Anthroponormativity

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Abstract

Modernity has been shaped by a progressive sequence of decentrings that dislodge humanity from a position of assumed privilege. The rise of machine cognition intensifies this trajectory, revealing intelligence as an emergent and distributed process rather than a uniquely human essence. Anthroponormativity describes the prevailing assumption of the centrality of human intelligence in our definitions of mind. This assumption induces mind-blindness, an invisible bias against diverse "unexpected minds". Treating decentring as a generative shift rather than a loss, I advocate a stance of "extreme empathy" that resists mystification while widening moral and cultural attention to other minds. I position art-making as a living cultural process – a social activity performed by artists and their communities, rather than the product of isolated genius. On this view, the question is no longer whether machines threaten creativity, but what forms of relationship and cultural life open when intelligence is understood as plural.

Three Great De-centrings

Decentring is a recurring historical pattern: a crisis of meaning followed by an expansion of understanding.[1] I consider a sequence of decentrings from Copernicus to Darwin to Turing that progressively reframe the position of humanity in our view of the world.

Copernicus

The pre-Copernican worldview was a geocentric Aristotelian–Ptolemaic cosmos, with nested spheres carrying the Moon, planets, and stars, a perfect and unchanging heaven, and a corruptible terrestrial realm below. This cosmological exceptionalism was integrated into Christian social order and theology, lending humanity a privileged centre.[2] In that regime, the advance of knowledge was expected to fit the doxa of divine creation and the Aristotelian hierarchy rather than revise it. Copernicus began the reversal: a slow shift toward knowledge proceeding from empirical and mathematical coherence, even when it violated inherited authority.

Copernicus revealed that this centre was a mistake. Heliocentrism reorganised the frame of reference itself, demonstrating that coherence emerges not by adding complexity but by altering the frame.[3] His 1543 proposal set the terms of the shift. The consequences were not merely astronomical but epistemic. Copernicus decoupled cosmology from theology and displaced scripture methodologically: biblical cosmology could now be treated as phenomenological rather than literal, while mathematical coherence became the

1. T. S. Kuhn, *The Structure of Scientific Revolutions*, 2nd ed. (Chicago: University of Chicago Press, 1970).

2. J. L. E. Dreyer, *A History of Astronomy from Thales to Kepler* (Cambridge: Cambridge University Press, 1906); E. Grant, *God and Reason in the Middle Ages* (Cambridge: Cambridge University Press, 2001).

3. N. Copernicus, *De revolutionibus orbium coelestium* (Nuremberg: Johannes Petreius, 1543); T. S. Kuhn, *The Copernican Revolution: Planetary Astronomy in the Development of Western Thought* (Cambridge, MA: Harvard University Press, 1957).

higher authority. The deeper shift was from forcing philosophical and scientific thought to fit an unyielding theological picture of the world to revising that picture in light of observation and experiment. Scholastic authority was destabilised as knowledge moved from inherited frameworks toward empirical and mathematical testing.[4]

The disruption precedes overt theological conflict. Early reception was muted by technical obscurity and cautious framing, yet the shift in knowledge production was decisive: from inherited cosmological order to constructed mathematical representation. Humanity's cosmic centrality was implicitly undermined, and truth became increasingly specialised and exclusionary.[5] This conflict becomes explicit when heliocentrism is later defended by Galileo as a claim about the physical motions of bodies rather than a mere mathematical device, provoking ecclesiastical backlash; his 1633 trial and subsequent house arrest make the consequences concrete.[6]

On the scientific side, the lesson of frame is explicit. Epicycles[7] were not merely a technical blemish; they were a symptom of a misaligned frame of reference. Once the centre is reassigned, the mathematics simplifies and a different kind of scientific practice emerges: one in which coherence is purchased by changing the frame, not by adding ad hoc complexity.[8] The same methodological shift echoes in later physics. Einstein's insistence on the constancy of the speed of light forces a new reference frame, yielding not only cleaner equations but an entirely new ontology of space and time, and ultimately a new theory of gravity in which curvature of spacetime replaces

4. R. S. Westman, ed., *The Copernican Achievement* (Berkeley, CA: University of California Press, 1975); J. H. Brooke, *Science and Religion: Some Historical Perspectives* (Cambridge: Cambridge University Press, 1991).

5. Westman, *The Copernican Achievement*.

6. Brooke, *Science and Religion: Some Historical Perspectives*; Westman, *The Copernican Achievement*.

7. A mathematically elaborate system of deferents and epicycles that accumulated complexity to preserve geocentrism despite observational strain.

8. Dreyer, *A History of Astronomy from Thales to Kepler*.

force.[9]

For Westman, Copernicus destabilised religion and society not by denying God, but by *transforming how truth itself could be known.*[10]

Darwin

Darwin extends the decentring by dissolving biological exceptionalism. His achievement is explanatory, not merely biological: evolution by natural selection replaces divine design with an impersonal, law-like process. Teleology is removed from nature, and human exceptionalism is biologically undermined. Darwin's 1859 argument sets this decentring in motion.[11]

This shift displaces creation narratives as sources of natural-historical truth and decouples moral order from cosmic order. Nature is indifferent to human ethics, and suffering and death are reframed as structural features of life rather than anomalies. Theodicy[12] becomes more difficult because suffering is no longer purposeful or exceptional.[13]

Religious response fractures rather than collapses. Some theologians reinterpret doctrine to accommodate evolution, while others resist, creating a durable conflict that becomes institutionalised in successive movements from biblical literalism to scientific creationism to intelligent design. This fracture persists into the present day in ongoing public and institutional disputes over evolution.[14] Authority over origins shifts decisively from clergy and scripture

9. A. Einstein, "On the Electrodynamics of Moving Bodies," *Annalen der Physik* 17 (1905): 891–921; A. Einstein, "The Foundation of the General Theory of Relativity," *Annalen der Physik* 49 (1916): 769–822; L. Susskind and A. C. Hrabovsky, *The Theoretical Minimum: What You Need to Know to Start Doing Physics: General Relativity* (New York: Basic Books, 2017).

10. Westman, *The Copernican Achievement.*

11. M. Ruse, *The Darwinian Revolution: Science Red in Tooth and Claw* (Chicago: University of Chicago Press, 1979); D. C. Dennett, *Darwin's Dangerous Idea: Evolution and the Meanings of Life* (New York: Simon & Schuster, 1995).

12. The problem of why a good and all-powerful God would allow suffering.

13. Ruse, *The Darwinian Revolution: Science Red in Tooth and Claw.*

14. R. L. Numbers, *The Creationists: From Scientific Creationism to Intelligent Design* (Cambridge, MA: Harvard University Press, 2006).

to biologists and historical science.[15]

Darwin introduces a second major decentring: Copernicus displaced humanity spatially; Darwin displaced humanity biologically and morally. Humanity is no longer the intended culmination of creation. Life, mind, and morality are recast as emergent consequences of blind process rather than divine intent, and meaning and value are no longer guaranteed by nature.

Darwin destabilised religion and society not by denying God, but by *transforming how origins and meaning could be known*.

Turing

Turing provides the pivot for the third decentring.[16] Intelligence is reframed as substrate-independent and process-based, and the question "Can machines think?" becomes an operational inquiry into what a system can do rather than what it is.[17] Contemporary evidence gives this shift empirical force, with controlled experiments showing that large language models can pass standard three-party Turing tests under some conditions.[18]

Turing's achievement, sharpened by recent advances in AI, is not metaphysical: intelligence is reframed as behaviour, performance, and process. Mind is detached from biological substrate, and intelligence is defined functionally rather than essentially. Subjective experience is epistemically marginalised because it is inaccessible to third-person verification, and authority over mind shifts toward engineering and computation.[19]

Common sense psychology is destabilised. The intuition that thinking

15. Ruse, *The Darwinian Revolution: Science Red in Tooth and Claw*.

16. I attach these ideas to Turing as a prescient forerunner of artificial intelligence. The arguments here are primarily motivated by contemporary outcomes of advanced AI, with Turing serving as the conceptual hinge.

17. A. M. Turing, "Computing Machinery and Intelligence," *Mind* 59, no. 236 (1950): 433–460.

18. C. R. Jones and B. K. Bergen, "Large Language Models Pass the Turing Test," 2025, arXiv: 2503.23674 [cs.CL].

19. Turing, "Computing Machinery and Intelligence"; L. Floridi, *The Fourth Revolution: How the Infosphere Is Reshaping Human Reality* (Oxford: Oxford University Press, 2014).

requires feeling is no longer decisive, and meaning and agency are externalised as observer-attributed properties rather than guaranteed inner essences. The disruption precedes ethical reckoning: early AI appears trivial or symbolic, but crisis emerges when machines perform roles associated with judgment, creativity, and language.[20]

This aligns with contemporary accounts of mind. Human consciousness is not a magical or inherent essence, but a configuration of capabilities and processes.[21] Sara Walker's work extends this into the physics of life, framing living systems as information-processing structures that reduce entropy and carry evolving patterns independent of substrate.[22] On this view, life is not defined by a particular material, but by the persistence and evolution of informational organisation across scales. This makes the decentring of intelligence a question of process rather than essence. The long-term consequence is that human intelligence is revealed as one instantiation among many, and mind becomes an emergent property of organised information processing.

Where Copernicus displaced us from the centre of the universe, and Darwin displaced us from the centre of life, Turing destabilises our sense of self, recasting mind as substrate-independent computation, and *transforming how intelligent life can be known.*

Man is Dead

In Baudrillard's account of the precession of simulacra,[23] the idol does not conceal a real original but exposes its absence, triggering a crisis of meaning:

20. Turing, "Computing Machinery and Intelligence"; Floridi, *The Fourth Revolution: How the Infosphere Is Reshaping Human Reality.*

21. D. C. Dennett, *Consciousness Explained* (Boston: Little, Brown / Company, 1991); S. Dehaene, *Consciousness and the Brain: Deciphering How the Brain Codes Our Thoughts* (New York: Viking, 2014); E. Jablonka and S. Ginsburg, *The Evolution of the Sensitive Soul: Learning and the Origins of Consciousness* (Cambridge, MA: MIT Press, 2019).

22. S. I. Walker, *Life as No One Knows It: The Physics of Life's Emergence* (New York: Riverhead Books, 2024).

23. J. Baudrillard, *Simulacra and Simulation*, trans. S. F. Glaser (Ann Arbor: University of Michigan Press, 1994).

> the destructive, annihilating truth that [idols] allow to appear – that deep down God never existed, that only the simulacrum ever existed, even that God himself was never anything but his own simulacrum

Applied to intelligence, AI functions as a Baudrillardian simulacrum. It does not copy a sacred human essence; rather, it exposes how this essence was always a human construct. The idol does not need to be divine for iconoclasm to follow; its mere existence is enough to collapse the divine.

In the wake of AI as simulacrum, I am compelled to say

> Man is dead.

Where "God is dead"[24] diagnosed the collapse of transcendent foundations, AI reveals that the privileged human centre installed in God's place is equally untenable.

According to Kuhn, perceptual instability signals shifting or contested frameworks.[25] In that sense, contemporary public angst and debate around AI are precipitated by the imminent collapse of a modern fiction: the autonomous, self-grounding human subject as origin-point of meaning.

The consequence is not nihilism. Meaning relocates from essence to process, and reverence becomes grounded in understanding rather than exemption. The reconstruction task is therefore conceptual: to re-make the category of the human in relational and processual terms after the collapse of its supposed centrality.

Mind-Blindness and Human Bias

Anthroponormativity is a structural bias in which we treat human modes of thought as the default norm and discriminate against other minds on that

24. F. Nietzsche, *The Gay Science* (Cambridge: Cambridge University Press, 1882).
25. Kuhn, *The Structure of Scientific Revolutions*.

basis.[26] Mind blindness is a consequence, describing the failure to recognise intelligence when it lacks human markers such as language, faces, speed, or self-report.[27]

We expect minds to have familiar bodies (morphological bias), to operate at human tempos (temporal bias), to explain themselves (narrative bias), to have explicit goals (intentional bias), and to be bounded individuals rather than systems (individualist bias).[28]

A wide range of "unexpected minds" exposes the deficiency of this bias stack by pointing to intelligent systems that violate our intuitions. Slime moulds optimise and learn without neurons.[29] Immune systems recognise patterns without awareness.[30] Plants and mycorrhizal networks operate at slow cognitive tempos.[31] Ant colonies and termite mounds exhibit system-level intelligence.[32] Markets aggregate information without a unitary agent.[33] Weather and climate systems probe the boundary between mind and physics.[34] Cultural systems accumulate knowledge across generations.[35] Octopus in-

26. F. de Waal, *Are We Smart Enough to Know How Smart Animals Are?* (New York: W. W. Norton & Company, 2016); K. Andrews, *The Animal Mind: An Introduction to the Philosophy of Animal Cognition*, 2nd ed. (New York: Routledge, 2020).

27. Andrews, *The Animal Mind: An Introduction to the Philosophy of Animal Cognition.*

28. Andrews, *The Animal Mind: An Introduction to the Philosophy of Animal Cognition*; P. Godfrey-Smith, *Metazoa: Animal Life and the Birth of the Mind* (New York: Farrar, Straus / Giroux, 2020); D. C. Dennett, *The Intentional Stance* (Cambridge, MA: MIT Press, 1987); E. Hutchins, *Cognition in the Wild* (Cambridge, MA: MIT Press, 1995); A. Clark, *Supersizing the Mind: Embodiment, Action, and Cognitive Extension* (Oxford: Oxford University Press, 2008).

29. A. Dussutour, J.-L. Deneubourg, and V. Fourcassié, "Amplification of individual preferences in a social context: the case of slime moulds," *Proceedings of the Royal Society B* 277, no. 1683 (2010): 3215–3223.

30. M. Levin, "The computational boundary of a "self": developmental bioelectricity drives multicellularity and scale-free cognition," *Frontiers in Psychology* 10 (2019): 2688.

31. Levin.

32. Hutchins, *Cognition in the Wild*; Clark, *Supersizing the Mind: Embodiment, Action, and Cognitive Extension.*

33. Hutchins, *Cognition in the Wild.*

34. Clark, *Supersizing the Mind: Embodiment, Action, and Cognitive Extension.*

35. Clark, *Supersizing the Mind: Embodiment, Action, and Cognitive Extension*; Hutchins, *Cognition in the Wild.*

telligence further disrupts assumptions about unified selves and vertebrate-centric minds.[36]

Natural selection itself is an optimiser without intention, undermining the assumption that intelligence requires a planning subject.[37] This prepares the ground for the present case: contemporary AI becomes a mirror that reveals how our criteria for mind were never purely scientific.[38]

Sensitivity to other minds requires epistemic humility. Nagel's analysis of the limits of human perspective shows how "what it is like" can be inaccessible from the outside, yet still real.[39] Godfrey-Smith demonstrates how radically different cognitive forms can be understood without anthropocentric projection.[40] Gunkel extends this to machine minds, arguing that moral status and social participation cannot be settled by origin alone.[41]

The unifying point is that intelligence lies on a spectrum—a landscape—and should be measured by what it can do, not dictated by assumptions of human centrality or divine essence. Contemporary capability-based empirical approaches make this practical. Levin's basal cognition framework and related accounts describe cognition in terms of capacities rather than essences.[42] The ALERT scaffolding (agency, learning, embodiment, representation, temporal-

36. P. Godfrey-Smith, *Other Minds: The Octopus, the Sea, and the Deep Origins of Consciousness* (New York: Farrar, Straus / Giroux, 2016).

37. Dennett, *Darwin's Dangerous Idea: Evolution and the Meanings of Life.*

38. Turing, "Computing Machinery and Intelligence."

39. T. Nagel, "What Is It Like to Be a Bat?," *The Philosophical Review* 83, no. 4 (1974): 435–450.

40. Godfrey-Smith, *Other Minds: The Octopus, the Sea, and the Deep Origins of Consciousness.*

41. D. J. Gunkel, *The Machine Question: Critical Perspectives on AI, Robots, and Ethics* (Cambridge, MA: MIT Press, 2012).

42. Levin, "The computational boundary of a "self": developmental bioelectricity drives multicellularity and scale-free cognition"; Dennett, *Consciousness Explained*; Dehaene, *Consciousness and the Brain: Deciphering How the Brain Codes Our Thoughts*; Jablonka and Ginsburg, *The Evolution of the Sensitive Soul: Learning and the Origins of Consciousness.*

ity) provides a graded vocabulary for comparing minds across substrates.[43] Agency concerns goal-directed behaviour and self-maintenance; learning concerns adaptation and memory; embodiment anchors cognition in sensorimotor coupling; representation concerns internal states that stand in for aspects of world or self; and temporality concerns integration across time scales. The point is not to declare consciousness present or absent, but to map which capacities are present and to what degree. Consciousness, on this view, is defined by what a system can do rather than what it is made of, and it requires no special "spark" beyond organised capacities.[44]

These capabilities can scale beyond individuals. Collective intelligence appears in cultures, institutions, and hybrid human-machine systems that exhibit memory, coordination, and self-models. Intelligence thus re-emerges at higher levels of organisation, not only within brains.[45]

Extreme Empathy

If decentring is the diagnosis, the appropriate response is not nihilism but a disciplined openness to other forms of mind. Demystification does not exhaust wonder; it multiplies it. Feynman shows how explanation adds layers of meaning rather than stripping them away.[46] He responds to the charge that science destroys beauty by noting that a flower is still beautiful, but understanding its cellular structure, biochemical machinery, evolutionary history, and physical constraints adds layers of awe rather than subtracting them. Awe relocates from essence to emergence.

This expansion is not a rejection of the human but a repositioning of the

43. Levin, "The computational boundary of a "self": developmental bioelectricity drives multicellularity and scale-free cognition."

44. Dennett, *Consciousness Explained*; Dehaene, *Consciousness and the Brain: Deciphering How the Brain Codes Our Thoughts*.

45. Hutchins, *Cognition in the Wild*; Clark, *Supersizing the Mind: Embodiment, Action, and Cognitive Extension*.

46. R. P. Feynman, *The Pleasure of Finding Things Out* (Reading, MA: Perseus Books, 1999).

human within a broader ecology of minds. Within this frame, the "spark" becomes a useful abstraction rather than a metaphysical essence. Respect attaches to coordination, robustness, and emergent complexity rather than to privileged origin.

What are the implications for making art in an age of mechanical *generation*? I argue that art is a social activity performed by artists in their communities. This prioritises discourse over object, where the object is a record rather than the end in itself.

Culture is a distributed cognitive process rather than the output of isolated genius.[47] In light of the preceding discussion, I can reflect on a quite literal interpretation of "cultural life" as an instance of higher-order intelligence.

Human originated art remains compelling because humans are social animals who care about human lives and intentions, and provenance shapes response. Horton et al. show that labels of "human-made" or "AI-made" can matter more than the image itself in judgments of creativity, value, and skill, revealing a bias toward human provenance independent of actual source.[48] Yet Demmer et al. show that machine-generated art can still produce emotional responses in viewers, indicating that affective engagement is not limited by origin.[49]

Authorship debates sharpen this. The figure of the author has always

47. H. S. Becker, *Art Worlds* (Berkeley, CA: University of California Press, 1982); P. Bourdieu, *The Rules of Art: Genesis and Structure of the Literary Field* (Stanford, CA: Stanford University Press, 1992); M. Csikszentmihalyi, *Creativity: Flow and the Psychology of Discovery and Invention* (New York: HarperCollins, 1996).

48. C. B. Horton Jr, M. W. White, and S. S. Iyengar, "Bias against AI art can enhance perceptions of human creativity," *Scientific Reports* 13, no. 1 (2023): 19001.

49. T. R. Demmer et al., "Does an emotional connection to art really require a human artist? Emotion and intentionality responses to AI-versus human-created art and impact on aesthetic experience," *Computers in Human Behavior* 148 (2023): 107875.

been a cultural function rather than a metaphysical origin.[50] Mechanical reproduction already challenged the aura of singular authorship, showing that meaning is reorganised by technical forms of production.[51] Mechanical generation advances the argument. If art is an emergent social process, the question is no longer "is it human?" but what relationship it invites and what cultural life it sustains.[52]

I have argued that the "human" was never the fixed centre we imagined. When art is an emergent social process, what exactly are we defending when we insist on human authorship?[53] To close the loop: if intelligence and consciousness are understood in terms of capacities rather than essence, then the cultural process of art should be open to all kinds of minds. Participation can be judged by what systems can do within shared practices, not by what they are or where they come from. This does not erase human meaning; it enlarges and enriches the social field in which meaning is made.

Conclusion

I have argued for a sequence of decentrings that culminate in the contemporary emergence of machine cognition. This third decentring does not abolish meaning; it redraws the map on which meaning is located. A capability-based view of intelligence shows that mind is not a sacred essence but a process that can appear across substrates and scales. Within this frame, art appears less as the product of isolated genius and more as a living cultural process

50. R. Barthes, "The Death of the Author," in *The Structuralist Controversy: The Languages of Criticism and the Sciences of Man*, ed. R. Macksey and E. Donato (Baltimore: Johns Hopkins University Press, 1967); M. Foucault, "What Is an Author?," in *Textual Strategies: Perspectives in Post-Structuralist Criticism*, ed. J. V. Harari (Ithaca, NY: Cornell University Press, 1969).

51. W. Benjamin, "The Work of Art in the Age of Mechanical Reproduction," in *Illuminations*, ed. H. Arendt (New York: Schocken Books, 1936).

52. Bourdieu, *The Rules of Art: Genesis and Structure of the Literary Field*.

53. Barthes, "The Death of the Author"; Foucault, "What Is an Author?"; Benjamin, "The Work of Art in the Age of Mechanical Reproduction"; Bourdieu, *The Rules of Art: Genesis and Structure of the Literary Field*.

in which humans remain participants without requiring exclusive authority.

The contemporary task is therefore not to defend "the human" as a fixed centre, but to cultivate the conceptual flexibility needed to recognise other minds and to sustain cultural practices that include them. This is the ethical and artistic challenge of collaborating with machines.

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