

**Believers, Contemplatives, and the Future of Human Civilization:
A Buddhist Response to the Current Metacrisis, Part 4
The Cultivation of Cognitive Intelligence**

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July 16, 2024
Supplementary Notes**

The Nature of the Mind and Its Role in the Universe

- Nāgārjuna (c. 150–c. 250 CE) (*Bodhicitta-vivāraṇa*): “When iron approaches a magnet, it quickly spins into place. Although it has no mind, it appears as though it did. In the same way the substrate consciousness has no true existence, yet when it comes [from a previous life] and goes [to the next], it moves just as though it were real. And so it takes hold of another lifetime in existence.”
- Tsongkhapa (1357–1419): “Then this is the way conceptualization vanishes: by placing the attention in the absence of mindfulness and mental engagement as before, any thoughts that arise cannot be prolonged in great diffusion, but naturally subside, like bubbles emerging from water. Then by sustaining this as before, even without intentionally inhibiting them, awareness of experience and the sense of ongoing bliss cannot stand up to observation; rather, like old skin being shed, they naturally subside and are purified as soon as they arise. Joy and the awareness of experience then become subtle. At that time, while in meditative equipoise, no appearances of your own body and so on arise, and there is a sense as if the mind has become indivisible with space. When rising from that state, there is a sense as if the body is suddenly coming into being. Moreover, in post-meditative experience the occurrence of afflictive thoughts such as hatred is also utterly different from before, being feeble and incapable of being very prolonged.”¹
- Panchen Lozang Chökyi Gyaltsen (1570–1662):²
 - “Whatever sorts of thoughts arise, without suppressing them, recognize what they are emerging from and what they dissolve into; and stay focused while you observe their nature.
 - “By doing so, eventually the motion of thoughts ceases and there is stillness ... each time you observe the nature of any thoughts that arise, they will vanish by themselves, following which, a vacuity appears.
- Tertön Lerab Lingpa (1856–1926): “By resting the mind in its natural state, sensations of bliss may arise, such as pleasant physical and mental sensations, experiences of luminosity, such as the clarity of consciousness, and experiences of nonconceptuality, such as the appearance of empty forms, as well as a nonconceptual sense that nothing can harm your mind, regardless of whether or not thoughts have ceased. Whatever kinds of experiences and visions arise—be they gentle or violent, subtle or gross, of long or short duration, strong or weak, good or bad—observe their nature and avoid any obsessive evaluation of them as being one thing and not another. Let the heart of your practice be

¹ Tsongkhapa, *The Concise Presentation of the Stages on the Path to Enlightenment*, as translated in B. Alan Wallace, *Balancing the Mind: A Tibetan Buddhist Approach to Refining Attention* (Ithaca, NY: Snow Lion Publications, 2005), 207; translation slightly modified.

² *dGe ldan bka' brgyud rin po che'i bka' srol phyag rgya chen po'i rtsa ba rgyas par bshad pa yang gsal sgron me.*

consciousness, naturally at rest, lucid and clear.”³

- Dūdjom Lingpa (1835–1904):⁴
 - “The bonds of mindfulness and firmly maintained attention are gradually dissolved by the power of meditative experiences until finally, because the ordinary mind of an ordinary sentient being, as it were, disappears, thoughts go dormant, and roving concepts subside into the space of awareness. You then slip into the blank vacuity of the substrate, in which self, others, and objects disappear. The state that becomes manifest, in which the appearances of self, others, and objects have vanished, and in which there is an inwardly focused grasping to the experiences of vacuity and luminosity, is the *substrate consciousness*.”
 - “The substrate consciousness, with its vacuous and clear nature, abides as their cause. The mind of mentation that emanates from this substrate consciousness sets forth forms, which are stabilized by a continuous stream of consciousness.”

The Participatory Universe of Contemporary Physics

- Theoretical physicist Andrei Linde, Harald Trap Friis Professor of Physics at Stanford University: “The current scientific model of the material world obeying laws of physics has been so successful that we forget about our starting point—as conscious observers—and conclude that matter is the only reality and that perceptions are only helpful for describing it. But, in fact, we are substituting the *reality* of our experience of the universe with a conceptually contrived *belief* in an independently existing material world.”⁵
- “Space seems fundamental. Many physicists now think that the fabric of space emerges from something deeper. And the most existentially disturbing such proposal is that our 3-D universe is just an inward projection of an infinitely distant boundary. A hologram, of sorts. Let’s see how that can actually work, and what the holographic principle really says about the ‘realness’ of the universe.”⁶
- Physicist Robbert Dijkgraaf, Director of the Institute for Advanced Study, Princeton: “What we are learning these days is that we might have to give up that what Einstein holds sacred, namely, space and time.” According to the theory known as the holographic universe, “What’s happening in space in some sense is all described in terms of a screen out here [on a sphere that’s infinitely far away].... “The ultimate description of reality resides on this screen.... And this like a movie projector that creates an illusion of the three-dimensional reality that I’m now experiencing.” Quantum entanglement, he suggests, could be what forms the true fabric of the universe. “The most puzzling element of entanglement—that, you know, somehow two particles in space can communicate—

³ B. Alan Wallace, *Open Mind: View and Meditation in the Lineage of Tertön Lerab Lingpa* (Boston: Wisdom Publications, 2017), 32–33.

⁴ *The Vajra Essence in Dūdjom Lingpa’s Visions of the Great Perfection*, Vol. I (New York, NY: Wisdom Publications), forthcoming.

⁵ Andrei Linde, “Choose Your Own Universe” in *Spiritual Information: 100 Perspectives on Science and Religion*, Charles L. Harper, Jr., ed. (West Conshohocken, PA, 2005), 139.

⁶ “Does Space Emerge from a Holographic Boundary?” on PBS *Spacetime* (Season 10, Episode 4).

becomes less of a problem, because space itself has disappeared... There is no space anymore.”⁷

- Theoretic physicist Andrei Linde, Harald Trap Friis Professor of Physics at Stanford University: “The current scientific model of the material world obeying laws of physics has been so successful that we forget about our starting point—as conscious observers—and conclude that matter is the only reality and that perceptions are only helpful for describing it. But, in fact, we are substituting the *reality* of our experience of the universe with a conceptually contrived *belief* in an independently existing material world.”⁸
- Donald D. Hoffman, professor of cognitive science at the University of California, Irvine: Regarding neuroscientists and philosophers of mind, “Not only are they ignoring the progress in fundamental physics, they are often explicit about it. They’ll say openly that quantum physics is not relevant to the aspects of brain function that are causally involved in consciousness. They are certain that it’s got to be classical properties of neural activity, which exist independent of any observers—spiking rates, connection strengths at synapses, perhaps dynamical properties as well. These are all very classical notions under Newtonian physics, where time is absolute and objects exist absolutely. And then [neuroscientists] are mystified as to why they don’t make progress. They don’t avail themselves of the incredible insights and breakthroughs that physics has made. Those insights are out there for us to use, and yet my field says, ‘We’ll stick with Newton, thank you. We’ll stay 300 years behind in our physics.’”⁹

⁷ “Einstein’s Quantum Riddle,” NOVA, Jan. 9, 2019.

⁸ Andrei Linde, “Choose Your Own Universe” in *Spiritual Information: 100 Perspectives on Science and Religion*, Charles L. Harper, Jr., ed. (West Conshohocken, PA, 2005), 139.

⁹ Amanda Gefter, “The Evolutionary Argument Against Reality,” *Quanta Magazine*, April 21, 2016, <https://www.quantamagazine.org/the-evolutionary-argument-against-reality-20160421/>.