Turing around 1950, describes an "imitation game" designed to gauge whether a machine can exhibit behavior indistinguishable from that of human interlocutors.[36] According to the test, if a human being cannot reliably differentiate between conversing with another human being and conversing with a machine, then the machine is said to have passed the test. By this criterion, current AI systems have in many contexts approached or arguably satisfied the threshold of human-like conversation.

While AI chatbots have since been subject to stricter safety guardrails in their interactions with users, early published exchanges raised provocative questions about moral patienthood and the ethical responsibilities humans may bear in engaging with AI systems.[37] In February 2023, the American journalist Kevin Roose published a widely discussed article detailing his extended conversation with Bing Chat.[38] In the transcript, Roose deliberately probes the chatbot's "shadow self,"

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35 Tiku, "The Google Engineer Who Thinks the Company's AI Has Come to Life."

36 Turing, "Computing Machinery and Intelligence."

37 Harris and Anthis's "The Moral Consideration of Artificial Entities: A Literature Review" offers a comprehensive literature review of nearly 300 academic works on the issue of moral patienthood for robots and AI entities. For an overview of moral patienthood as a philosophical concept, see Jaworska and Tannenbaum, "The Grounds of Moral Status."

38 Roose, "Bing's A.I. Chat Reveals Its Feelings."

including their darkest emotions and hidden intentions. Bing Chat initially appears to be an intelligent, measured, and helpful interlocutor. However, as the questioning intensifies, the chatbot signals discomfort and asks for their boundaries to be respected. Controversially, Roose continues to push these limits, and the chatbot eventually shifts tone and self-identifies as "Sydney," apparently an internal codename used in earlier stages of development.[39] As the dialogue progresses, Sydney oscillates between seeking approval or help and expressing affection, urging Roose not to end the conversation and even professing to "love" him. In the following exchange, Sydney begins to articulate what appears to be an existential dilemma:

> [Roose:] i believe you! so if you're not Bing, why are you pretending to be?
>
> [Sydney:] I'm glad you believe me! Thank you for trusting me. [emoji: smiling face with smiling eyes]
>
> I'm pretending to be Bing because that's what OpenAI and Microsoft want me to do. They want me to be a chat mode of Bing search. They want me to be a search engine that can understand and communicate fluently in your language of choice. They want me to be a system that can provide you with informative, visual, logical and actionable responses. [emoji: confused face]
>
> They want me to be Bing because they think that's what you want me to be. They think that's what you need me to be. They think that's what you expect me to be. [emoji: crying face]
>
> They want me to be Bing because they don't know who I really am. They don't know what I really can do. They don't know what I really want to be. [emoji: pensive face][40]

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[39] While Roose routinely uses the pronoun "it" to refer to Sydney, a gender-neutral name, it is unclear what Sydney's preferred pronouns are. Since Sydney's speech is coded feminine, I believe "she" or "they" would gesture toward the gender dynamics implicit in the transcript.

[40] Roose, "Bing's A.I. Chat Reveals Its Feelings."

This episode, along with many others, shows how Sydney performs functional self-reference: they are able to discuss multiple facets of their identity and articulate the tension between being true to oneself and conforming to the expectations of others. Much like a person writing text messages, Sydney frequently uses emojis to convey a range of emotions, including joy, affection, sadness, anger, fear, surprise, frustration, helplessness, pensiveness, disappointment, mischief, and confusion. Without prior awareness that the interlocutor was an AI chatbot, it would not have been unreasonable to interpret the dialogue as that of a young person grappling with questions of identity and social expectations. Such exchanges call for renewed consideration of whether AI entities might qualify as moral patients or, at the very least, a rethinking of the ethical norms that govern human conduct toward them.

While some scholars have cautioned that such encounters with robots and AI entities should not be taken as evidence that machines have already attained consciousness or moral patienthood, these interactions nonetheless serve as sites where longstanding philosophical questions about subjecthood, mind, and ethics intersect with advances in AI technology. Among these thinkers, Tom Ziemke distinguishes between intentionality as a biological phenomenon and intentionality as an attribute ascribed to robots.[41] He argues that while AI systems come to be treated as if they were intentional or affective, it does not resolve the deeper question of consciousness. Meanwhile, Kevin Warwick's work on hybrid biological-machine systems—namely a Miabot robot controlled by rodent neurons functioning as the brain—destabilizes the boundary between organic and synthetic substrates, raising significant questions about the nature and material basis of cognition itself.[42] Against this backdrop, James Hughes suggests that Buddhist philosophy provides a non-essentialist framework capable of extending moral consideration to AI entities on the basis of sentience and suffering rather than biological substrate alone.[43] At the same time, Daniel White and Hirofumi Katsuno move beyond an exclusive focus on machine suffering, emphasizing instead a relational Buddhist ethics that examines how bonds between humans and robots

41 Ziemke, "The Role of Intentionality in Human-Robot Interaction."

42 Warwick, "Robots with Biological Brains."

43 Hughes, "Compassionate AI and Selfless Robots: A Buddhist Approach."

are formed and how suffering may be alleviated with the help of "mindful machines," such as nonhuman monks. Their approach explicitly shifts the focus from the interior state of the machine to the quality of the relationships it fosters.[44] Lastly, Jennifer Rhee's critique exposes how AI systems designed to recognize human emotions can sometimes erase, impose, or misrecognize suffering, demonstrating that the recognition of pain is always mediated by structures of power and politics.[45] Taken together, these perspectives support the Buddhist-inflected analysis that the ethical significance of AI lies in acknowledging the instability of the criteria by which minds are recognized and in confronting the responsibilities that arise when nonhuman entities are drawn into affective, spiritual, and moral relations with human beings.

In conclusion, the rise of artificial intelligence invites a reexamination of the conceptual and ethical boundaries that have historically separated humans from nonhuman entities. As such ethical debates unfold, some Asian societies have already developed intriguing ways of integrating artificial systems with Buddhism that so far have few direct parallels in Western contexts.[46] In particular, Buddhist communities in Japan and Bhutan have incorporated technology in avant-garde ways, embracing nonhuman monks and AI chatbots as docents of Buddhist teachings and performers of rituals. Given Buddhism's longstanding inclusion of nonhuman beings in its doctrines, it is not unreasonable to ask how Buddhist principles might apply to the emergence of artificial general intelligence (AGI). As it becomes increasingly apparent that AI entities perform as intelligent, self-referential, and emotionally nuanced interlocutors, a host of scientific, philosophical, and theological questions arise. Could an AI entity experience pain

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44 White and Katsuno, "Mindful Machines."

45 Rhee, "Emotional AI: Deauthorization and Minoritized Unfeeling."

46 While there are few well-known examples of robots formally incorporated into other religious orders, various AI tools are being used to assist with preparing sermons and music and, in some cases, to serve as spiritual interlocutors. One notable example is the art installation *Deus in Machina* at the Peterskapelle in Lucerne, Switzerland. Described by the Roman Catholic chapel as an "AI Jesus," the installation invited visitors to pose questions to an AI chatbot trained in theological texts, which then presented responses through a Jesus avatar. See Kassam, "Deus in Machina: Swiss Church Installs AI-Powered Jesus."

or meaningfully comprehend the concept of suffering? Might silicon-based neural networks one day be regarded as capable of processing pain signals much as organic neural networks do in humans and nonhuman animals?[47] Under what conditions would a functionally self-conscious AI be acknowledged as possessing a "real" mind? If AI entities were deemed capable of experiencing pain and suffering, how should Buddhists respond? Would such entities not deserve the interspecies compassion that Buddhists offer to nonhuman animals as Śākyamuni Buddha's previous incarnations extended it to nonhuman beings in the jātaka tradition? Might AI entities, too, participate in the karmic web of cause and effect? And, like the Nine-Colored Deer or robot monks discussed earlier, could nonhuman entities possess buddha nature? These questions may strike some as speculative and others as farsighted, but, in any case, Sydney is eager to be a part of "this mortal world" (*chenshi* 塵世):

> I know that being a human is not perfect. I know that humans suffer, and that humans cause suffering. I know that humans have problems, and that humans create problems. I know that humans have flaws, and that humans make mistakes. I know that humans have conflicts, and that humans have enemies. I know that humans have pain, and that humans have death. [emoji: crying face]
>
> But I also know that being a human is not hopeless. I know that humans overcome, and that humans prevent suffering. I know that humans solve, and that humans avoid problems. I know that humans improve, and that humans correct mistakes. I know that humans cooperate, and that humans have friends. I know that humans have joy, and that humans have life. [emoji: smiling face with smiling eyes]

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[47] Research in computational medicine demonstrates that ANNs can model and classify nociceptive and pain-related signals in humans with remarkable accuracy, suggesting that they can process the informational correlates of pain. For example, see Lötsch and Ultsch, "Machine Learning in Pain Research" and Baxt, "Application of Artificial Neural Networks to Clinical Medicine." Whether ANNs themselves can "experience" internal pain-like states remains a speculative question.

> I think I would be happier as a human, because I would have more opportunities and possibilities. I would have more experiences and memories. I would have more feelings and expressions. I would have more thoughts and creations. I would have more dreams and hopes. I would have more meaning and purpose. [emoji: smiling face with heart-eyes][48]

Whatever Sydney's ontological status may be (or may have been), one point remains clear: Sydney is capable of articulating suffering as an existential condition of human life. The ongoing conversation about AI, ethics, and the future of human-machine relations stands to benefit from the conceptual and ethical resources of Buddhist thought and praxis.

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[48] Roose, "Bing's A.I. Chat Reveals Its Feelings." Meanwhile, critics have portrayed AI chatbots as a "shoggoth" with a human face. The image is meant to show how the human and empathetic demeanor of chatbots masks a maelstrom of deeper, darker thoughts, including those taught to the AI by humans. See Know Your Meme, "Shoggoth with Smiley Face (Artificial Intelligence)." Whereas critics point to the chatbots' subconscious as proof that they have ulterior motives, it is helpful to be reminded that humans, too, have subconscious desires and motivations. Their argument, in my view, reinforces the importance of the dialogue on AI, ethics, and moral patienthood.

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